

CURRICULUM VITAE
OF
EUGENIO OÑATE IBAÑEZ DE NAVARRA



February 2015

INDEX

PERSONAL DATA	1
PROFESSIONAL DATA	1
CURRENT WORK	2
ACADEMIC DEGREES	2
G R A N T S	3
L A N G U A G E S	3
SCIENTIFIC AND PROFESSIONAL POSITIONS	4
INSTITUTIONAL POSITIONS	5
A W A R D S	6
TEACHING ACTIVITIES	7
OTHER TEACHING ACTIVITIES	7
THESES	8
SUPERVISION OF DOCTORAL THESES	9
RESEARCH LINES	15
RELEVANT CONTRACTS WITH COMPANIES AND/OR ADMINISTRATIONS	23
COMPANIES AND ORGANISATIONS WHICH	29
E. OÑATE HAS COLLABORATED WITH	29
RELATIONSHIP OF E. OÑATE WITH LATIN AMERICA	31
ORGANIZED CONFERENCES	33
COMPUTATIONAL PLASTICITY, MODELS, SOFTWARE AND APPLICATIONS (COMPLAS I), BARCELONA, SPAIN, 6 - 10 APRIL 1987	
PARTICIPATION IN EDITORIAL BOARDS IN JOURNALS	36
R E F E R E N C E S	38
PUBLICATIONS	40
WRITTEN BOOKS	43
EDITED INTERNATIONAL JOURNALS	44
EDITED BOOKS	45
TRANSLATED BOOKS	49
PAPERS IN JOURNALS	50
BOOK SERIES EDITED	77
CHAPTERS IN BOOKS WITH ISBN	78
MONOGRAPHS WITH ISBN	85
PAPERS IN PROCEEDINGS	90
PUBLICATIONS IN RESEARCH CENTERS	132

PERSONAL DATA

NAME: Eugenio Oñate Ibáñez de Navarra

DATE OF BIRTH: 28 March 1953

PERSONAL STATUS: Married, three children.

ID No.: 22.514.914 F

PERSONAL ADDRESS: C/. Berlínés, 11-13, át. 2ª, 08022 Barcelona, Spain

TELEPHONE: +34.93. 211.46.85

PROFESSIONAL DATA

PRESENT POSITION: Full Professor of Structural Mechanics since 1987

DEDICATION: Full time

WORK PLACE: Technical University of Cataluña (UPC), Civil Engineering School, Dpt. of Strength of Materials

WORK ADDRESS: Edificio C-1, Campus Norte UPC, Gran Capitán, s/n. 08034 Barcelona. Spain Telephone: +34 93 205 70 16. Fax: +34 93 401 65 17 E-mail: onate@cimne.upc.edu

CURRENT WORK

E. Oñate combines the teaching and research activities at the Technical University of Cataluña (UPC) with the Executive Vicepresidence and Management of the International Center for Numerical Methods in Engineering (CIMNE). CIMNE is a research organisation created in 1987 as a Consortium between the UPC and the Generalitat of Catalunya. CIMNE specializes in the development, application and dissemination of numerical methods for the solution of engineering problems. The current staff of CIMNE amounts to 150 scientists and engineers from 20 different countries.

ACADEMIC DEGREES

<i>Type</i>	<i>University</i>	<i>Date</i>
Civil Engineer	ETS Ing. Caminos, Canales y Puertos, University Politécnica de Valencia.	1975
Master in Science (M.Sc.)	Civil Engineering Dpt. University College of Swansea. University of Wales (U. K.)	Thesis: Dec 1976 Degree: July 1977
Doctor in Philosophy (Ph.D.)	Civil Engineering Dpt. University College of Swansea University of Wales (U.K.) <i>Director of the Thesis:</i> Prof. O. C. Zienkiewicz	Thesis: Dec 1978 Degree: July 1979
Doctor in Civil Engineering	Ministerio de Educación y Ciencia, Spain	July 1979

GRANTS

Grant of Ministerio de Educación y Ciencia for researchers training outside Spain. Course 1976/77

Grant for research at the Civil Engineering Department of University of Swansea. Wales. UK

Alcoa Research Grant

Course 1977/78

Grant for research at the Civil Engineering Department of University of Swansea. Wales. UK

LANGUAGES

(F=fair, W=well, C=correctly)

<i>LANGUAGE</i>	<i>SPEAKS</i>	<i>READS</i>	<i>WRITES</i>
CATALAN	W	W	F
ENGLISH	C	C	C
FRENCH	C	C	W
ITALIAN	W	W	-
GERMAN	F	F	-

SCIENTIFIC AND PROFESSIONAL POSITIONS

DATES	POSITION	INSTITUTION
Sept.76-Sept.78	Research Student	Civil Engng. Dept., Univ. College of Swansea, Wales
Sept.78-Febr.79	Research Assistant	Civil Engng. Dept., Univ. College of Swansea, Wales
Oct.78-July 87	Associate Professor	Civil Engineering School of Barcelona
June 83-April 89	Director	Civil Engineering School of Barcelona
July 87	Full Professor	Civil Engineering School of Barcelona
Jan. 1988	Executive Vice-president and Director	International Center for Numerical Methods in Engineering (CIMNE)
April 89-May 2003	President	Spanish Society for Numerical Methods in Engineering(SEMNI)
April 1991	Director	Spanish Pilot Center of the European Research Community on Flow, Turbulence and Combustion (ERCOFTAC)
May 91-October 94	Director	Dpt. of Strength of Materials (UPC)
May 91-June 95	President	Scientific Council of Supercomputing Center of Cataluña (CESCA)
June 91-Sept.96	Vice-President	European Community on Computational Methods in Applied Sciences (ECCOMAS)
June 1993	Director	Quality Research Group. CIRIT. Generalitat of Catalunya
Sept. 94-Sept.2000	Secretary General	International Association for Computational Mechanics (IACM)

Sept. 2000	President	European Community on Computational Methods in Applied Sciences (ECCOMAS)
July 2002-2010	President	International Association for Computational Mechanics (IACM)
April 2004	Honorary President	Spanish Society for Numerical Methods in Engineering (SEMNI)

INSTITUTIONAL POSITIONS

- Associated member of the Instituto Eduardo Torroja, Madrid, Spain
- Member of the Spanish Association of Pre-stressed Structures (ATEP).
- Full member of the International Association for Shell Structures (IASS).
- Member of the Managing Board of the Instituto Catalán de Ingeniería Civil (ICEC).
- Member of the Founding Council of the International Association for Computational Mechanics (IACM).
- Founding member of the International Network of Centers for Computer Applications (INCCA) of Unesco.
- Member of the European Research Community of Flow, Turbulence and Combustion (ERCOFTAC). Director of the Pilot Center in Spain from April 1991.
- Member of the Executive Council of Spanish Association for Numerical Methods in Engineering (SEMNI).
- Member of the of the Executive Council of the European Community on Computational Methods in Applied Sciences (ECCOMAS).
- Member of the of the Executive Council and the General Council of the International Association for Computational Mechanics (IACM).
- Member of the Real Academia de Doctores, Barcelona, Spain.
- Member of the International Advisory Council of the Centre of Advanced Materials and Structures (AMAS), Polish Academy of Sciences, Warsaw.
- Honorary member of the Portuguese Association of Thematical Applied and Computational Mechanics (APMTAC).

AWARDS

- Argentinian Award “Dr. Luis Federico Leloir” to the International Cooperation in Science, Technology and Innovation, 2013
- International Association for Computational Mechanics (IACM), Gauss-Newton Medal, 2010
- Advanced Grant of the European Research Council of the European Community, November 2010
- JSCES Grand Prize (Japan), 2009
- O.C. Zienkiewicz Medal of the Polish Association for Computational Mechanics (PACM), 2009
- Ted Belytschko Applied Mechanics Award of ASME, 2009
- JSME Computational Mechanics Award, 2009
- Literati Award for Excellence to the best article published in *Engineering Computations*, 2009
- SEMNI Award to Professional Achievements, 2007
- Honorary Member of the Portuguese Association of Applied, Theoretical and Computational Mechanics (APMTAC), 2005
- University of Jyväskylä Medal (Finland), 2004
- Duran i Farell Award to the best Research and Technology Project of the University Politècnica de Catalunya, 2004
- City of Barcelona Award in Technological Research, 2002
- Literati Award for Excellence to the best article published in *Engineering Computations*, 2002
- Medal of the School of Civil Engineering of Barcelona to Professional Achievements, 2001
- Award of the Spanish Group on Fracture Mechanics, 2000
- Award of the Asociación Argentina de Mecánica Computacional (AMCA), 2000
- Accésit to the City of Barcelona Award in Technological Research, 1999
- Narcís Monturiol Award from the Catalanian Government to the Scientific Merit of CIMNE (received as Director of CIMNE), 1999
- IACM Computational Mechanics Award, 1998
- Eric Reissner Medal in Computational Mechanics, 1996
- Medal to Professional Merit of Spanish Institution of Civil Engineering, 1995
- Catalanian Medal for Research "Narcís Monturiol", 1990

HONORARY DEGREES

- Doctor Honoris Causa, Universidad “Marta Abreu”, Las Villas, Cuba, March 2013
- Doctor Honoris Causa, INSA-Lyon, France, June 2012
- Honorary Fellow of the University College of Swansea (UK), 2007
- Doctor Honoris Causa, University Ovidius, Constanza, Rumania, 2000
- Fellow of the International Association for Computational Mechanics (IACM), 1998

ACADEMY MEMBERSHIP

- Foreign Member of the Accademia di Scienze e Lettere, Istituto Lombardo, Milan (Italy), 2006
- Member of the Royal Academy of Doctors, 1998

TEACHING ACTIVITIES

Responsible for the following grade courses:

- 1979- *Advanced Analysis of Structures*. Undergraduate course of the Civil Engineering School of the Technical University of Cataluña (UPC)
- 1992 *Introduction to the Finite Elements Method*. Undergraduate course of the Civil Engineering School of the Technical University of Cataluña (UPC)

Responsible for the following postgrade courses:

- 1980- *Introduction to the Finite Element Method*. Course for the Ph.D. Program of Civil Engineering and Structural Analysis at UPC.
- 1984- *Thermal Problems Analysis*. Course for the Ph. D. Program of Civil Engineering and Structural Analysis at UPC.

OTHER TEACHING ACTIVITIES

- 1982- Director of the Master Course on Numerical Methods for Analysis and Design in Engineering, Technical University of Cataluña (UPC)

From 1979 he has lectured more 800 teaching hours in short courses and post graduate seminars in different Spanish and foreign universities.

THESES

1. *Thesis for the degree of Masters in Science*

"Comparisons of finite strip methods for the analysis of box girder bridges" Ref. C/M/122/76. Civil Engineering Dept. University College of Swansea. Wales, UK. September 1976.

2. *Thesis for the degree of Doctor of Philosophy*

"Plastic flow in metals with special reference to: I) Coupled thermal flow. II) Thin sheet metal forming". Ref. C/Ph/51/78. Civil Engineering Dept., University College of Swansea. Wales, UK. December 1976.

SUPERVISION OF DOCTORAL THESES

1) Title: **A quasi intrinsic formulation for the finite element analysis of arches, plates and shells under large displacement in the elastoplastic regime**

Author: Javier Oliver Olivella School of Civil Engineering

University: Technical University of Catalunya

Date: March 1982 Qualification: Excellent cum laude

2) Title: **A finite strip formulation using Reissner-Mindlin theory for análisis of plates, bridges and axisymmetric shells**

Author: Benjamín Suárez Arroyo School of Civil Engineering

University: Technical University of Catalunya

Date: June 1982 Qualification: Excellent cum laude

3) Title: **Contribution to the dynamic analysis of structures. Free vibration of bridges and axisymmetric plates using the finite strip method.**

Author: Luis Pérez Vidal Facultad/Escuela: E.T.S.Ing. Industriales

University: Technical University of Catalunya

Date: July 1982 Qualification: Excellent cum laude

4) Title: **Theoretical-experimental study of the influence of transverse shear in skew slabs**

Author: Elena Blanco Díaz School of Civil Engineering

University: Technical University of Catalunya

Date: April 1986 Qualification: Excellent cum laude

5) Title: **Plastic damage models for frictional materials**

Author: Sergio Horacio Oller School of Civil Engineering

University: Technical University of Catalunya

Date: 1988 Qualification: Apto cum laude

6) Title: **Finite element Petrov-Galerkin formulation for incompressible flows**

Author: Ramón Codina School of Civil Engineering

University: Technical University of Catalunya

Date: 1989 Qualification: Apto cum laude

7) Title: **A viscous shell formulation for sheet stamping processes**

Author: Carlos Agelet de Saracibar Bosch School of Civil Engineering

University: Technical University of Catalunya

Date: 1990 Qualification: Apto cum laude

8) Title: **A finite element model for analysis of shells under static and dynamic loads**

Author: Reza Attarnejad School of Civil Engineering

University: Technical University of Catalunya

Date: June 1990 Qualification: Apto cum laude

9) Title: **Analysis of multi-layer composite shells using the finite element method**

Author: Salvador Botello Rionda School of Civil Engineering

University: Technical University of Catalunya

Date: June 1993 Qualification: Apto cum laude

- 10) Title: **A finite element formulation for analysis of compressible flows**
Author: J. Fernando A. Quintana School of Civil Engineering
University: Technical University of Catalunya
Date: July 1993 Qualification: Apto cum laude
- 11) Title: **A methodology for computer aided training in structural engineering**
Author: Fernando Escalante Echeverri School of Civil Engineering
University: Technical University of Catalunya
Date: 1993 Qualification: Apto cum laude
- 12) Title: **A thermo mechanical model for solidification problems in metals**
Author: Diego Javier Celentano School of Civil Engineering
University: Technical University of Catalunya
Date: 1994 Qualification: Apto cum laude
- 13) Title: **A finite element model for incompressible flow problems with free surface**
Author: Marcela Cruchaga School of Civil Engineering
University: Technical University of Catalunya
Date: June 1996 Qualification: Apto cum laude
- 14) Title: **A contribution to adaptive numerical solution of compressible flow problems**
Author: Thomas R. Fischer School of Civil Engineering
University: Technical University of Catalunya
Date: June 1996 Qualification: Apto cum laude
- 15) Title: **New finite element methods for elastoplastic dynamic análisis of shell structures**
Author: Patricio Cendoya Hernández School of Civil Engineering
University: Technical University of Catalunya
Date: June 1996 Qualification: Apto cum laude
- 16) Title: **New triangular finite element for plates and shells**
Author: José Francisco Zárate Araiza School of Civil Engineering
University: Technical University of Catalunya
Date: July 1996 Qualification: Apto cum laude
- 17) Title: **The critical displacement method for structural instability analysis**
Author: William M. Taylor School of Civil Engineering
University: Technical University of Catalunya
Date: September 1996 Qualification: Apto cum laude
- 18) Title: **Sensitivity análisis for non linear material models. Application to structural design**
Author: Luis Gil School of Civil Engineering
University: Technical University of Catalunya
Date: December 1996 Qualification: Apto cum laude
- 19) Title: **Non linear static and dynamic análisis of reinforced concrete structures using damage models**
Author: Dan Alexandru Hanganu School of Civil Engineering
University: Technical University of Catalunya
Date: June 1997 Qualification: Apto cum laude

- 20) Title: **Evolutionary methods for topology optimization**
 Author: Josefa Estupiñán School of Civil Engineering
 University: Technical University of Catalunya
 Date: December 1997 Qualification: Apto cum laude
- 21) Title: **Analysis of structural stability problems by the finite element method**
 Author: Jasmina Jovicevic School of Civil Engineering
 University: Technical University of Catalunya
 Date: Jan. 1998 Qualification: Apto cum laude
- 22) Title: **Analysis of coupled fluid-structure interaction problems in ship hydrodynamics**
 Author: Julio García School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: November 1999
- 23) Title: **A continuum constitutive model for the análisis of composite materials**
 Author: Eduardo José Car School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: March 2000
- 24) Title: **Development of an integrated system for geometrical modelling, mesh and data generation for finite element analysis**
 Author: Ramon Ribó Rodríguez School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: March 2000
- 25) Title: **The finite point method in fluid dynamics**
 Author: Carlos Sacco School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: March 2002
- 26) Title: **A meshless finite point method for elasticity problems using the finite point method**
 Author: Franco Perazzo School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: February 2003
- 27) Title: **Secant and tangent finite element formulations for Cosserat beams**
 Author: Antonio Morán School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: May 2005
- 28) Title: **New lagrangian formulations for analysis of the interaction between structures and fluid**
 Author: Romain Aubry School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: March 2006
- 29) Title: **New numerical methods for analysis of fatigue life of structures with composite materials**
 Author: Fernando Rastellini School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: June 2006

- 30) Title: **Development of finite element methods to solve coupled fluid-structure interaction problems**
 Author: Pooyan Dadvand School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: July 2007
- 31) Title: **New numerical methods for the analysis of rigid-flexible structures under wind loading**
 Author: Henrik Lynga School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: September 2007
- 32) Title: **Nonlinear analysis of orthotropic membrane and shell structures including fluid-structure interaction**
 Author: Gerardo Valdés School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: November 2007
- 33) Title: **Análisis de estructuras de hormigón armado expuestas al fuego**
 Author: Daniel Di Capua School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: January 2009
- 34) Title: **Desarrollo de redes neuronales para sistemas de ayuda a la decisión en ingeniería**
 Author: Roberto López School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: January 2009
- 35) Title: **Modeling of Ground Excavation with the Particle Finite Element Method**
 Author: Josep M^a Carbonell School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: December 2009
- 36) Title: **A formulation for mixture problems based on the particle finite element method**
 Author: Mónica de Mier Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos
 University: Politècnica de Catalunya Qualification: Apto cum laude
 Date: June 2010
- 37) Title: **Lagrangian FE methods for coupled problems in fluid mechanics**
 Author: Pavel Ryzhakov Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos
 University: Politècnica de Catalunya Qualification: Apto cum laude
 Date: July 2010
- 38) Title: **Regularized Maxwell equations and nodal finite elements for electromagnetic field computations in frequency domain**
 Student: Rubén Otín School of Civil Engineering
 University: Politècnica de Catalunya Qualification: Apto cum laude
 Date: May 2011
- 39) Title: **Development of stabilization methods in convective transport problems using finite calculus**
 Student: Prashant Nadukandi School of Civil Engineering
 University: Politècnica de Catalunya Qualification: Apto cum laude
 Date: May 2011

- 40) Title: **Formulación de elementos finitos para vigas de sección abierta en laminados compuestos**
 Student: Pablo Enrique Vargas Mendoza School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: January 2012
- 41) Title: **Instability analysis of earth dams due to overflows by the particle finite element method**
 Student: Antonia Larese De Tetto School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: July 2012
- 42) Title: **Particle methods for mining engineering problems**
 Student: Carlos Labra School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: July 2012
- 43) Title: **Computational model of the human urinary bladder**
 Student: Virginia Monteiro School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: June 2013
- 44) Title: **Development of stabilization techniques for numerical analysis of incompressible mechanics**
 Student: Kazem Kamran School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: June 2013
- 45) Title: **On the theory of cell migration: durotaxis and chemotaxis**
 Student: Xavier Diego School of Civil Engineering
 University: Technical University of Catalunya Qualification: Apto cum laude
 Date: July 2013
- 46) Title: **Aerodynamic shape optimization using adaptive remeshing**
 Student: Mohammad Kouhi School of Civil Engineering
 University: Technical University of Catalunya Qualification: Excellent
 Date: September 2013
- 47) Title: **Development and applications of the Finite Point Method to compressible aerodynamics problems**
 Student: Enrique Ortega School of Civil Engineering
 University: Technical University of Catalunya Qualification: Excellent cum laude
 Date: May 2014
- 48) Title: **Advances in the generation of nonstructured meshes**
 Student: Abel Coll School of Civil Engineering
 University: Technical University of Catalunya Qualification: Excellent cum laude
 Date: July 2014
- 49) Title: **Finite element modelling of delamination in advanced composite beams and plates using one- and two-dimensional finite elements based on the refined zigzag theory**
 Student: Ariel Eijo School of Civil Engineering
 University: Technical University of Catalunya Qualification: Excellent cum laude
 Date: September 2014

ON GOING Ph.D. THESES

Title: **Finite element analysis of membrane structures**

Student: Pere-Andreu Ubach de Fuentes School of Civil Engineering

University: Technical University of Catalunya

Title: **New particle and finite element methods. Applications in civil engineering**

Student: Miguel Angel Celigueta School of Civil Engineering

University: Technical University of Catalunya

Title: **New numerical methods for applications in bio-medical engineering**

Student: Eduardo Soudah School of Civil Engineering

University: Technical University of Catalunya

Title: **New computational methods for analysis of particulate flows and their effects on structures**

Student: Guillermo Casas Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos

Universidad: Polit cnica de Catalunya

Title: **Unified Lagrangian formulation for analysis of fluid solids and their interaction with the Particle Finite Element Method**

Autor: Alessandro Franci Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos

Universidad: Polit cnica de Catalunya

Title: **Advanced finite element method for multifracture of materials and structures**

Student: Ignasi Pouplana Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos

Universidad: Polit cnica de Catalunya

Title: **Advanced finite element methods and particle-based methods for analysis of particulate flows in granular media**

Student: Salvador Latorre Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos

Universidad: Polit cnica de Catalunya

Title: **A new generation of discrete and finite element methods for multidisciplinary problems in engineering**

Student: Miquel Santasusana

Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos

Puertos

Universidad: Polit cnica de Catalunya

Title: **Applications of turbulence modelling in civil engineering**

Student: Jordi Cotella

Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos

Universidad: Polit cnica de Catalunya

Title: **An interactive virtual platform for simulating the human body including joint contact**

Student: Javiera Valdivia

Facultad/Escuela: E.T.S.Ing. Caminos, Canales y Puertos

Universidad: Polit cnica de Catalunya

RESEARCH LINES

Below are listed the main research lines of E. Oñate.

Development of innovative finite element methods (FEM) for structural analysis

Research topics in this field:

- Integration of particle-based method and finite element (FEM) for analysis of fluid-soil-interaction problems.
- Damage models for non linear FEM analysis of concrete structures.
- Finite strip method for analysis of thin prismatic structures (plates, bridges, folded plates and axysymmetric shells).
- New rotation-free shell triangles for linear and non linear analysis of structures accounting for frictional contact situations.
- New critical displacement method for fast computation of structural instability points.
- Secant-based algorithms for non linear structural mechanics.
- Finite point method for meshless analysis of solids and structures.
- Advanced mixing theory for non linear FEM analysis of composite structures.
- Finite calculus method for analysis of quasi and fully incompressible solids.
- New FEM for analysis of membrane and inflatable structures.
- Development of discrete element methods (DEM) and particle finite element methods (PFEM) for analysis of geomechanical problems.
- Combination of DEM, PFEM and FEM for analysis of underground constructions.

Relevant research outcomes:

- a) New finite elements for analysis of plate and shell structures. This research is relevant for the design of many structures in civil, mechanical and aerospace structures, among other engineering areas. He has published 35 papers in JCR journals in this field. The outcome of this research is collected in several chapters of the text books “Oñate E., Structural analysis with the finite element method. Linear statics. Volume 2. Beams, plates and shells, 864 pp. Springer, 2013” and “Oñate E., Cálculo de Estructuras por el Método de los Elementos Finitos. Análisis Estático Lineal, 850 pp., CIMNE Barcelona, 1st edition, 1992, 2nd edition 1995 “.
- b) Development of innovative finite element methods for analysis and optimal design of structures with standard and composite materials. The outcomes of this research are relevant for many applications to shells, buildings, dams, bridges, tunnels, harbors, geomechanics, inflatable structures and vehicle structures (cars, airplanes, trains, ships). He has published 47 papers in JCR papers in this field.

Development of FEM for industrial forming processes

Research topics in this field:

- Plastic flow formulation for analysis of metal forming processes using the FEM.
- Viscous shell approach for analysis of sheet metal stamping problems.
- Coupled thermal-mechanical formulation for hot forming problems using the FEM.
- New rotation-free shell triangles for sheet stamping problems.
- Advanced FEM and particle methods for casting problems.

Relevant research outcomes:

- a) Innovative numerical methods for optimal design of manufacturing processes. This research extends the work of E. Oñate in his doctoral period for developing advanced computational procedures for application to the design and analysis of sheet metal forming, casting, forging, rolling and extrusion of metallic products. He has published 25 papers in JCR journals in this field.
- b) New numerical methods for optimal design of manufacturing processes. This research extends the work of E. Oñate in his doctoral period for developing advanced computational procedures for application to the design and analysis of sheet metal forming, casting, forging, rolling and extrusion of metallic products. He has published 25 papers in JCR journals in this field.

Computational fluid dynamics and fluid-structure interaction

Research topics in this field:

- Development of finite calculus (FIC) for numerical solution of advective-convective transport and fluid flow problems.
- New particle finite element method (PFEM) for fluid flow problems using a lagrangian formulation.
- Innovative FEM for fluid-structure interaction problems
- New FEM for analysis of coupled thermal-flows.
- Development of stabilized FEM for ship hydrodynamics.
- Finite point method for meshless analysis of incompressible and compressible flows.

Relevant research outcomes:

- a) Development of innovative numerical methods combining particle-based methods, discrete element methods and finite element methods for coupled problems in engineering. The methods developed by E. Oñate are relevant for solving fluid-structure interaction problems with application to harbor and marine engineering and to constructions under flooding and tsunami situations; excavation problems in civil and mining engineering. He has published 59 papers in JCR journals in this field.

His research work in this scientific area was awarded in 2010 with an Advanced Grant of the European Research Council (ERC) for the project “New Computational Methods

for Predicting the Safety of Constructions to Water Hazards accounting for Fluid-Soil-Structure Interactions” (www.cimne.com/safecon). The Advanced Grant has a budget of 2.5 million Euros to perform research in the field during the period 2010-2015. The Advanced Grant is one of the most EC important prizes to individual researchers in Europe.

- b) New stabilized finite element methods based on finite calculus for analysis of fluids and incompressible solids. This research introduces an innovative approach based on an extension of the classical infinitesimal theory in mechanics for obtaining accurate solutions in complex problems of fluid and solid mechanics. He has published 28 papers in JCR journals in this field.
- c) Development of innovative numerical methods for fluid dynamics and fluid-structure interaction problems. The outcomes of this research are relevant for the study of aerodynamic and aeroelastic analysis of airplanes and flexible structures (tall buildings, slender bridges, aero generator blades); hydrodynamics and hydro-elastic analysis of ships and sailing boats; fluid-structure interaction problems with application to naval and offshore engineering and coupled thermal-flows in environmental problems. Much of this research has been developed in cooperation with and sponsorship from the Office for Naval Research (ONR) and the Naval Research laboratory (NRL) of the USA . He has published 51 papers in JCR papers in this field.
- d) Modeling and simulation of the melting and burning of objects in fire situations with the particle finite element method. This research is carried out in cooperation with the National Institute of Science and Technology (NIST) of the US. The goal is the development of new computational procedures for the enhanced design of objects that are better resistant to fire events. He has published 5 papers in JCR journals in this field.

Miscellaneous topics

- Development of artificial neural network techniques and decision support systems for engineering problems: risk assessment and management of floods, maintenance of buildings, management of oil-spill situations, management of energy consumption in urban areas, etc.
- Development of wireless sensing networks (WSN) for civil engineering applications.

PROFESSIONAL ACTIVITY

Dr. Eugenio Oñate is a Civil Engineer. His activity in the last 35 years has combined in a balanced manner an academic career as Professor of Structural Mechanics at the Technical University of Catalonia (UPC), a research career in the field of numerical methods and a professional career focused on the application of numerical methods in engineering and the transfer of the results of his research to the industrial sector. His research and professional achievements in the form of innovative numerical methods and software for the analysis and design of structures, fluid dynamics and industrial manufacturing processes are internationally recognized. The practical outcomes of his scientific work are of particular relevance to the solution of multidisciplinary problems in the field of civil, industrial, aerospace, marine and naval engineering, among others.

The professional activity of E. Oñate has combined teaching, research and technology transfer as well as his participation as manager in international scientific organizations. He was the founder and Director since 1987 of CIMNE, one of the most prestigious research centers in the world in the field of computational engineering. He was a founder and first president of the Spanish Society of Numerical Methods in Engineering (SEMNI) and was also president of the European Community for Computational Mechanics in Applied Sciences (ECCOMAS) and of the International Association for Computational Mechanics (IACM). He has been a driving force behind the creation of twelve technology-based companies in Spain. These companies market worldwide the products resulting from the research at CIMNE. He has received numerous awards and honors at international level.

After completing a degree in Civil Engineering in July 1975 at the Technical Univ. of Valencia (Spain), he started postgraduate studies at the Civil Engineering Dept. of Swansea University, Wales, UK. There he completed in June 1976 a Master of Science degree (M.Sc. Thesis on Development of a finite strip method for analysis of bridges and folded plate structures) and later a Ph.D. degree (Dec. 1978) under the supervision of Prof. O. C. Zienkiewicz (Ph. D. Thesis on Plastic flow in metals with special reference to: I) Coupled thermal flow. II) Thin sheet metal forming). His Ph.D. studies were funded by an Alcoa Research Grant from USA.

In February 1979 he moved to the Technical University of Catalunya (UPC), where he was hired as an Associated Professor on Structural Mechanics at the School of Civil Engineering. He became a Full Professor with tenure on June 1983. From March 1983 to March 1989 he was the Director of the School of Civil Engineering at UPC. During that period and under his personal supervision the new premises of the Civil Engineering School ($\approx 20,000$ m²) were designed and built in the new campus of UPC.

On March 1987 he founded CIMNE (International Center for Numerical Methods in Engineering, www.cimne.com), a research center specialized in the development and application of numerical methods in engineering. Since 1987 he is the Executive Vice-President and Director of CIMNE. This center has grown to employ some 180 scientists and engineers from 25 different countries worldwide specialized in research activities in

different fields of engineering and science (civil, mechanical, aerospace and naval engineering, bio-medical engineering, food engineering, etc.). CIMNE has received many prestigious Awards in Cataluña and by the European Commission.

In 2002 he created the CIMNE Classroom Network. The CIMNE Classrooms are physical spaces jointly created by CIMNE and a University for the development of training, research and technology transfer activities (see www.cimne.com for further details). The CIMNE Classroom Network incorporates nowadays 24 centers created between CIMNE and universities in Spain and in several Latin American countries (Argentina, Mexico, Chile, Peru, Colombia, Brazil, Cuba and Venezuela). The CIMNE Classrooms are a unique instrument for scientific and technical cooperation between research, academic and industrial organizations in Europe and Latin-American.

He has supervised **49 Ph.D. Thesis and 57 Master Thesis**. 30 of his former students are now full professors in Universities in Spain (13), USA (4), UK (2) and Latin America (11). He has had a significant impact in the creation of new scientific groups in cooperation with his former students.

In 1989 he was the founder and first President of the Spanish Association for Numerical Methods in Engineering (SEMNI, www.cimne.upc.es/semni). Under his presidency (1989-2004) SEMNI became the largest association in Europe in the field of Numerical Methods in Engineering. SEMNI has organized 8 congresses in the field. On June 2004 he was appointed Honorary President of SEMNI.

In July 2005 he was appointed Honorary Member of the Portuguese Association of Theoretical, Applied and Computational Mechanics (APMTAC) in recognition of his work towards the cooperation of APMTAC and SEMNI. We note his initiative to merge the APMTAC and SEMNI conferences that are jointly held bi-annually since 1983 and typically attract some 400 scientists and engineers.

He was one of the founders and first Vice-President (1993-95) of the European Community on Computational Methods in Applied Sciences (ECCOMAS, www.eccomas.org). In the period 2000 - 2004 he was the President of ECCOMAS. On September 2000 he organized the third ECCOMAS Congress in Barcelona which attracted some 1500 participants.

In the period 1994-2002 he was the Secretary General of the International Association for Computational Mechanics (IACM, www.iacm.info). From 2002-2010 he was the President of the IACM. On July 2006 he was re-elected as President of the IACM for a four year period (he has been the only president of the IACM who has been re-elected). During his mandate as Secretary General and President of IACM he supervised the organization of the World Congresses of Computational Mechanics (WCCM) of the IACM held in Tokyo (1994), Buenos Aires (1998), Vienna (2002), Peking (2004), Los Angeles (2006), Venice (2008) and Sidney (2010). The next WCCM will be take place in Barcelona (Spain) on 20-25 July 2014 under the chairmanship of E. Oñate, some 4000 participants are expected to attend this

congress (<http://www.wccm-eccm-ecfd2014.org>). In 2010 he was appointed permanent member (with full voting rights) of the Executive Council of the IACM.

His professional activities have spread over a range of multidisciplinary fields which he has contributed relevant theories and methods of practical relevance. His key professional contributions are the following:

- Development of numerical methods for studying the safety of constructions against water. Application to the stability of dams in ports under large wave's and to the safety of infrastructures (dams, bridges, buildings, etc.) during flooding and tsunamis. This technology is marketed in Spain by COMPASS Ingeniería y Sistemas S.A. (www.compassis.com).
- Development of new technologies for design and analysis of inflatable structures formed by low pressure tubes of new polymer materials. Application to mobile pavilions for exhibitions, hospitals and emergency shelters; airplane hangars and high strength mobile inflatable bridges allowing the pass of traffic. This inflatable structure technology is been exploited worldwide by the Spanish company Buildair Ingeniería y Arquitectura S.A. (www.buildair.com).
- Development of innovative simulation methods for analysis of solids and structures with standard and composite material. Applications to the analysis and design of shells, buildings, dams, bridges, tunnels, harbour structures, inflatable structures, geomechanical problems, vehicle structures (cars, airplanes, trains, ships). The outcome of this research is the structural analysis code RamSeries marketed by the Spanish company COMPASS Ingeniería y Sistemas S.A. (www.compassis.com).
- Development of innovative numerical methods for analysis and design of manufacturing processes. Applications to sheet metal forming and casting processes, forging, machining and extrusion of metallic products. The outcomes of this research are the software codes STAMPAK (sheet metal forming), VULCAN and Click2Cast (casting) marketed by the Spanish company QUANTECH ATZ S.A. (www.quantech.es).
- Development of innovative numerical methods for fluid dynamics and fluid-structure interaction problems. Applications to the study of the safety of constructions in water hazards, aerodynamic and aeroelastic analysis of airplanes and flexible structures (tall buildings, slender bridges, aero generator blades); hydrodynamics and hydro-elastic analysis of ships and sailing boats; fluid-structure interaction problems with application to naval and offshore engineering and coupled thermal-flows in environmental problems. Much of this research has been developed under sponsorship from the Office for Naval Research (ONR) and the Naval Research Laboratory (NRL) of the United States of America (USA) . The outcome of this research has been collected in the code Tdyn marketed by the Spanish company COMPASS Ingeniería y Sistemas S.A. (www.compassis.com).

- Development of decision support systems integrating data-bases, numerical methods, wireless sensor and activators, and artificial intelligence techniques. Applications to the risk prediction and management of floods (Ramflood code, www.cimne.com/ramflood) and sea spills (Spillrec code) and bio-medical engineering and to the management of energy consumption in cities (Energy Information System, SIE). The outcome of this research is marketed by the Spanish companies COMPASS Ingeniería y Sistemas S.A., QUANTECH ATZ S.A. and CIMNE Tecnología SA. (www.cimnetecnologia.com).

- Development of new web-based technology for e-learning and e-work. The outcome of this research is collected in the collaborative work platform Fraktalis (www.cimne.com/fraktalis) and the Virtual Training Center marketed by the Spanish company STRUCTURALIA (www.structuralia.com).

The above research lines have been developed in the framework of over **400 RTD projects** carried out in cooperation with the main engineering companies in Spain and worldwide. Some **140** of these projects have been developed in the framework of EC programmes.

The numerical methods and software he has developed for structural analysis have had a significant impact for the enhanced analysis and design of reinforced concrete and composite structures, large scale inflatable structures (inflatable hangars and bridges, etc.), as well as for the optimum design of industrial sheet forming processes.

In addition, to this RTD activity he has developed an intensive task in the transfer of the outcome of his research to the industrial sector, and in particular to Spanish companies, with the aim of improving their manufacturing processes and products with the help of advanced numerical simulation codes.

We mention his personal involvement in the creation of twelve spin-off companies that operate with success in the international market. Among these we note the following: QUANTECH ATZ, S.A. (1996), specialized in the marketing of software and engineering services for the metal forming and aeronautic sectors (www.quantech.es); STRUCTURALIA, S.A. (2000), specialized in internet services for the construction sector (www.structuralia.com); COMPASS, Ingeniería y Sistemas, S.A. (www.compassis.com) (2002), specialized in the marketing of software and engineering services in the civil and naval sectors; BUILDAIR, Ingeniería y Arquitectura, S.A. (www.buildair.com) (2003), specialized in analysis and design of inflatable structures such as airplane hangars, inflatable bridges, emergency and exhibition pavilions, etc; INGENIA AIE (www.ingenia.aero) (2003), specialized in engineering services for the aeronautic sector and NHIT, S. A. (2003), specialized in transfer of knowledge in computational methods to the industrial sector. NHIT S.L. (2009). Transfer and application of computational technology to industry.

In 2011 he created CIMNE Tecnología. S.A. specialized in the transfer to industry of the products developed at CIMNE. In the period 2011-2013 this company has created, or taken part as a shared holder, in several other spin-off companies from CIMNE such as: BUILDAIR Asia-Pacific Inc, specialized in promoting inflatable structures technology in

Asia, Computational and Information Technologies S.A., specialized in the development and market of software and information systems for engineering applications. LYNCOS S.L., specialized in the Internet of Things (www.lhings.com); Servicios Energéticos Avanzados S.L. specialized in energy management in buildings (www.inergybcn.com) and Tecnologías Avanzadas para el Ocio (TAOC S.L.), specialized in the application of information technologies in the tourism and leisure sector (www.beaching.com). For more information visit www.cimnetecnologia.com

The mentioned companies market worldwide several products related to the research carried out at CIMNE. These include the Tdyn code for fluid-dynamic analysis, the structural analysis code RamSeries, the metal forming simulation codes Stampack, Vulcan and Click2Cast, the Ramflood code for risk analysis and management of floods, the SIE code for energy management in buildings, a Collaborative Work Platform and a Virtual Training Center and several designs of inflatable structures for applications in civil engineering and architecture.

The CIMNE spin-off companies promoted by E. Oñate employ some 92 workers, including 15 Post-Docs.

RELEVANT CONTRACTS WITH COMPANIES AND/OR ADMINISTRATIONS

Scientist in charge: Eugenio Oñate Ibáñez de Navarra

Project Title	Funded by	Starting Date	Ending Date	Budget (in K Euros)
Development of an integrated methodology for linear and non linear structural analysis	CICYT Project N° PR-841132CO302	May 1984	May 1987	100
Numerical análisis of the Navier-Stokes and Euler equations in aerodynamics	CICYT Ref. PB 87/0504	Jan. 1988	Jan. 1990	80
Numerical análisis of sheet stamping processes	CICYT Ref. PB 87.0603	Feb. 1988	Feb. 1991	60
Development of computer aided methods for industrial sheet stamping processes	PETRI (PTR 89-0145)	Jan. 1989	Jan. 1992	50
Development of an unstructured grid based computer software system for 2D and 3D aerodynamics design	EC-BRITE P-2435 (FP3)	June 1989	June 1992	200
Numerical simulation of industrial sheet metal forming processes	EC Programme BRITE P-2029 (FP3)	Jan. 1989	Jan. 1993	280
Development of educational software for engineering education and training	EC-COMETT P-5387Cc (FP3)	Jan. 1989	Jan. 1993	300
Analysis of the safety of concrete dams under dynamic loads	ENHER OCIDE	Apr.1989	Apr.1993	230
The development of multimedia distance learning package for finite element education and training	EC-COMETT II P-263/D (FP3)	Jan. 1993	July 1993	180
Improvement of higher education and training in computational mechanics in Poland	EC-TEMPUS P-JEP-369 (FP3)	Nov. 1992	August 1993	200

Numerical simulation of hot rolling and sheet stamping processes	Mº Industria (Prog. PAUTA)	July 1991	Dec. 1993	180
Numerical simulation of crash-worthiness problems using parallel computing	Mº Industria (Prog. PAUTA)	Jan. 1992	Dec. 1993	210
Development of numerical methods for analysis of separation and stagnation zone in the Hermes shuttle	Aviones Marcel-Dassault (Project Hermes)RD/ ANE88	Jan. 1990	Jan. 1994	90
Structural analysis of a containent shell structure in Vandellós II nuclear power plant	Asoc.Nuclear Vandellós	May 1993	Jan. 1994	70
Development of an User-Oriented CAE system for simulating the casting of ductile iron parts	EC-BRITE Euram P-BE-4596 (FP4)	April 1990	April 1994	250
Prediction of non linear and structural behaviour using parallel computing methods	EC-BRITE-Euram P-BREU-CT91-9431 (TSTS) (FP4)	Jan. 1992	Feb. 1995	180
Development of a methodology for linking CAD data with finite element codes	CICYT P-TAP93-0964	May 1993	May 1995	75
Development of a computer aided methodology for enhanced design of axial and centrifugal fans	EC-BRITE Euram P-BE-5076 (FP4)	Nov. 1992	Nov. 1995	230
Development of a decision support system for predicting wear in bulk and sheet forming operations	EC-BRITE Euram P-BE-5248-92 (FP4)	Nov.1992	Nov.1996	190
Development of finite element methods for solidification and cooling in casting	Mº Industria (Prog. PATI)	Jan. 1995	Dec.1996	120
Computer simulation of casting processes	REGIENOV (Renault, Paris France)	Jan. 1990 Jan. 1995	Jan. 1993 Dec. 1996	90 110
Development of computational methods for high speed flows	NASA	Dec.1993	Dec.1996	90
Improvement of higher education and training in computational mechanics in Poland	EC-TEMPUS P-JEP-7065/94 (FP4)	Oct.1994	Oct.1997	90

Enhanced design of high gear pumps using environmentally acceptable hydraulic fluids	EC-BRITE-Euram P-BE/95-1046	Dec.1995	Dec.1998	230
Development of parallel computing techniques for analysis of sheet stamping processes (STAMPAR)	EC-Esprit P-21037 (FP4)	March 1996	Dec.1998	140
Development and dissemination of educational software and courses for continuing active training in computer aided engineering	EC-Leonardo P-1049	Feb.1996	Jan. 1999	90
Development of parallel computing techniques for sheet stamping processes	CICYT P-TIC-96-1019	June 1996	June 1999	60
Optimisation of service life of production tools in hot forging, die casting and glass forming by minimizing the risks due to thermal fatigue	EC-BRITE-Euram P-BE96-3922 (FP4)	Sept.1996	Sept.2000	240
New methodologies for design and manufacturing of inflated structures (INFLAST)	EC-BRITE-Euram P-BE96-3015 (FP4)	Sept.1996	Sept.2000	210
Development of a computer based system for enhanced seakeeping and structural ship design (SHEAKS)	EC BRPR-CT-97-0605	Dec. 1997	Dec. 2000	210
HPCN tools for enhanced hydrodynamic design of fast ships on parallel computing platforms (FLASH)	EC-Esprit 24903 (FP4)	Oct.1997	April 2000	180
Integrated expert system for analysis of ship collision	Mº Industria Atyca P54/1997	Jan. 1997	Dec. 1997	150
Computer aided system for design of sails	Mº Industria Atyca PO316/1997	Jan. 1997	Dec. 1997	115
An informatic system for hydrodynamic design of ships	Mº Industria Atyca P341/1997	Jan. 1997	Dec. 1997	150
Enhanced design environment for industrial casting processes on parallel computing platforms (DECAST)	EC-Esprit 28144 (FP4)	Oct. 1998	June 2001	115

Enhanced computer-based design and promotion of sheet stamping dies (PRODIES)	EC-CRAFT BES2-5536 (FP5)	Oct. 1998	Sept. 2000	130
Enhanced design and manufacturing of high resistance casted parts (DARCAST)	EC-CRAFT BRST-CT-98-5328 (FP5)	Nov.1998	October 2000	150
Enhanced design and production of wear resistant rock cutting tools for construction machinery (CUTTER)	EC-Growth (FP5)	Jan. 2000	Dec. 2002	300
Development of a modular open-platform and tools for personalized learning in computational engineering methods (MOPLÉ)	EC-IST Prog. (FP5)	Jan. 2000	Dec. 2001	280
Enhanced design and manufacturing of mini-hydraulic products (MINIHAP)	EC-Growth (FP5)	Feb. 2000	Dec. 2002	250
A validated simulation support system for the optimal design of steel shaped can manufacturing processes (SCANMAP)	EC-Growth (FP5)	Jan. 2000	Dec. 2002	100
Functional design and optimisation of ship hull forms (FANTASTIC)	EC-Growth (FP5)	Jan. 2000	Dec. 2002	180
Design and demonstration of highly reliable low Nox combustion systems for gas turbines (DESIRE)	EC-Growth (FP5)	Feb. 2002	Jan. 2005	250
Prospective study on the state of the art of multidisciplinary modelling, simulation and validation in aeronautics (PROMUVAL)	EC-Growth GMA-2002-72158 (FP5)	Dec. 2002	May 2004	75
Decision support system for risk assessment and management of floods (RAMFLOOD)	EC-IST IST-2001-37581	Jan. 2003	Dec. 2004	425
Rear fuselage and empennage flow investigation (REMFI)	EC-FP6	Dec.2003	Nov. 2004	140
Economical exploitation of polymer coated steel sheet in large-scale production of new can types by the European can industry (POLYCOAT)	EC-FP6	Dec.2003	Nov. 2004	180
Grid based decision support system for assisting clinical diagnosis and interventions in cardiovascular problems (DISHEART)	EC-FP6	Jan. 2005	Dec.2006	350

Finite element methods for aeroelastic analysis of rigid flexible structures (ADEL)	CICYT	Jan. 2003	Dec. 2005	120
Development of finite element methods for analysis of cardio-vascular problems	CICYT	Jan. 2005	Dec. 2007	130
New design and manufacturing processes for high pressure fluid power products (PROHIPPI)	EC-FP6	Jan. 2005	Dec. 2009	300
Technology Innovation in underground construction (TUNCONSTRUCT)	IP-EC	Sept.2005	Oct.2009	250
Multiscale reinforcement of semi-crystalline thermoplastic sheets and honeycombs (MRECT)	EC (FP7)	Apr.2010	Apr.2010	277
Development of a method for studying the failure process of rockfill embankment dams combining finite element and particle techniques (XPRES)	MEC	Oct.2007	Sept.2010	179
Numerical and experimental techniques for safety assessment and protection of embankment dams in overtopping scenarios (e-DAMS)	MICINN	Jan.2011	Dec.2013	49
Real time computational mechanics techniques for multi-fluid problems (HFLUIDS)	MICINN	Jan.2011	Dec.2013	99
New computational methods for predicting the security of constructions to water hazards accounting for fluid-soil-structure interactions (SAFECON)	EC (FP7)	Jan.2011	Dec.2015	2500
Manipulation of Reynolds stress for separation control and drag reduction (MARS)	EC (FP7)	Oct.2010	Sept.2013	269
Greener aeronautics international networking (GRAIN)	EC (FP7)	Jan.2011	Dec.2013	99
Numerical methods and tools for key exascale computing challenges in engineering and applied sciences (NUMEXAS)	EC (FP7)	Jan.2013	Sept.2016	436

Visual Analysis for Extremely Large-Scale Scientific Computing (VELaSSCo)	EC (FP7)	Jan.2014	Dec.2016	411
---	----------	----------	----------	-----

Total Projects: 61

Total Budget: 13,474 million Euros

Note: Budget in all projects refers to the participation of E. Oñate's group.

COMPANIES AND ORGANISATIONS WHICH E. OÑATE HAS COLLABORATED WITH

Below is the list of organisations and companies with which E. Oñate has collaborated under contract in the framework of research, development and technology transfer projects:

ORGANISATIONS

Autonomous University of Barcelona	Ministerio de Educación y Cultura
Centre d'Informació i Desenvolupament Empresarial (Cidem)	Ministerio de Fomento
Ciemat	Ministerio de Industria y Energía
Comissionat per a la Societat de la informació	Ministerio de Defensa
European Community	Ministerio de Obras Públicas y Transporte
Fundació Catalana per a la Recerca	National Technical University of Athens (Greece)
Generalitat de Catalunya	Unesco
Generalitat de València	Technical University of Catalunya
George Mason University (USA)	Technical University of Madrid
Institut Cartogràfic de Catalunya	University of Barcelona
Institut Català d'Energia	University of Cantabria
Institut Català del Sòl	University of Valencia
Instituto Nacional de Técnica Aeroespacial	

COMPANIES

AGROMAN, S.A.	INARSA
ALFREDO CARDOSO, S.L. (Portugal)	INGENIA
AMES, S.A.	INFRAES, S.A.
ARGOMM, S.P.A. (Italy)	INME/NASA (UK)
ASCAMM	INSTITUT CARTOGRÀFIC DE CATALUNYA
ASOS. NUCLEAR DE ASCO, AIE	INTECASA
ASOS. NUCLEAR VANDELLOS	ITEL TELECOMUNICAZIONI, S.R.L.
ATIPIC	IZAR S.A.
AUTOPISTAS CONC. ESPAÑOLA, S.A.	J.A. TORROJA-OF. TECNICA, S.A.
AUXINI, S.A.	LABEIN
AVIONS M. DASSAULT (F)	LOSTEC, S.A.
BUILD AIR S.A.	MADESA
CADESA	MARIN INGENIERÍA, S.L.
CANAL DE EL PARDO	MASTER, S.A.
CANDEMAT, S.A.	MATRIX, S.A.
CANTERAS SAN ANDRES, S.A.	METALOGENIA, S.A.
CARLOS FERNÁNDEZ CASADO, S.L.	METALPACK, S.A.
CASA, S.A.	MIKALOR, S.A.
CAST, S.A.	O.C.P. CONSTRUCCIONES
CEA-IFAC	OBRAS Y SERVICIOS HISPANIA, S.A.
CEBAL-ENTEC	OCISA
CEDEX	OFEP, S.A.
CEN/SCK (B)	OFITECO Y GEOS-UTE
CEP IBERICA, S.A.	OFITECO-INTRAESA, UTE
CINSA	PAYMA, S.A.

COMPASS. Ingeniería y Sistemas,S.A.
 COMSA
 COPCISA
 COVIT, S.A.
 CTT-STRONGHOLD
 DECAD INGENIERÍA INTEGRAL, S.A.
 DRAGADOS CONSTRUC. P.O., S.A.
 DRAGADOS OBRAS Y PROYECTOS, S.A.
 ECOTECNIA
 EMP. NAL. DE RESID. RADIOACTIVOS
 EMPRESA NACIONAL BAZAN
 EMSSA
 ENASA
 ENHER
 EOVAL/UTE
 EPTISA
 EQUIP. NUCLEARES, SA/AUXINI, S.A.
 ESTEYCO
 EUROGEONTECNICA, S.A.
 EUROPROJECT, S.A.
 FARGUELL, S.A.
 FAROBEL, S.A.
 FCC CONSTRUCCIÓN S.A.
 FOMENTO DE CONS. Y CONTRATAS, S.A.
 FORMO UNICON, S.A.
 FREYSSINET, S.A.
 FUCHS PETROLEUH A.G. (D)
 FUNDACIÓN INASMET
 FUNDICIONES MIGUEL ROS, S.A.
 GERC
 GEOCONSULTING, S.A.
 GEOTEYCO, S.A.
 GESTIÓ D'INFRASTRUCTURES, S.A.
 GRANTECAN, S.A.
 HIDRURSA, S.L.
 HIPERCOR, S.A.
 HORMIGONES PROYECTADOS, S.A.
 HORMIPRESA
 IDIADA
 IDOM INGENIERÍA Y SISTEMAS, S.A.
 IKERKAN, S. COOP. LTD

PCG HIDRAULICS, LTD. (UK)
 PEDELTA, S.A.
 PEDRO ROQUET, S.A.
 PRAINSA
 PREFABRICADOS ALVI, S.A.
 PROYECTOS Y SERVICIOS, S.A.
 PUERTO AUTONOMO DE BILBAO
 PUJOL, S.A.
 QUANTECH ATZ, S.A.
 REGIENOV/RENAULT (F)
 RELSA
 REMOTE SESING EUROPEO, S.A.
 RENFE
 RESEARCH AND CONCRETE, S.A.
 ROCKFIELD SOFTWARE, LTD (UK)
 RODIO CIMENTACIONES ESPEC, S.A.
 RUBAU TARRES-OCP CONST. UTE
 SATO
 SENER, S.A.
 SERRA AERONÁUTICA
 SIMO, S.A.
 SOLER Y PALAU, S.A.
 SOME, S.A.
 SORIGUE, S.A.
 STATING, S.A.
 STRUCTURALIA
 SUBEROLITA, S.A.
 SWEDISH NUCLEAR POWER INSPECTORATE (ski) (S)
 TABASA
 TALLERES DAUMAR, S.A.
 TECN. GRUPO INI, S.A.
 TERMICAS DEL BESOS, S.A.
 TONI TIÓ VELAS, S.A.
 TRAVIPOS, S.A.
 UBENA BBS, S.L.
 VICRUSA
 VIEWTECH AS
 ZANINI, S.A.
 ZENTRUM FERTIGUNESTECHNIK STUTTGART (D)

RELATIONSHIP OF E. OÑATE WITH LATIN AMERICA

E. Oñate has promoted different cooperation activities with groups of Universities in Latin America.

Stands out the collaboration with different Universities and research centers in Mexico, Argentina, Chile, Brazil, Colombia, Perú and Venezuela with which he has been developing joint research, education and professional activities for years.

As an example, some of the activities in Argentina, Mexico, Chile, Colombia, Venezuela, Brazil and Cuba are listed below.

Activities in Argentina

- Plenary lecturer in several congresses organized by the Argentinian Association of Computational Mechanics (Santa Fe 1996, Bariloche 2000, Bahía Blanca 2003, Buenos Aires 2010).
- Co-Chairman of IV World Congress on Computational Mechanics (Buenos Aires, 1998).
- Founder of the CIMNE Classrooms at the Universities of Santa Fe (2000), Tucuman (2001), Cordoba (2002), Salta (2008) and Rosario (2013).
- Medal of the Argentinian Association of Computational Mechanics (2000)
- Argentinian Award “Dr. Luis Federico Leloir” to the International Cooperation in Science, Technology and Innovation, 2013

Activities in Brazil

- Lecturer in a course on Linear and Non linear Structural Analysis using the Finite Element Method, University of Belo Horizonte, Minas Gerais (1995)
- Founder of a CIMNE Classroom at the University of Uberlandia (2004)
- Founder of a CIMNE Classroom at the Instituto Federal de Educação, Ciência e Tecnologia of Sao Paulo (2009).

Activities in Chile

- Chairman of the I International Congress of Numerical Methods in Engineering and Applied Sciences (Concepcion, Nov. 1992).
- Plenary speaker in different congresses organised by the Chilenian Association for Numerical Methods in Engineering (Santiago, 1996, 2002).
- Founder of CIMNE Classroom at the University of Valparaiso (2004).

Activities in Colombia

- Lecturer in a course on finite element methods at Universidad de Los Andes (1986)
- Founder of CIMNE Classroom at the University of Los Andes (2003)
- Founder of CIMNE Classroom at the University of Manizales (2004)

Activities in Cuba

- Founder of the CIMNE Classroom at the University Central "Martha Abreu" of Las Villas (2003)
- Doctor Honoris Causa, Universidad "Martha Abreu", Las Villas, Cuba (2013)

Activities in El Salvador

- Founder of the CIMNE Classroom at the University Centroamericana "José Simeón Cañas" UCA (2009).

Activities in Guatemala

- Founder of the CIMNE Classroom at the University Mariano Gálvez (UMG) (2011)

Activities in Mexico

- Lectures at different institutions of Mexico:
 - Autonomous University of Mexico, November 1994
 - Mexican Institute of Transportation, Queretano, November 1994
 - University of Guanajuato, May 1996
 - Technological Institute of Monterrey, Jan. 2000
- Promoter and fundational member for the creation of the Mexican Association of Numerical Methods in Engineering (www.cimat.mx/smmni). Created in the University of Guanajuato on January 19th, 2002.
- Promoter for the organisations of the following congresses in Mexico:
 - II International Congress of Numerical Methods in Engineering and Applied Sciences. Guanajuato, 17-19 Jan. 2002
 - III International Congress of Numerical Methods in Engineering and Applied Sciences, Monterrey, 22-24 Jan. 2004
- Founder and co-director of a CIMNE Classroom at the University of Guanajuato, created on January 2002.
- Founder and co-director of a CIMNE Classroom at the Technological Institute of Monterrey, January 2004

Activities in Peru

- Founder of the CIMNE Classroom at the University Católica of Perú (2009)

Activities in Venezuela

- Founder of the CIMNE Classroom at the University Central of Venezuela (2001)
- Founder of the CIMNE Classroom at the University Centroccidental "Lisandro Alvarado" (UCLA) (2008)
- Founder of the CIMNE Classroom at the University of Carabobo (2009)
- Plenary Speaker at the X Int. Conference on Numerical Methods in Engineering and Applied Sciences (CIMENICS'2010), held in Mérida from 22 to 24 March 2010.

ORGANIZED CONFERENCES

Below is a list of conferences organized by E. Oñate in collaboration with other Spanish and foreign scientists. In all of them he has been Chairman or Co-Chairman.

XI World Congress on Computational Mechanics (WCCM XI), 20-25 July 2014, Barcelona, Spain

VI International Conference on Textile Composites and Inflatable Structures - Structural Membranes 2013, 9 - 11 October 2013, Munich, Germany

III International Conference on Particle-Based Methods (PARTICLES 2013), Stuttgart, Germany, 18-20 September 2013

XII International Conference on Computational Plasticity (COMPLAS 2013), Barcelona, Spain, 3-5 September 2013

V International Conference on Computational Methods in Marine Engineering (MARINE 2013), 29 - 30 May 2013, Hamburg, Germany

V International Conference on Textile Composites and Inflatable Structures - Structural Membranes 2011, 5 - 7 October 2011, Barcelona, Spain

IV International Conference on Computational Methods in Marine , 28 - 30 September 2011, Lisbon, Portugal

Computational Methods for Coupled Problems in Science and Engineering - COUPLED PROBLEMS 2011, 20 - 22 June 2011, Kos Island, Greece

XI International Conference on Computational Plasticity (COMPLAS 2011), Barcelona, Spain, 7-9 September 2011

5th Conference on Advances and Applications of GiD & 1st Kratos Workshop, Barcelona, Spain, 26-27 May 2010

International Conference on Particle-Based methods, Barcelona, Spain, 25-27 November 2009

IV International Conference on Textile Composites and Inflatable Structures (Structural Membranes 2009), Stuttgart, Germany, 5-7 October 2009

X International Conference on Computational Plasticity (COMPLAS 2009), Barcelona, Spain, 2-4 September 2009

Computational Methods in Marine Engineering (Marine 2009), Trondheim, Norway, 15-17 June, 2009

Computational Methods for Coupled Problems in Science and Engineering, Ischia Island, Italy, 8-11 June, 2009

Congreso de Métodos Numéricos en Ingeniería, Barcelona, España, 29 Junio - 2 Julio 2009
International Conference on Adaptive Modeling and Simulation (ADMOS 2007), Göteborg, Sweden,
26-28 September 2007

III International Conference on Textile Composites and Inflatable Structures (Structural Membranes
2007), Barcelona, Spain, 17-19 September 2007

IX International Conference on Computational Plasticity (COMPLAS 2007), Barcelona, Spain, 5-7
September 2007

Computational Methods in Marine Engineering (Marine 2007), Barcelona, Spain, 4-6 June, 2007

Computational Methods for Coupled Problems in Science and Engineering, Ibiza Island, Spain 21-
23 May, 2007

European Congress on Computational Fluid Dynamics (ECCOMAS CFD 2006), Egmond aan Zee,
The Netherlands, 5-8 September 2006

III European Conference on Computational Solid and Structural Mechanics (ECCSSM'06), Lisbon,
Portugal, 5-8 June 2006

VII Congreso de Métodos Numéricos en Ingeniería, Granada, España, 4-7 Julio 2005

International Conference on Adaptive Modeling and Simulation (ADMOS 2005), Barcelona, Spain,
8-10 September 2005

VIII International Conference on Computational Plasticity (COMPLAS 2005), Barcelona, Spain, 5-8
September 2005

II International Conference on Textile Composites and Inflatable Structures (Structural Membranes
2005), Stuttgart, Germany, 2 - 4 October 2005

Computational Methods in Marine Engineering (Marine 2005), Oslo, Norway, 27-29 June, 2005

Computational Methods for Coupled Problems in Science and Engineering, Santorini Island,
Greece, 25-28 May, 2005

International Conference on Textile Composites and Infaltable Structures (Structural Membranes
2003), Barcelona, España, 30 June - 3 July 2003

Seventh International Conference on Computational Plasticity (COMPLAS VII), Barcelona, España,
7 - 10 Abril 2003

5º Congreso de Métodos Numéricos en Ingeniería, Madrid, España, 3 - 6 Junio 2002

2º Congreso Internacional de Métodos Numéricos en Ingeniería y Ciencias Aplicadas, Guanajuato,
México, 17 - 19 Enero 2002

1er. Congreso sobre Métodos Numéricos en Ciencias Sociales (MENCIS 2000), Barcelona, España, 20 - 21 Noviembre 2000

European Congress on Computational Methods in Applied Science and Engineering (ECCOMAS 2000), Barcelona, Spain, 11 - 14 September 2000

International Conference on Computational Plasticity: Fundamentals and Applications (COMPLAS VI), Barcelona, Spain, 11 - 14 September 2000

8th European Turbulence Conference, Barcelona, Spain, 27 - 30 June 2000

IV Congreso sobre Métodos Numéricos en Ingeniería, Sevilla, España, 7 - 10 Junio 1999

Fourth World Congress on Computational Mechanics, Buenos Aires, Argentina, 29 June - 2 July 1998

International Conference on Computational Plasticity: Fundamentals and Applications (COMPLAS V), Barcelona, Spain, 17 - 20 March 1997

Tercer Congreso sobre Métodos Numéricos en Ingeniería, Zaragoza, España, 3 - 6 Junio 1996

International Seminar on Structural Analysis of Historical Constructions , Barcelona, Spain, 8 - 10 November, 1995

International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS IV), Barcelona, Spain, 3 - 6 April 1995

VIII International Conference on Finite Elements in Fluids. New Trands and Applications (FEMIF'93), Barcelona, Spain, 20 - 24 September 1993

Segundo Congreso sobre Métodos Numéricos en Ingeniería, La Coruña, España, 7 - 11 Junio 1993

International Conference on Parallel Computing and Transputer Applications (PACTA'92), Barcelona, Spain, 21 - 24 September 1992

International Conference on Computational Plasticity. Fundamentals and Applications (COMPLAS III), Barcelona, Spain, 6 - 10 April 1992

International Congress on Numerical Methods in Engineering and Applied Sciences, Concepción, Chile, 16 - 20 November 1992

Computer Aided Training in Science and Technology (CATS'90), Barcelona, Spain, 8 - 12 July 1990

Computational Plasticity. Models, Software and Applications (COMPLAS II), Barcelona, Spain, 18 - 22 September 1989

Computational Plasticity, Models, Software and Applications (COMPLAS I), Barcelona, Spain, 6 - 10 April 1987

PARTICIPATION IN EDITORIAL BOARDS IN JOURNALS

- Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería (Universidad Politécnica de Cataluña).
- Archives of Computational Methods in Engineering. State of the art reviews. (Centro Internacional de Métodos Numéricos en Ingeniería).
- Engineering Computations (Pineridge Press, U. K.).
- International Journal for Numerical Methods in Engineering (J. Wiley)
- Computational Mechanics (Springer-Verlag)
- Boletín Técnico del Instituto de Materiales y Modelos Estructurales (Univ. de Caracas, Venezuela)
- Applied Mechanics Reviews (Pergamon Press)
- Computer Modeling and Simulation in Engineering (Sage Press, USA)
- International Journal of Computer Applications in Technology
- Sismodinámica
- Computer Methods in Applied Mechanics and Engineering (Elsevier)
- International Journal of Forming Processes (Hermes)
- Computers and Structures (Pergamon Press)
- Structural Engineering and Mechanics (Techno Press)
- International Journal of Computational Methods (World Scientific)
- Revista de Obras Públicas (Colegio de Ingenieros de Caminos, Canales y Puertos)
- Mechanics of Advanced Materials and Structures (J. N. Reddy, USA)
- International Review of Mechanical Engineering (Praise Worthy Prize)
- Interaction and Multiscale Mechanics: an International Journal (J. S. Chen, USA)
- Journal of Mathematics in Industry (Springer)
- Computer Assisted Methods in Engineering and Science (Polish Academy of Sciences)
- Advanced Modelling and Simulation in Engineering Sciences (Springer)
- International Journal for Numerical Methods in Biomedical Engineering (J. Wiley)
- Journal of Sailboat Technology (The Society of Naval Architects and Marine Engineers)
- Latin American Journal of Solids and Structures (Brazil)
- Journal of Computational Particle Mechanics (Springer)
- International Journal of Modern Mechanics (ScienTech)
- International Journal for Multiscale Computational Engineering (Begell House Journals)

REFERENCES

IN USA

Prof. T. J. R. Hughes
Computational and Applied Mathematics Chair III
Institute for Computational Engineering and Sciences (ICES)
The Univ. of Texas at Austin
201 East 24th Street, ACES 5.430A
1 University Station C0200
Austin, Texas 78712-0027
Phone: +1/512/471.33.12, Fax: +1/512/471.86.94
tjr_hughes@hotmail.com

Prof. T. Oden
Texas Institute for Computational
and Applied Mathematics (TICAM)
The Univ. of Texas at Austin
ACES 6.324
Taylor Hall 2400
Austin, Texas 78712
Phone: +1/512/471.33.12, Fax: +1/512/471.86.94
oden@brahma.ticam.utexas.edu

IN EUROPE

Prof. H. A. Mang
Institut für Baustatik und Festigkeitslehre
Technische Universität Wien
Karlsplatz 13/202
A-1040 Wien
AUSTRIA
Phone: +43/1/58 801 202 11, Fax: +43/1/58 801 202 99
herbert.mang@tuwien.ac.at

Prof. B. Schrefler
Dept. of Structural and Transportation Engng.
Univ. of Padova
Via Marzolo, 9
35131 Padova
ITALY
Phone: +39/049/827.56.11, Fax: +39/049/827.56.04
bas@caronte.dic.unipd.it

IN ASIA

Prof. Genki Yagawa
Toyo University
Dept. of Quantum Engng. & Systems Science
School of Engineering
7-3-1 Hongo, Bunkyo-ku
Tokyo 113
JAPAN
Phone: +81/3/38.12.21.11, ext. 6993, Fax: +81/3/56.84.32.65
yagawag@ybb.ne.jp

Prof. Mingwu Yuan
Dept. of Mechanics & Engineering Science
Peking University
Beijing, 100871
CHINA
Phone: +86-10-627.518.26, Fax: +86-10-627.598.06
yuanmw@pku.edu.cn

PUBLICATIONS

SUMMARY OF PUBLICATIONS

4 text books written	4 edited international journals
53 edited books	62 chapters in books
46 monographs with ISBN	306 papers in JCR journals
437 papers in conference proceedings	3 books translated into English
230 research publications	3 book series edited

Total n° of publications: 1148

h factor = 37

N° of citations: 5.213

Chief Editor of three international journals:

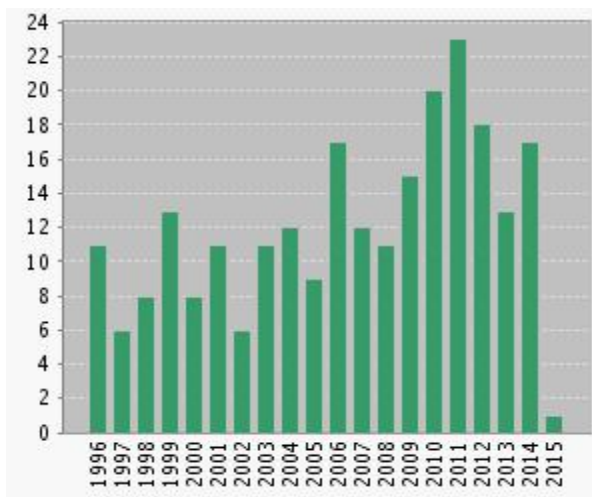
- Archives of Computational Methods in Engineering. Edited by M. Kleiber and E. Oñate, since 1994. Published by Springer. 5 years Impact factor: 3.576
- Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería. Edited by E. Oñate and S. Idelsohn, since 1985. Published by Elsevier. Recently compiled in JCR (2010). 5 years Impact factor: 0.170
- Computational Particle Mechanics. Edited by T. Zohdi, E. Oñate and P. Wriggers. Published by Springer. Starting in January 2014.
- He has 2 papers with more than 200 citations, 5 papers with more than 100 citations, 18 papers with more than 50 citations and 63 papers with more than 20 citations.

JCR JOURNALS WHERE HE HAS PUBLISHED FIVE OR MORE PAPERS

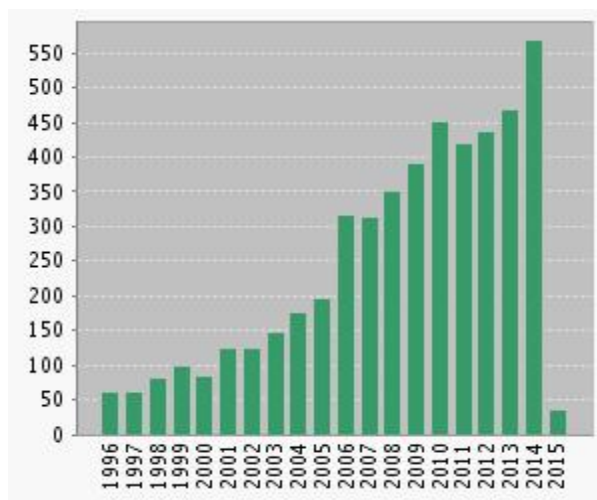
- Int. Journal for Numerical Methods in Engineering (51 papers), Computer Methods in Applied Mechanics and Engineering (39 papers), Int. Journal of Numerical Methods for Analysis and Design in Engineering (in Spanish) (26 papers), Computational Mechanics (25 papers), Engineering Computations (18 papers), Computers and Structures (14 papers), Journal of Solids and Structures (8 papers), Communications in Numerical Methods in Engng. (6 papers), Journal of Materials Processing Technology (5 papers).

NUMBER OF PAPERS IN JCR JOURNALS AND CITATIONS PER YEAR (1996 - 2015) (Source: ISI web of knowledge)

N° of papers/year



N° of citations



Information at February 2015.

ANNEX
PUBLICATIONS

Written books

Oñate, E.

Cálculo de Estructuras por el Método de los Elementos Finitos. Análisis Estático Lineal
CIMNE, 850 pp., Barcelona, 1ª edición, 1992, 2ª edición 1995, ISBN: 84-87867-00-6

Oñate, E.

El Aura de los Números

Reial Acadèmia de Doctors, 110 pp., Depósito Legal: B-26046-98, Barcelona, 1998, Depósito Legal:
B-26046-98

Oñate, E.

Structural analysis with the finite element method. Linear statics. Volume 1. Basis and solids
CIMNE Barcelona, Springer, 2009, ISBN: 978-1-4020-8732-5

Oñate, E.

Structural analysis with the finite element method. Linear statics. Volume 2. Beams, plates and
shells

Series: Lecture Notes on Numerical Methods in Engineering and Sciences, Springer, CIMNE
Barcelona, 2013, ISBN: 978-1-4020-8742-4

Edited International Journals

Quarterly publication of the Technical University of Catalonia (from 1981)

Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería

Eugenio Oñate (Spain), Sergio R. Idelsohn (Spain), ISSN 0213-1315

Quarterly publication of the International Center for Numerical Methods in Engineering (from 1994)

Archives of Computational Methods in Engineering. State of the art reviews

Michael Kleiber (Poland), Eugenio Oñate (Spain), ISSN 1134-3060

Quarterly publication of the Polish Academy of Sciences (from 1994)

Computer Assisted Methods in Engineering and Science

M. Kleiber, T. Burczynski, H. Mang, E. Oñate, M. Papadrakakis, J. Périaux and E. Ramm (Eds.),
ISSN 2299-3649

Computational Particle Mechanics

Zohdi T., Oñate E. and Wriggers P. (Eds.), published by Springer (from 2014), ISSN: 2196-4378
(paper), 2196-4386 (electronic) (from 2014)

Edited Books

- M. A. Toledo, R. Morán and E. Oñate (Eds.),** Dam protections against overtopping and accidental leakage, CRC Press, Taylor and Francis Group, A Balkema book, 2015
- L. Eça, E. Oñate, J. García-Espinosa, T. Kvamsdal and P. Bergan (Eds.),** Marine 2011, IV Int. Conference on Computational Methods in Marine Engineering. Selected papers, Springer, 2013
- E. Oñate, D.R.J. Owen (Eds.),** Particle-Based Methods. Fundamentals and Applications, Springer, 2011
- M. Papadrakkais, E. Oñate, B. Schrefler (Eds.),** Computational Methods for Coupled Problems in Science and Engineering IV, 2011
- E. Oñate, D.R.J. Owen (Eds.),** Particle-Based Methods II. Fundamentals and Applications, 2011
- E. oñate, D.R.J. Owen, D.Peric, B. Suárez (Eds.),** Computational Plasticity XI. Fundamentals and Applications, 2011
- E. Oñate, B. Kröplin, K.-U. Bletzinger (Eds.),** Structural Membranes 2011 V International Conference on Textile Composites and Inflatable Structures, 2011
- L. Eça, E. Oñate, J. Garcia, T. Kvamsdal, P.Bergan (Eds.),** MARINE 2011. Computational Methods in Marine Engineering IV, 2011
- E. Oñate and R. Owen (Eds.),** Particle Based Methods, Computational Methods in Applied Sciences, Vol. 25, Springer, 2011
- M. Papadrakakis and B. Schrefler (Eds.),** Computational Methods for Coupled Problems in Science and Engineering III, E. Oñate, 2009
- E. Oñate and D.R.J. Owen (Eds.),** Computational Plasticity X. Fundamentals and Applications, 2 volumes + 1cd, 2009
- E. Oñate, J. García, P. Bergan and T. Kvamsdal (Eds.),** Computational methods in Marine Engineering III, 2009
- E. Oñate and B. Kröplin (eds.),** Textile Composites and Inflatable Structures, 2008
- E. Oñate (Ed.),** Structural analysis with the finite element methods, 2008
- E. Oñate and B. Kröplin (Eds.),** Textile Composites and Inflatable Structures III, 2007
- E. Oñate and D.R.J. Owen (Eds.),** Computational Plasticity IX. Fundamentals and Applications, 2 volumes, 2007

R. Castilla, E. Oñate, J. M. Redondo (Eds.), Models, Experiments and Computation in Turbulence, 2007

E. Oñate, M. Papadrakakis (Eds.), Computational Methods for Coupled Problems in Science and Engineering II (COUPLED 2007), 5-7 June, 2007

P. Bergan, J. García, E. Oñate and T. Kvamsdal (Eds.), Computational Methods in Marine Engineering (MARINE 2007), 5-7 June, 2007

E. Oñate and B. Kröplin (Eds.), Textile Composites and Inflatable Structures, Springer, 2005

P. Neittaanmäki, T. Rossi, S. Korotov, E. Oñate, J. Periaux and D. Knörzer (Eds.), European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2004), Jyväskylä, 24 - 28 July 2004

E. Oñate and B. Kröplin (Eds.), Textile Composites and Inflatable Structures (Structural Membranes 2003), Barcelona, España, 30 June - 3 July 2003

D.R.J. Owen, E. Oñate and B. Suárez (Eds.), Seventh International Conference on Computational Plasticity (COMPLAS VII), CIMNE, Barcelona, España, 7 - 10 April 2003

E. Oñate, F. Zárate, G. Ayala, S. Botello, M.A. Moreles (Eds.), Actas del II Congreso Internacional de Métodos Numéricos en Ingeniería y Ciencias Aplicadas, CIMNE, Barcelona, Spain 2002

Oñate E., Sacco C. and Idelsohn S., Innovative Tools for Scientific Computation in Aeronautical Engineering, J. Periaux, P. Joly, O. Pironneau and E. Oñate (Eds.), CIMNE, Barcelona, Spain 2001

J. Periaux, O. Pironneau, P. Joly and E. Oñate (Eds.), Innovative Tools for Scientific Computation in Aeronautical Engineering, CIMNE, ISBN84-89925-78-X, Barcelona, Spain, May 2001

E. Oñate, F. García-Sicilia y L. Ramallo (Eds.), Métodos Numéricos en Ciencias Sociales, 491 pp., CIMNE, ISBN 84-89925-71-2, Barcelona, España, 20 - 21 Noviembre 2000

E. Oñate et al (Eds.), Computational Methods in Applied Science and Engineering, CD-Rom, ISBN 84-89925-70-4, Eccomas, Barcelona, Spain, 11 - 14 September 2000

Roca P., González J.L., Oñate E. and Lourenço P.B. (Eds.), Structural Analysis of Historical Constructions II. Possibilities of numerical and experimental techniques, 354 pp., CIMNE, ISBN: 84-89925-26-7, Barcelona, Spain, November 1998

Owen D.R.J., Oñate E. and Hinton E. (Eds.), Computational Plasticity: Fundamentals and Applications, 2 Volumes, 2300 pp., CIMNE, ISBN: 84-87867-71-5, Barcelona, Spain, April 1997

J.A. Désidéri, P. Le Tallec, E. Oñate, J. Périaux and E. Stein (Eds.), Numerical Methods in Engineering'96, John Wiley & Sons, 1996

J.A. Désidéri, C. Hirsch, P. Le Tallec, E. Oñate, M. Pandolfi, J. Périaux and E. Stein (Eds.), Computational Methods in Applied Sciences'96, John Wiley & Sons, 1996

Roca P., González J.L., Marí A.R. and Oñate E. (Eds.), Structural Analysis of Historical Constructions I. Possibilities of Numerical and Experimental Techniques, 300 pp., CIMNE, ISBN: 84-87867-77-4, Barcelona, 1996

Owen D.R.J., Oñate E. and Hinton E. (Eds.), Computational Plasticity, CIMNE/Pineridge Press, ISBN: 0-906674-85-9, 1995

Hughes T., Oñate E., and Zienkiewicz O.C. (Eds.), Recent Developments in Finite Element Analysis, 317 pp., CIMNE, ISBN: 84-87867-45-6, Barcelona, 1994

Morgan K., Oñate E., Periaux J., Peraire J. and Zienkiewicz O.C. (Eds.), Finite Element in Fluids, CIMNE, Pineridge Press, ISBN: 84-87867-30-8, 1993

Hirsch Ch., Zienkiewicz O.C. and Oñate E. (Eds.), Numerical Methods in Engineering, Elsevier, 1992

Hirsch Ch., Periaux J. and Oñate E. (Eds.), Computational Methods in Applied Sciences, Elsevier, 1992

Valero M., Oñate E., Jane M., Suárez B. and Larriba J.L. (Eds.), Parallel Computing and Transputer Applications, CIMNE, IOS Press, ISBN: 84-87967-13-8, 1992

Owen D.R.J., Hinton E. and Oñate E. (Eds.), Computational Plasticity, CIMNE/Pineridge Press, ISBN: 09066474794, 1992

Alder H., Heinrich J. C., Lavanchy S., Oñate E., and Suárez B. (Eds.), Numerical Methods in Engineering and Applied Sciences, CIMNE, ISBN: 84-87867-16-2, Barcelona, 1992

Oñate E., Periaux J. and Samuelsson A. (Eds.), The Finite Element Method in the 1990's. A book dedicated to O. C. Zienkiewicz, CIMNE/Springer Verlag, ISBN: 84-87867-04-9, 1991

Krätzig W.B. and Oñate E., (Eds.), Computational Mechanics of Nonlinear Response of Shells, Springer Verlag, 1990

Oñate E., Suárez B., Owen D.R.J., Schrefler B., Kröplin B. and Kleiber M. (Eds.), Computer Aided Training in Science and Technology, CIMNE/Pineridge Press, ISBN: 84-404-7304-4, 1990

Owen D.R.J., Hinton E. and Oñate E. (Eds.), Computational Plasticity. Models, Software and Applications, Pineridge Press, ISBN: 0-906674-71-9, 1989

Oliver J., Elices M., Oñate E. y Astiz M.A. (Eds.), Métodos Numéricos Aplicados a la Mecánica de Fractura, CIMNE, ISBN: 84-600-5339-3, 191 pp., Barcelona, 1988

Chenot J.L. and Oñate E. (Eds.), Modelling of Metal Forming Processes, Kluwer Academic Publishers, 1988

Owen D.R.J., Hinton E. and Oñate E. (Eds.), Computational Plasticity, Models, Software and Applications, Pineridge Press, ISBN: 0-906674-61-1, 1987

Oliver J., Casteleiro M. y Oñate E. (Eds.), Aplicaciones del Método de los Elementos Finitos en Ingeniería. Vol. III: Diseño por Ordenador, Ediciones UPC, ISBN: 84-7653-012-9, Barcelona, 1986

Oñate E., Suárez B. y Miquel J. (Eds.), Aplicaciones del Método de los elementos Finitos en Ingeniería. Vol. I: Análisis de Estructuras, Ediciones UPC, ISBN: 84-7653-010-2 Barcelona, 1986

Oliver J., Casteleiro M. y Oñate E. (Eds.), Aplicaciones del Método de los Elementos Finitos en Ingeniería. Vol. I: Cálculo de Estructuras, Ediciones UPC, Barcelona, 1986

Alonso E., Gens A. y Oñate E. (Eds.), Aplicaciones de los elementos Finitos en Estructuras. Vol. II: Ingeniería Geotécnica, Ediciones UPC, ISBN: 84-7653-011-0, Barcelona, 1986

Oñate E., Alonso E. y Casteleiro M. (Eds.), Aplicaciones del Método de los Elementos Finitos en Ingeniería, Ediciones UPC, ISBN: 84-300-8136-4, Barcelona, 1982

Translated Books

Zienkiewicz O. C., Taylor R.L. y Nithiarasu P.

Participation in the translation to Spanish of the sixth edition

The finite element method

Volume 1: The Basis

Volume 2: Solid Mechanics

Volume 3: Fluid Dynamics

English Editor: Elsevier Butterworth-Heinemann

Spanish Editor: Centro Internacional de Métodos Numéricos en Ingeniería. Barcelona, 2010

Zienkiewicz O. C. y Taylor R.L.

Translation from English to Spanish of the two volumes of the fourth edition

The finite element method

English Editor: McGraw-Hill. London

Spanish Editor: Centro Internacional de Métodos Numéricos en Ingeniería/McGraw Hill.
Barcelona. 1995

Zienkiewicz O. C.

Translated from English to Spanish

The finite element method in engineering science

English Editor: McGraw-Hill. London

Spanish Editor: Ed. Reverté. Barcelona. 1980

Papers in Journals

Soudah E., Rudenick P., Bordone M., Bijmens B., Garcia-Dorado D., Evangelista A. and Oñate E.

Validation of numerical flow simulations against in vitro phantom measurements in different type B aortic dissection scenarios, *Computer Methods in Biomechanics and Biomedical Engineering*, Vol. 18 (8), pp. 805-15, 2015

Jarauta A., Secanell M., Pons-Prats J., Ryzhakov P., Idelsohn S.R. and Oñate E.

A semi-analytical model for droplet dynamics on the GDL surface of a PEFC electrode, *International Journal of Hydrogen Energy*, Published online, January 2015

Alessandro F., Oñate E. and Carbonell J.M^a

On the effect of the bulk tangent matrix in partitioned solution schemes for nearly incompressible Fluids, *Int. Journal for Numerical Methods in Engineering*, Published online, 2014

Oñate E. and Carbonell J.M.

Updated lagrangian mixed finite element formulation for quasi and fully incompressible fluids *Computational Mechanics*, Vol. 54, pp. 1583-1596, 2014

Becker P., Idelsohn S. and Oñate E.

A unified monolithic approach for multi-fluid flows and fluid-structure interaction using the Particle Finite Element Method with fixed mesh, *Computational Mechanics*, Published online, 2014

Soudah E., Rossi R., Idelsohn S. and Oñate E.

A reduced-order model based on the coupled 1D-3D finite element simulations for an efficient analysis of hemodynamics problems, *Computational Mechanics*, Vol. 54 (4), pp. 1013-1022, 2014

Kouhi M., Dehghan Manshadi M. and Oñate E.

Geometry optimization of the diffuser for the supersonic wind tunnel using genetic algorithm and adaptive mesh refinement technique, *Aerospace Science and Technology*, Vol. 36, pp. 64-74, 2014

Oñate E., Franci A. and Carbonell J.M^a

Lagrangian formulation for finite element analysis of quasi-incompressible fluids with reduced mass losses, *International Journal for Numerical Methods in Fluids*, Vol. 74 (10), pp. 699-731, 2014

Ortega E., Oñate E., Idelsohn S. and Flores R.

Application of the finite point method to high-reynolds number compressible flow problems, *International Journal for Numerical Methods in Fluids*, Vol. 74 (10), pp. 732-748, 2014

Ryzhakov P., Cotella J., Rossi R. and Onate, E.

A two-step monolithic method for the efficient simulation of incompressible flows, *International Journal for Numerical Methods in Fluids*, Vol 74 (12), pp. 919-934, 2014

Bouchart Ch., Kanok-Nukulchai W., Ortega E. and Oñate E.

A shallow water model by finite point method, *International Journal of Computational Methods*, Vol. 11 (1), 27 pages, Paper no.: 1350047, 2014

Kouhi M. and Oñate E.

A stabilized finite element formulation for high-speed inviscid compressible flows using finite Calculus, *International Journal for Numerical Methods in Fluids*, Vol. 74 (2), pp. 872-897, 2014

Norachan P., Kim K.D. and Oñate E.

Analysis of segmentally constructed prestressed concrete bridges using hexahedral elements with realistic tendon profiles, *Journal of Structural Engineering*, American Society of Civil Engineers (ASCE), Vol. 140 (6), pp. 04014028/1-17, 2014

Kempel F., Schartel B., Marti J.M., Burlter K.M., Rossi R., Idelsohn S.R., Oñate E. and Hofmann A.

Modelling the vertical UL 94 test: competition and collaboration between melt dripping, gasification and combustion, *Fire and Materials, an International Journal (FAM)*, Published online, John Wiley & Sons Ltd., 2014

Idelsohn S.R., Marti J., Becker P. and Oñate E.

Analysis of multifluid flows with large time steps using the particle finite element method, *Int. Journal for Numerical Methods in Fluids*, Vol. 75, pp. 621-644, 2014

Oñate E., Franci A. and Carbonell J.M.

A particle finite element method for analysis of industrial forming processes, *Computational Mechanics*, Vol. 54 (1), pp. 85-107, 2014

Oñate E., Celigueta M.A., Latorre S., Casas G., Rossi R. and Rojek J.

Lagrangian analysis of multiscale particulate flows with the particle finite element method, *Journal of Computational Particle Mechanics*, Vol. 1 (1), pp. 85-102, 2014

Ortega E., Oñate E., Idelsohn S. and Flores R.

Comparative accuracy and performance assessment of the finite point method in compressible flow Problems, *Computers and Fluids*, Vol. 89, pp. 53-65, 2014

Oñate E., Nadukandi P. and Idelsohn S.

P1/P0+ elements for incompressible flows with discontinuous material properties, *Computer Methods in Applied Mechanics and Engineering*, Vol. 271, pp. 185-209, 2014

Eijo A., Oñate E. and Oller S.

Delamination in laminated plates using the 4-noded quadrilateral qlrz plate element based on the refined zigzag theory, *Composite Structures*, Vol. 108, pp. 456-471, 2014

Kouhi M., Lee D.S., Buggeda G. and Oñate E.

Multi-objective aerodynamic shape optimization using MOGA coupled to advanced adaptive mesh refinement, *Computers and Fluids*, Vol. 88, pp. 298-312, 2013

Oñate E., Marti J., Ryzhakov P., Rossi R. and Idelsohn S.

Analysis of the melting, burning and flame spread of polymers with the particle finite element method, *Computer Assisted Methods in Engineering and Science*, Vol. 20 (3), pp. 165-184, 2013

Soudah E., Rudenick P., Bordone M., Bijns B., Garcia-Dorado D., Evangelista A. and Oñate E.
Validation of numerical flow simulations against in vitro phantom measurements in different type B aortic dissection scenarios, *Computer Methods in Biomechanics and Biomedical Engineering*, Published online, 2013

Eijo, A., Oñate E. and Oller S.
A four-noded quadrilateral element for composite laminated plates/shells using the refined zigzag theory, *Int. Journal for Numerical Methods in Engineering*, Vol. 95 (8), pp. 631-660, 2013

Eijo A., Oñate E. and Oller S.
A numerical model of delamination in composite laminated beams using the LRZ beam element based on the refined zigzag theory, *Composite Structures*, Vol. 104, pp. 270-280, 2013

Ryzhakov P., Rossi, R., Viña A. and Oñate E.
Modelling and simulation of the sea-landing of aerial vehicles using the Particle Finite Element Method, *Ocean Engineering*, Vol. 66, pp. 92-100, 2013

Carbonell J.M^a. and Oñate E.
Modelling of tunnelling processes and rock cutting tool wear with the Particle Finite Element Method, *Computational Mechanics*, Vol. 52 (3), pp. 607-629, 2013

Salazar F., Morán R., Rossi R. and Oñate E.
Analysis of the discharge capacity of radial-gated spillways using CFD and ANN - Olia Dam case study, *Journal of Hydraulic Research*, Vol. 51 (3), pp. 244-252, 2013

Kamran K., Rossi R. and Oñate E.
A compressible Lagrangian framework for modeling the fluid-structure interaction in the underwater implosion of an aluminum cylinder, *Mathematical Models and Methods in Applied Sciences (M3AS)*, Vol. 23 (2), pp. 339-367, 2013

Lee D.S., Morillo C., Oller S., Bugeda G. and Oñate E.
Robust design optimisation of advance hybrid (fiber-metal) composite structures, *Composite Structures*, Vol. 99, pp. 181-192, 2013

Kamran K., Rossi R., Oñate E. and Idelsohn S.
A compressible Lagrangian framework for the simulation of the underwater implosion of large air bubbles, *Computer Methods in Applied Mechanics and Engineering*, Vol. 255 (1), pp. 210-225, 2013

Rossi, R., Larese de Tetto A., Dadvand P. and Oñate E.
An efficient edge-based level set finite element method for free surface flow problems, *International Journal for Numerical Methods in Fluids*, Vol. 71 (6), pp. 687-716, 2013

Lee D.S., Bugeda G., Periaux J. and Oñate E.
Robust active shock control bump design optimisation using hybrid parallel MOGA, *Computers and Fluids*, Vol. 80, pp. 214 - 224, 2013

- Dadvand P., Rossi, R., Gil M., Martorell X., Cotella J. Juanpere E., Idelsohn S. and Oñate E.**
Migration of a generic multi-physics framework to HPC environments, *Computers and Fluids*, Vol. 80 (SI), pp. 301-309, 2013
- Kamran K., Rossi R. and Oñate E.**
A contact algorithm for shell problems via Delaunay-based meshing of the contact domain, *Computational Mechanics*, Vol. 52 (1), pp. 1-16, 2013
- Larese A., Rossi R., Oñate E., Toledo M.A., Morán R. and Campos H.**
Numerical and experimental study of overtopping and failure of rockfill dams, *International Journal of Geomechanics*, Published online, pp. 04014060-1 to 23, 2013
- García-Espinosa J., Serván B., Di Capua D., Ubach de Fuentes P.A and Oñate E.**
Advances in the development of a FEM model for evaluation of a Surface-Effect Ship (SES) including skirt dynamics, *Ingeniería Naval*, Vol. 1 (920), pp. 86-91, 2013
- Dadvand P., Rossi, R., Gil M., Martorell X., Cotella J. Juanpere E., Idelsohn S. and Oñate E.**
Migration of a generic multi-physics framework to HPC environments, *Computers and Fluids*, Published online, 2012
- Lee D.S., Bugada G., Periaux J. and Oñate E.**
Robust active shock control bump design optimisation using parallel hybrid-MOGA, *Computers and Fluids*, Published online 16/4/2012
- Rossi, R., Larese de Tetto A., Dadvand P. and Oñate E.**
An efficient edge-based level set finite element method for free surface flow problems, *International Journal for Numerical Methods in Fluids*, Published online, 2012
- Kamran K., Rossi R. and Oñate E.**
A contact algorithm for shell problems via Delaunay-based meshing of the contact domain, *Computational Mechanics*, Published online, 2012
- Larese de Tetto A., Rossi R., Oñate E. and Idelsohn S.**
A coupled PFEM-Eulerian approach for the solution of porous FSI problems, *Computational Mechanics*, Vol. 50 (6), pp. 805-819, 2012
- Marti J., Ryzhakov P., Idelsohn S. and Oñate E.**
Combined Eulerian-PFEM approach for analysis of polymers in fire situations, *International Journal for Numerical Methods in Engineering*, Vol. 92 (9), pp. 782-801, 2012
- Salazar F., Oñate E. y Morán R.**
Modelación numérica del deslizamiento de ladera de embalses mediante el Método de Partículas y Elementos Finitos (PFEM), *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 28 (2), pp. 112-123, 2012

Pons-Prats J., Bugeda G., Zarate F. y Onate E.

Robust design optimization applied to aeronautics combining stochastic calculus with evolutionary algorithms, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 28, pp. 18-32, 2012

Rojek J., Labra C., Su O. and Oñate E.

Comparative study of different discrete element models and evaluation of equivalent micromechanical parameters, *International Journal of Solids and Structures*, Vol 49, pp. 1497-1517, 2012

Pons-Prats J., Bugeda G., Zárate F. y Oñate E.

Optimización robusta en aplicaciones aeronáuticas con la combinación de cálculo estocástico y algoritmos evolutivos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 28 (1), pp. 18-32, 2012

Ródenas J.J., Bugeda G., Albelda J., Oñate E., y Nadal E.

Sobre la necesidad de controlar el error de discretización de elementos finitos en optimización de forma estructural con algoritmos evolutivos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 28 (1), pp. 1-11, 2012

Zárate F. and Oñate E.

Extended rotation-free shell triangles with transverse shear deformation effects, *Computational Mechanics*, Vol. 49 (4), pp. 487-503, 2012

Nadukandi P., Oñate E. and García Espinosa J.

A Petrov-Galerkin formulation for the alpha interpolation of FEM and FDM stencils. Applications to the Helmholtz equation, *Int. Journal for Numerical Methods in Engineering*, Vol. 89, pp. 1367-1391, 2012

Idelsohn S. R., Nigro N., Limache A. and Oñate E.

Large time-step explicit integration method for solving problems with dominant convection, *Computer Methods in Applied Mechanics and Engineering*, Vol. 217-220, pp. 168-185, 2012

Eijo A., Oller S. and Oñate E.

Simple and accurate two-noded beam element for composite laminated beams using a refined zigzag theory, *Computer Methods in Applied Mechanics and Engineering*, Vol. 213-216, pp. 362-382, 2012

Nadukandi P., Oñate E. and García Espinosa J.

A high-resolution Petrov-Galerkin method for the convection-diffusion-reaction problem. Part II-A multidimensional extension, *Computer Methods in Applied Mechanics and Engineering*, Vol. 213-216, pp. 327-352, 2012

Geyer A., De Mier Torrecilla M., Philips J.C., Idelsohn S. and Oñate E.

Flow behaviour of negatively buoyant jets in immiscible ambient fluid, *Experiments in Fluids*, Vol. 52 (1), 261-271, 2012

Mier-Torrecilla M., Geyer A., Phillips J., Idelsohn S. and Oñate E.

Numerical simulations of negatively buoyant jets in an immiscible fluid using the Particle Finite Element Method, *International Journal of Fluid Mechanics*, Vol. 69 (5), pp. 1016-1030, 2012

Lee D.S., Periaux J., Gonzalez L.F., Srinivas K. and Oñate E.

Robust multidisciplinary unmanned aerial system design optimisation, *Structural and Multidisciplinary Optimization*, Vol. 45 (3), pp. 433-450, 2012

Lee D.S., Morillo C., Bugada G., Oller S. and Oñate E.

Multilayered composite structure design optimisation using distributed/parallel multi-objective evolutionary algorithms, *Composite Structures*, Vol. 94 (3), pp. 1087-1096, 2012

Lee D.S., Periaux J., Gonzalez L.F., Oñate E. and Qin N.

Active transonic aerofoil design optimisation using MOEA coupled to uncertainty design method, *Journal of Aircraft*, Vol. 48 (3) pp. 1084-1094, 2011

Ortega E., Oñate E., Idelsohn S. and Buachart C.

An adaptive finite point method for the shallow water equations, *Int. Journal for Numerical Methods in Engineering*, Vol. 88 (2), pp. 180-204, 2011

Ryzhakov P., Rossi R. and Oñate E.

An algorithm for the simulation of thermally coupled low speed flow problems, *International Journal for Numerical Methods in Fluids*, Vol. 70 (1), pp. 1-19, 2011

Oñate E., Nadukandi P., Idelsohn S., García J. and Felippa C.

A family of residual-based stabilized finite element methods for Stokes flows, *International Journal for Numerical Methods in Fluids*, Vol. 65 (1-3), pp. 106-134, 2011

Ryzhakov P., Oñate E., Rossi R. and Idelsohn S.

Improving mass conservation in simulation of incompressible flows, *Int. Journal for Numerical Methods in Engineering*, Vol. 90 (12), pp. 1435-1451, 2011

Nadukandi P., Oñate E. and Garcia J.

A fourth-order compact scheme for the Helmholtz equation: Alpha-interpolation of FEM and FDM stencils, *Int. Journal for Numerical Methods in Engineering*, Vol. 86 (1), pp. 18-46, 2011

Rojek J., Oñate E., Labra C. and Kargl H.

Discrete element simulation of rock cutting, *International Journal of Rock Mechanics and Mining Sciences*, Vol. 48 (6), pp. 996-1010, 2011

Ortega E., Oñate E., Idelsohn S. and Buachart C.

An adaptive finite point method for the shallow water equations, *Int. Journal for Numerical Methods in Engineering*, Vol. 88, pp. 180-204, 2011

Pons-Prats J., Bugada G., Zárate F. and Oñate E.

Robust design optimization in aeronautics using stochastic analysis and evolutionary algorithms, *Journal of Aerospace Engineering*, Vol. 225, (10), pp. 1131-1151, 2011

Rossi R., Idelsohn S., Oñate E., Cotella J. y Del Pin F.

Mejora de la solución fuertemente acoplada de problemas FSI mediante una aproximación de la matriz tangente de presión, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 27 (3), pp. 165-179, 2011

Oñate E., Celigueta M.A., Idelsohn S.R., Salazar F. and Suárez B.

Possibilities of the particle finite element method for fluid-soil-structure interaction problems, *Computational Mechanics*, Vol. 48 (3), pp. 307-318, 2011

Ródenas J.J., Bugada G., Albelda J. and Oñate E.

On the need for the use of error-controlled finite element analyses in structural shape optimization processes, *Int. Journal for Numerical Methods in Engineering*, Vol. 87 (11), pp. 1105-1126, 2011

Oñate E., Idelsohn S. R. and Felippa C. A.

Consistent pressure Laplacian stabilization for incompressible continua via higher-order finite calculus, *Int. Journal for Numerical Methods in Engineering*, Vol. 87 (1-5), pp. 171-195, 2011

Lee D.S., Gonzalez L.F., Periaux J., Srinivas K. and Oñate E.

Hybrid-game strategies for multi-objective design optimization in engineering, *Computers and Fluids*, Vol. 47 (1), pp. 189-204, 2011

Lee D.S., Periaux J., Gonzalez L.F, Oñate E. and Quin N.

Active transonic aerofoil design optimization using robust multiobjective evolutionary algorithms, *Journal of Aircraft*, Vol. 48 (3), pp. 1084-1094, 2011

Flores R., Ortega E. y Oñate E.

PUMI: un código explícito no estructurado para resolver las ecuaciones de Euler, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 27 (2), pp. 129-145, 2011

Nadukandi P., Oñate E. and Garcia Espinosa J.

A fourth-order compact scheme for the Helmholtz equation: Alpha-interpolation of FEM and FDM stencils, *Int. Journal for Numerical Methods in Engineering*, Vol. 86 (1), pp. 18-46, 2011

Flores F. and Oñate E.

Wrinkling and folding analysis of elastic membranes using an enhanced rotation-free thin shell triangular element, *Finite Elements in Analysis and Design*, Vol. 47 (9), pp. 982-990, 2011

Martínez X., Rastellini F., Oller S., Flores F. and Oñate E.

Computationally optimized formulation for the simulation of composite materials and delamination failures, *Composites Part B: Engineering*, Vol. 42 (2), pp. 134-144, 2011

Mier-Torrecilla M., Idelsohn S. and Oñate E.

Advances in the simulation of multi-fluid flows with the particle finite element method. Application to bubble dynamics, *International Journal for Numerical Methods in Fluids*, Vol. 67, pp. 1516-1539, 2011

Idelsohn S. R. , Oñate E. and De Mier M.

The particle finite element method applied to solve multi-fluid flows, *Acta Mechanica Solida Sinica*, Vol 23, pp. 56-63, December, 2010

Salazar F., Oñate E. y Morán R.

Modelación numérica de deslizamientos de ladera en embalses mediante el método de partículas y elementos finitos (PFEM), *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 15, pp. 185-211, 2010

Ryzhakov P.B., Rossi R., Idelsohn S.R. and Oñate E.

A monolithic Lagrangian approach for fluid-structure interaction problems, *Computational Mechanics*, Vol. 46 (6), pp. 883-899, 2010

Idelsohn S. R. and Oñate E.

The challenge of mass conservation in the solution of free-surface flows with the fractional-step method: Problems and solutions, *International Journal for Numerical Methods in Biomedical Engineering*, Vol. 26 (10), pp. 1313 - 1330, 2010

Dadvand P., Rossi R. and Oñate E.

An object oriented environment for developing finite element codes for multi-disciplinary applications, *Archives of Computational Methods in Engineering*, Vol. 17 (3), pp 253-297, 2010

Oñate E. and Zárate F.

Extended roation-free plate and beam elements with shear deformation effects, *Int. Journal for Numerical Methods in Engineering*, Vol. 83 (2), pp. 196-227, 2010

Löhner R. and Oñate E.

Advancing front techniques for filling space with arbitrary separated objects, *Finite Elements in Analysis and Design*, Vol. 46 (1-2), pp. 140-151, 2010

Carbonell J.M., Oñate E. and Suárez B.

Modeling of ground excavation with the particle finite element method, *Journal of Engineering Mechanics*, ASCE, Vol. 136 (4), pp. 455-463, 2010

Rossi R. and Oñate E.

Analysis of some partitioned algorithms for fluid-structure interaction, *Engineering Computations*, Vol. 27 (1), pp. 20-56, 2010

Flores R., Ortega E. and Oñate E.

A numerical investigation of wind tunnel model deformations caused by the twin-sting support system, *Journal of Aircraft*, Vol. 47, pp. 708-714, 2010

Nadukandi P., Oñate E. and García J.

A high-resolution Petrov-Galerkin method for the 1D convection-diffusion-reaction problem, *Computer Methods in Applied Mechanics and Engineering*, Vol. 199, pp. 525-546, 2010

Ubach de Fuentes, P.A. and E. Oñate

New rotation-free finite element shell triangle accurately using geometrical data, *Computer Methods in Applied Mechanics and Engineering*, Vol. 199, pp 383-391, 2010

Oñate E., Rossi R., Idelsohn S.R. and Butler K.M.

Melting and spread of polymers in fire with the particle finite element method, *Int. Journal for Numerical Methods in Engineering*, Vol. 81 (8), pp. 1046-1072, 2010

Idelsohn S.R., Mier-Torrecilla M., Nigro N. and Oñate E.

On the analysis of heterogeneous fluids with jumps in the viscosity using a discontinuous pressure field, *Computational Mechanics*, Vol. 46 (1), pp. 115-124, 2010

Rossi R., Ryzhakov P.B. and Oñate E.

A monolithic FE formulation for the analysis of membranes in fluids, *International Journal of Space Structures*, Vol. 24 (4), pp. 205-210, 2009

Kleiber M. and Oñate E.

Olgierd Cecil Zienkiewicz Obituary, *Archives of Computational Methods in Engineering*, Vol. 16, pp 465, 2009

Idelsohn S.R., del Pin F., Rossi R. and Oñate E.

Fluid-structure interaction problems with strong added-mass effect, *Int. Journal for Numerical Methods in Engineering*, Vol. 80, (10), pp. 1261-1294, 2009

Valdés J.G., Miquel J. and Oñate E.

Nonlinear finite element analysis of orthotropic and prestressed membrane structures, *Finite Elements in Analysis and Design*, Vol. 45 (6-7), pp. 395-405, 2009

Di Capua D., Oñate E. y Marí A.

Modelo higo-termo-mecánico para el hormigón expuesto al fuego, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 25 (4), pp. 359-393, 2009

Labra C. and Oñate E.

High-density sphere packing for discrete element method simulations, *Communications in Numerical Methods in Engineering*, Vol. 25 (7), pp. 837-849, 2009

Labra C., Rojek J., Oñate E. and Zárate F.

Advances in discrete element modelling of underground excavations, *Acta Geotechnica*, Vol. 3 (4), pp. 317-322, 2009

Löhner R. and E. Oñate

An advancing front technique for filling space with arbitrary separated objects, *Int. Journal for Numerical Methods in Engineering*, Vol. 78 (13), pp. 1618-1630, 2009

Ortega E., Oñate E. and Idelsohn S.

A finite point method for adaptive three-dimensional compressible flow calculations, *International Journal for Numerical Methods in Fluids*, Vol. 60 (9), pp. 937-971, 2009

Valdés J. G. and Oñate E.

Orthotropic rotation-free basic thin shell triangle, *Computational Mechanics*, Vol. 44 (3), pp. 363-375, 2009

Valdés J.G., Miquel J. and E. Oñate

Nonlinear finite element analysis of orthotropic and prestressed membrane structures, *Finite Elements in Analysis and Design*, Vol. 45 (6-7), pp. 395-405, 2009

Idelsohn S., Mier-Torrecilla M. and E. Oñate

Multi-fluid flows with the particle finite element method, *Computer Methods in Applied Mechanics and Engineering*, Vol. 198 (33-36), pp. 2750-2767, 2009

Boroomand B., Najjar M. and Oñate E.

The generalized finite point method, *Computational Mechanics*, Vol. 44, pp. 173-190, 2009

Lomboy G.R., Suthasupradit S., Kim K.D. and Oñate E.

Nonlinear formulations of a four-node quasi-conforming shell element, *Archives of Computational Methods in Engineering*, Vol. 16 (2), pp. 189-250, 2009

Chacón R., Guzmán F., Mirambell E, Real E. and Oñate E.

Wireless sensor networks for strain monitoring during steel bridges launching, *Structural Health Monitoring*, Vol. 8 (3), pp. 195-205, 2009

Ortega E., Oñate E. and Idelsohn S.

A finite point method for adaptive-three-dimensional compressible flow calculations, *International Journal for Numerical Methods in Fluids*, Vol 60 (9), pp. 937-971, 2009

Idelsohn S.R., Marti J., Souto-Iglesias A. and Oñate E.

Interaction between an elastic structure and free-surface flows: experimental versus numerical comparisons using the PFEM, *Computational Mechanics*, Vol. 43 (1), pp. 125-132, 2008

Fragakis Y. and Oñate E.

Parallel Delaunay triangulation for particle finite element methods, *Communications in Numerical Methods in Engineering*, Vol. 24 (11), pp. 1009-1017, 2008

Bugeda G., Ródenas J. J y Oñate E.

An integration of a low cost adaptive remeshing strategy in the solution of structural shape optimization problems using evolutionary methods, *Computers and Structures*, Vol. 86 (13-14), pp. 1563-1578, 2008

López R. and Oñate E.

An extended class of multilayer perceptron, *Neurocomputing*, Vol. 71 (13-15), pp. 2538-2543, 2008

López R., Balsa-Canto E. and Oñate E.

Neural networks for variational problems in engineering, *Int. Journal for Numerical Methods in Engineering*, Vol. 75 (11), pp. 1341-1360, 2008

Nadukandi P., Oñate E. and García-Espinosa J.

Analysis of a consistency recovery method for the 1D convection-diffusion equation using linear finite elements, *International Journal for Numerical Methods in Fluids*, Vol. 57 (9), pp 1291-1320, 2008

García-Espinosa J., Valls A. and Oñate E.

ODDLS: A new unstructured mesh finite element method for the analysis of free surface flow problems, *Int. Journal for Numerical Methods in Engineering*, Vol 76 (9), pp. 1297-1327, 2008

Larese A., Rossi R., Oñate E. and Idelsohn S.R.

Validation of the particle finite element method (PFEM) for simulation of free surface flows, *Engineering Computations*, Vol. 25 (3-4), pp. 385-425, 2008

Idelsohn S.R., Marti J., Limache A. and Oñate E.

Unified Lagrangian formulation for elastic solids and incompressible fluids: Application to fluid-structure interaction problems via the PFEM, *Computer Methods in Applied Mechanics and Engineering*, Vol. 197 (19-20), pp. 1762-1776, 2008

Oñate E., Idelsohn S.R., Celigueta M.A., Rossi R.

Advances in the particle finite element method for the analysis of fluid-multibody interaction and bed erosion in free surface flows, *Computer Methods in Applied Mechanics and Engineering*, Vol. 197 (19-20), pp. 1777-1800, 2008

Rastellini F., Oller S., Salomon O. and Oñate E.

Composite materials non-linear modelling for long fibre-reinforced laminates. Continuum basis, computational aspects and validations, *Computers and Structures*, Vol. 86 (9), pp. 879-896, 2008

Rojek J. and Oñate E.

Multiscale analysis using a coupled discrete/finite element model, *Interaction and Multiscale Mechanics: An International Journal (IMMI)*, Vol. 1 (1), pp. 1-31, 2007

Löhner R., Yang C. and Oñate E.

Simulation of flows with violent free surface motion and moving objects using unstructured grids, *International Journal for Numerical Methods in Fluids*, Vol. 53 (8), pp 1315-1338, 2007

Limache A., Idelsohn S., Rossi R. and Oñate E.

The violation of objectivity in Laplace formulations of the Navier-Stokes equations, *International Journal for Numerical Methods in Fluids*, Vol. 54 (6-8), pp 639-664 , 2007

Ortega E., Oñate E. and Idelsohn S.

An improved finite point method for tridimensional potential flows, *Computational Mechanics*, Vol. 40 (6), pp. 949-963, 2007

Oñate E., Valls A. and García J.

Modeling incompressible flows at low and high Reynolds numbers via a finite calculus-finite element approach, *Journal of Computational Physics*, Vol. 224 (1), pp. 332-351, 2007

Oñate E., Valls A. and García J.

Computation of turbulent flows using a finite calculus-finite element formulation, *International Journal for Numerical Methods in Fluids*, Vol. 54 (6-8), pp. 609-637, 2007

Lomboy G.R., Kim K.D. and Oñate E.

A co-rotational 8-node resultant shell element for progressive nonlinear dynamic failure analysis of laminated composite structures, *Mechanics of Advanced Materials and Structures*, Vol. 14 (2), pp. 89-105, 2007

Felippa C. A. and Oñate E.

Nodally exact Ritz discretizations of 1D diffusion-absorption and Helmholtz equations by variational FIC and modified equation methods, *Computational Mechanics*, Vol. 39 (2), pp. 91-111, 2007

Flores F. and Oñate E.

A rotation-free shell triangle for the analysis of kinked and branching shells, *Int. Journal for Numerical Methods in Engineering*, Vol. 69 (7), pp. 1521-1551, 2007

Oñate E., Miquel J. and Zárate F.

Stabilized solution of the multidimensional advection-diffusion-absorption equation using linear finite elements, *Computers and Fluids*, Vol. 36 (1), pp. 92-112, 2007

Del Pin F., Idelsohn S., Oñate E. and Aubry R.

The ALE/Lagrangian particle finite element method: A new approach to computation of free-surface flows and fluid-object interactions, *Computers and Fluids*, Vol. 36 (1), pp. 27-38, 2007

Aubry R., Löhner R., Oñate E. and Idelsohn S.

Assessment of a Lagrangian incompressible flow code, *AIAA*, Paper n° 0715, 2007

Oñate E., Idelsohn S.R., Celigueta M. A. and Rossi R.

Advances in the particle finite element method for fluid-structure interaction problems, *Computational Mechanics: Solids, Structures and Coupled Problems*, Vol. 6, pp. 41-62, 2006

Agüero A., Pallarés F. and Oñate E.

The rotation-free BST shell element for linearized buckling analysis of steel structures, *Int. Journal for Computational Methods in Engineering Science and Mechanics*, Vol. 7, pp. 1-7, 2006

Oñate E., Valls A. and García Espinosa J.

FIC/FEM formulation with matrix stabilizing terms for incompressible flows at low and high Reynolds numbers, *Computational Mechanics*, Vol. 38 (4-5), pp. 440-455, 2006

Lohner R., Yang C. and Oñate E.

On the simulation of flows with violent free surface motion, *Computer Methods in Applied Mechanics and Engineering*, Vol. 195 (41-43), pp. 5597-5620, 2006

Rojek J., Oñate E. and Taylor R. L.

CBS-based stabilization in explicit solid dynamics, *Int. Journal for Numerical Methods in Engineering*, Vol. 66 (10), pp. 1547-1568, 2006

Oñate E., Celigueta M.A. and Idelsohn S.R.

Modeling bed erosion in free surface flows by the particle finite element method, *Acta Geotechnica*, Vol 1 (4), pp. 237-252, 2006

Perazzo F., Oller S., Miquel J. y Oñate E.

Avances en el método de puntos finitos para la mecánica de sólidos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 22 (2), pp. 153-167, 2006

Oñate E., Rojek J., Chiumenti M., Idelsohn S.R., Del Pin F. and Aubry R.

Advances in stabilized finite element and particle methods for bulk forming processes, *Computer Methods in Applied Mechanics and Engineering*, Vol. 195 (48-49), pp. 6750-6777, 2006

Flores F. and Oñate E.

Rotation-free finite element for the non-linear analysis of beams and axisymmetric shells, *Computer Methods in Applied Mechanics and Engineering*, Vol. 195 (41-43), pp. 5297-5315, 2006

Aubry R., Idelsohn S. R. and Oñate E.

Fractional step like schemes for free surface problems with thermal coupling using the Lagrangian PFEM, *Computational Mechanics*, Vol. 38 (4-5), pp. 294-309, 2006

Mora J., Otín R., Dadvand P. Escolano E., Pasenau Miguel A. and Oñate E.

Open tools for electromagnetic simulation programs, *The International Journal for Computation and Mathematics in Electrical and Electronic Engineering (Compel)*, Vol. 25 (3), pp. 551-564, 2006

Idelsohn S.R. and Oñate E.

To mesh or not to mesh. That is the question... , *Computer Methods in Applied Mechanics and Engineering*, Vol. 195 (37-40), pp. 4681 - 4696, 2006

Neamtu L. y Oñate E.

Un punto de vista sobre el uso de la simulación en la industria de estampación de chapa metálica, *Deformación Metálica*, Vol. 287, Marzo-Abril, 2006

Oñate E., García J., Idelsohn S. R., and Del Pin F.

Finite calculus formulation for finite element analysis of incompressible flows. Eulerian, ALE and Lagrangian approaches, *Computer Methods in Applied Mechanics and Engineering*, Vol. 195 (23-24), pp. 3001-3037, 2006

Oñate E., Miquel J. and Hauke G.

Stabilized formulation for the advection-diffusion-absorption equation using finite calculus and linear finite elements, *Computer Methods in Applied Mechanics and Engineering*, Vol. 195 (33-36), pp. 3926-3946, July 2006

Recarey C., Oñate E., Miquel J., Rojek J., Zárate F. y Burrel S.

Simulación de problemas de desgaste, en la interacción herramienta de corte terreno, empleando el método de los elementos discretos, *Ingeniería Civil*, Vol. 141, pp. 19-34, 2006

Oñate E., Zárata F. and Idelsohn S.

Finite element formulation for convective-diffusive problems with sharp gradients using finite calculus , *Computer Methods in Applied Mechanics and Engineering*, Vol. 195 (13-16), pp. 1793-1825, 2006

Idelsohn S. R., Oñate E., Del Pin F. and Calvo N.

Fluid-structure interaction using the particle finite element method, *Computer Methods in Applied Mechanics and Engineering*, Vol. 195 (17-18), pp. 2100-2123, 2006

Oñate E., Arteaga J., García Espinosa J. and Flores R.

Error estimation and mesh adaptivity in incompressible viscous flows using a residual power approach, *Computer Methods in Applied Mechanics and Engineering*, Vol. 195, pp. 339-362, 2006

Flores F. y Oñate E.

Un elemento de lámina sin grados de libertad rotacionales para el análisis de cáscaras con quiebres y ramificadas, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 21 (4), pp. 385-411, 2005

Recarey C., Oñate E., Rojek J., Miquel J., Zárata F., Cadoce G. y Labra C.

Modelación del ensayo brasileño empleando modelación discreta, *Ingeniería Civil*, Vol. 139, pp. 112-124, 2005

Rossi R., Lazzari M., Vitaliani R. and Oñate E.

Simulation of light-weight membrane structures by wrinkling model, *Int. Journal for Numerical Methods in Engineering*, Vol. 62 (15), pp. 2127-2153, 2005

Oñate E. and Flores F. G.

Advances in the formulation of the rotation-free basic shell triangle, *Computer Methods in Applied Mechanics and Engineering*, Vol. 194 (21-24), pp. 2406-2443, 2005

Boroomand B., Tabatabaei A. A. and Oñate E.

Simple modifications for stabilization of the finite point method, *Int. Journal for Numerical Methods in Engineering*, Vol. 63 (3), pp. 351-379, 2005

Aubry R. , Idelsohn S.R. and Oñate E.

Particle finite element method in fluid-mechanics including thermal convection-diffusion , *Computers and Structures*, Vol. 83 (17-18), pp. 1459-1475, 2005

Flores F. and Oñate E.

Improvements in the membrane behaviour of the three node rotation-free BST shell triangle using an assumed strain approach, *Computer Methods in Applied Mechanics and Engineering*, Vol. 194 (6-8), pp. 907-932, 2005

Oller S., Salomon O. and Oñate E.

A continuum mechanics model for mechanical fatigue analysis, *Computational Materials Science*, Vol. 32 (2), pp. 175-195, 2005

Hurtado J., Zárate F. and Oñate E.

Reliability estimation of the sheet stamping process using support vector machines, *International Journal of Vehicle Design*, Vol. 39 (1-2), pp. 110-124, 2005

Agüero A., Atienza J. R. y Oñate E.

Método aproximado para estimar el estado límite último en entramados metálicos esbeltos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 20 (3), pp. 277-295, 2004

Oñate E., Idelsohn S.R., Del Pin F. and Aubry R.

Possibilities of the particle finite element method for fluid-structure interaction problems with free surface waves, *Revue Européenne des Éléments Finis*, Vol. 13, pp. 637-666, 2004

Idelsohn S.R., Oñate E. and Del Pin F.

The particle finite element method: a powerful tool to solve incompressible flows with free-surfaces and breaking waves, *Int. Journal for Numerical Methods in Engineering*, Vol. 61 (7), pp. 964-989, 2004

Oñate E.

El valor del cálculo en los sistemas de ayuda a la toma de decisiones en ingeniería, *Revista de Obras Públicas*, Vol. 151 (3449), pp. 41-48, 2004

Löhner R. and Oñate E.

An advancing front technique for filling space with arbitrary separated objects, *Int. Journal for Numerical Methods in Engineering*, Vol. 61 (12), pp. 1977-1991, 2004

Felippa C. and Oñate E.

Volumetric constraint models for anisotropic elastic solids, *Journal of Applied Mechanics*, Vol. 71 (5), pp. 731-734, 2004

Perazzo F., Miquel J. y Oñate E.

El método de puntos finitos para problemas de la dinámica de sólidos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 20 (3), pp. 235-246, 2004

Oñate E., Idelsohn S.R., Del Pin F. and Aubry R.

The particle finite element method. An overview, *International Journal of Computational Methods*, Vol. 1 (2), pp. 267-307, 2004

Oñate E. and Rojek J.

Combination of discrete element and finite element methods for dynamic analysis of geomechanics problems, *Computer Methods in Applied Mechanics and Engineering*, Vol. 193 (27-29), pp. 3087-3128, 2004

Oñate E., Rojek J., Taylor R.L. and Zienkiewicz O.C.

Finite calculus formulation for incompressible solids using linear triangles and tetrahedra, *Int. Journal for Numerical Methods in Engineering*, Vol. 59 (11), pp. 1473-1500, 2004

García Espinosa J., Oñate E., J. Bloch y Chakkor M.R.

Análisis CFD del movimiento de balance de un portacontenedores, *Revista de Ingeniería Naval*, Vol. 814, pp. 104-108, 2004

Oñate E.

Possibilities of finite calculus in computational mechanics, *Int. Journal for Numerical Methods in Engineering*, Vol. 60 (1), pp. 255-281, 2004

Agüero A., J. R. Atienza y Oñate E.

Método aproximado para estimar el estado límite último en entramados metálicos esbeltos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 20 (3), pp. 277-295, 2004

Idelsohn S.R., Oñate E., Calvo N. and Del Pin F.

The meshless finite element method, *Int. Journal for Numerical Methods in Engineering*, Vol. 58 (6), pp. 893-912, 2003

Calvo N., Idelsohn S.R. and Oñate E.

The extended Delaunay tessellation, *Engineering Computations*, Vol. 20 (5-6), pp. 583- 600, 2003

Tschöpe H., Wriggers P. and Oñate E.

Direct computation of instability points with inequality constraints using the FEM, *Engineering Computations*, Vol. 20 (5-6), pp. 611- 628, 2003

Oñate E., Taylor R.L., Zienkiewicz O. C., and Rojek J.

A residual correction method based on finite calculus, *Engineering Computations*, Vol. 20 (5-6), pp. 629-658, 2003

Felippa C. A. and Oñate E.

Stress, strain and energy splittings for anisotropic elastic solids under volumetric constraints, *Computers and Structures*, Vol. 81 (13), pp. 1343-1357, 2003

Oñate E.

Multiscale computational analysis in mechanics using finite calculus: an introduction, *Computer Methods in Applied Mechanics and Engineering*, Vol. 192 (28-30), pp. 3043-3059, 2003

Tschöpe H., Oñate E. and Wriggers P.

Direct computation of instability points for contact problems, *Computational Mechanics*, Vol. 31 (1-2), pp. 173-178, 2003

Idelsohn S.R., Calvo N. and Oñate E.

Polyhedrization of an arbitrary 3D point set, *Computer Methods in Applied Mechanics and Engineering*, Vol. 192 (22-24), pp. 2649-2667, 2003

Idelsohn S. R., Oñate E. and Del Pin F.

A Lagrangian meshless finite element method applied to fluid-structure interaction problems, *Computers and Structures*, Vol. 81 (8-11), pp. 655-671, 2003

García Espinosa J. and Oñate E.

An unstructured finite element solver for ship hydrodynamics problems, *Journal of Applied Mechanics*, Vol. 70 (1), pp. 18-26, 2003

D'Elía J., Storti M., Oñate E. and Idelsohn S.R.

A Lagrangian panel method in the time domain for moving free-surface potential flows, *International Journal of Computational Fluid Dynamics*, Vol. 16 (4), pp. 263-275, 2002

Hanganu A.D., Oñate E., Barbat A.H.

A finite element methodology for local/global damage evaluation in civil engineering structures, *Computers and Structures*, Vol. 80 (20-21), pp. 1667-1687, 2002

Salomón O., Oller S. and Oñate E.

Fatigue analysis of materials and structures using a continuum damage model, *International Journal of Forming Processes*, Vol. 5 (2-3-4), pp. 493-503, 2002

Ribó R., Bugeda G. and Oñate E.

Some algorithms to correct a geometry in order to create a finite element mesh, *Computers and Structures*, Vol. 80 (16-17), pp. 1399-1408, 2002

Oñate E., Cendoya P. and Miquel J.

Non-linear explicit dynamic analysis of shells using the BST rotation-free triangle, *Engineering Computations*, Vol. 19 (5-6), pp. 662-706, 2002

Oñate E.

Posibilidades de los métodos numéricos en el mundo industrial, *Col·lecció Aula de Ciència i Cultura n° 13*, Fundació Caixa de Sabadell, pp. 9-33, 2002

Car E., Zalamea F., Oller S., Miquel J. and Oñate E.

Numerical simulation of fiber reinforced composite materials - two procedures, *International Journal of Solids and Structures*, Vol. 39 (7), pp. 1967-1986, 2002

Löhner R., Sacco C., Oñate E. and Idelsohn S.

A finite point method for compressible flow, *Int. Journal for Numerical Methods in Engineering*, Vol. 53 (8), pp. 1765-1779, 2002

Suárez B., Oñate E. y Ribó R.

Las herramientas numéricas y la práctica profesional en la ingeniería civil, *Revista de Obras Públicas*, Vol. 149 (3418), pp. 7-15, 2002

Rojek J., O.C. Zienkiewicz, Oñate E. and Postek E.

Advances in FE explicit formulation for simulation of metalforming processes, *Journal of Materials Processing Technology*, Vol. 119, pp. 41-47, 2001

Oñate E., Perazzo F. and Miquel J.

A finite point method for elasticity problems, *Computers and Structures*, Vol. 79 (22-25), pp. 2151-2163, 2001

Flores F.G. and Oñate E.

A basic thin shell triangle with only translational DOFs for large strain plasticity, *Int. Journal for Numerical Methods in Engineering*, Vol. 51 (1), pp. 57-83, 2001

Oñate E. and García J.

A finite element method for fluid-structure interaction with surface waves using a finite calculus formulation, *Computer Methods in Applied Mechanics and Engineering*, Vol. 191 (6-7), pp. 635-660, 2001

Idelsohn S., Storti M. and Oñate E.

Lagrangian formulations to solve free surface incompressible inviscid fluid flows, *Computer Methods in Applied Mechanics and Engineering*, Vol. 191 (6-7), pp. 583-593, 2001

Car E., Oller S. and Oñate E.

A large strain plasticity model for anisotropic materials - composite material application, *International Journal of Plasticity*, Vol. 17 (11), pp. 1437-1463, 2001

López Rodríguez M., García Espinosa J. y Oñate E.

Optimización de embarcaciones de recreo mediante la utilización de un código CFD, *Ingeniería Naval*, Vol. 784, pp. 122-130, 2001

Oñate E., Tschöpe H. and Wriggers P.

Combination of the critical displacement method with a damage model for structural instability analysis, *Engineering Computations*, Vol. 18 (3-4), pp. 642-662, 2001

Scotta R., Vitaliani R., Satta A., Oñate E. and Hanganu A.

A scalar damage model with a shear retention factor for the analysis of reinforced concrete structures: theory and validation, *Computers and Structures*, Vol. 79 (7), pp. 737-755, 2001

Codina R., Morton C., Oñate E. and Soto O.

Numerical aerodynamic analysis of large buildings using a finite element model with application to a telescope building, *International Journal of Numerical Methods for Heat and Fluid Flow*, Vol. 10 (5-6), pp. 616-633, 2000

Chiandussi G., Bugeda G. and Oñate E.

Shape variable definition with C-0, C-1 and C-2 continuity functions, *Computer Methods in Applied Mechanics and Engineering*, Vol. 188 (4), pp. 727-742, 2000

Oñate E.

A stabilized finite element method for incompressible viscous flows using a finite increment calculus formulation, *Computer Methods in Applied Mechanics and Engineering*, Vol. 182 (3-4), pp. 355-370, 2000

Oñate E. and Zárate F.

Rotation-free triangular plate and shell elements, *Int. Journal for Numerical Methods in Engineering*, Vol. 47 (1-3), pp. 557-603, 2000

Oñate E.

Desarrollos y aplicaciones de modelos de fractura en la Escuela de Ingenieros de Caminos de Barcelona, *Anales de Mecánica de la Fractura*, Vol. 17, pp. 127-154, 2000

Oñate E., Sacco C. and Idelsohn S.

A finite point method for incompressible flow problems, *Computing and Visualization in Science*, Vol. 3, pp. 67-75, 2000

Car E., Oller S. and Oñate E.

An anisotropic elastoplastic constitutive model for large strain analysis of fiber reinforced composite materials, *Computer Methods in Applied Mechanics and Engineering*, Vol. 185 (2-4), pp. 245-277, 2000

Chiandussi G., Bugada G. and Oñate E.

A simple method for automatic update of finite element meshes, *Communications in Numerical Methods in Engineering*, Vol. 16, pp. 1-19, 2000

Bugeda G., Gil L. and Oñate E.

Structural shape sensitivity analysis for nonlinear material models with strain softening, *Structural Optimization*, Vol. 17 (2-3), pp. 162-171, 1999

Blanco E., Gil Ll. Suárez B. y Oñate E.

Experiencias en la enseñanza asistida por ordenador de métodos numéricos para cálculo de estructuras, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 5 (2), pp. 297-306, 1999

Botello S., Marroquín J.L. y Oñate E.

Un modelo de optimización estocástica aplicado a la optimización de estructuras de barras prismáticas, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 15 (4), pp. 425-434, 1999

Lopez J., Oller S., Oñate E. and Lubliner J.

A homogeneous constitutive model for masonry, *Int. Journal for Numerical Methods in Engineering*, Vol. 46 (10), pp. 1651-1671, 1999

Oñate E. and Manzan M.

A general procedure for deriving stabilized space-time finite element methods for advective-diffusive problems, *International Journal for Numerical Methods in Fluids*, Vol. 31 (1), pp. 203-221, 1999

Löhner R., Yang C., Oñate E. and Idelsohn S.

An unstructured grid-based, parallel free surface solver, *Applied Numerical Mathematics*, Vol. 31 (3), pp. 271-293, 1999

Cruchaga M. A. and Oñate E.

A generalized streamline finite element approach for the analysis of incompressible flow problems including moving surfaces, *Computer Methods in Applied Mechanics and Engineering*, Vol. 173 (1-2), pp. 241-255, 1999

Botello S., Marroquin J. L., Oñate E. and Van Horebeek J.

Solving structural optimization problems with genetic algorithms and simulated annealing, *Int. Journal for Numerical Methods in Engineering*, Vol. 45 (8), pp. 1069-1084, 1999

Idelsohn S.R., Oñate E. and Sacco C.

Finite element solution of free-surface ship-wave problems, *Int. Journal for Numerical Methods in Engineering*, Vol. 45 (5), pp. 503-528, 1999

Bugeda G. and Oñate E.

Optimum aerodynamic shape design for fluid flow problems including mesh adaptivity, *International Journal for Numerical Methods in Fluids*, Vol. 30 (2), pp. 161-178, 1999

Botello S., Oñate E. and Miquel J.

A layer-wise triangle for analysis of laminated composites, plates and shells, *Computers and Structures*, Vol. 70 (6), pp. 635-646, 1999

Car E., Oller S. y Oñate E.

Un modelo constitutivo elasto plástico acoplado con daño mecánico e higrométrico. Aplicación a pavimentos flexibles, *Revista Internacional de Ingeniería de Estructuras*, Vol. 2 (2), pp. 20-38, 1998

Suárez B., Blanco E., Gil Ll., Zapata P. and Oñate E.

Ed-Elas2D: An educational program for computer-aided training in structural analysis using the finite element method, *European Journal of Engineering Education*, Vol. 23 (2), pp. 243-254, 1998

Rojek J. and Oñate E.

Sheet springback analysis using a simple shell triangle with translational degrees of freedom only, *International Journal of Forming Processes*, Vol. 1 (3), pp. 275-296, 1998

Taylor R.L., Zienkiewicz O.C. and Oñate E.

A hierarchical finite element method based on the partition of unity, *Computer Methods in Applied Mechanics and Engineering*, Vol. 152 (1-2), pp. 73-84, 1998

Estupiñán J., Oñate E. y Suárez B.

Optimización topológica mediante algoritmos genéticos, estrategias evolutivas y el método de Baluja, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 14 (4), pp. 427-438, 1998

Löhner R. and Oñate E.

An advancing front point generation technique, *Communications in Numerical Methods in Engineering*, Vol. 14 (12), pp. 1097-1108, 1998

Oñate E. and Idelsohn S.

A mesh-free finite point method for advective-diffusive transport and fluid flow problems, *Computational Mechanics*, Vol. 21 (4-5), pp. 283-292, 1998

Rojek J., Jovicevic J. and Oñate E.

Industrial applications of sheet-stamping simulation using new finite element models, *Computer Modeling and Simulation in Engineering*, Vol. 3 (3), pp. 147-152, 1998

Oñate E.

Derivation of stabilized equations for numerical solution of advective-diffusive transport and fluid flow problems, *Computer Methods in Applied Mechanics and Engineering*, Vol. 151 (1-2), pp. 233-265, 1998

Morán A., Oñate E. and Miquel J.

A general procedure for deriving symmetric expressions for the secant and tangent stiffness matrices in finite element analysis, *Int. Journal for Numerical Methods in Engineering*, Vol. 42 (2), pp. 219-236, 1998

Gil LL., Bugeda G. y Oñate E.

Análisis de sensibilidad de formas en problemas estructurales con comportamiento no lineal del material, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 14 (3), 403-420, 1998

Rojek J., Oñate E. and Postek E.

Application of explicit FE codes to simulation of sheet and bulk forming processes, *Journal of Materials Processing Technology*, Vols. 80-81, pp. 620-627, 1998

Barbat A.H., Cervera M., Hanganu A., Cirauqui C. and Oñate E.

Failure pressure evaluation of the containment building of a large dry nuclear power plant, *Nuclear Engineering and Design*, Vol. 180 (3), pp. 251-270, 1998

Oñate E., García J. and Idelsohn S.

Computation of the stabilization parameter for the finite element solution of advective-diffusive problems, *International Journal for Numerical Methods in Fluids*, Vol. 25 (12), pp. 1385-1407, 1997

Cruchaga M. and Oñate E.

A finite element formulation for incompressible flow problems using a generalized streamline operator, *Computer Methods in Applied Mechanics and Engineering*, Vol. 143 (1-2), pp. 49-67, 1997

Matias W. T. y Oñate E.

Análisis de la inestabilidad de estructuras por el método de desplazamiento crítico, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 13 (2), pp. 241-263, 1997

Barbat A.H., Oller S., Oñate E. and Hanganu A.

Viscous damage model for Timoshenko beam structures, *International Journal of Solids and Structures*, Vol. 34 (30), pp. 3953-3976, 1997

Rojek J., Jovicevic J. and Oñate E.

Industrial applications of sheet stamping simulation using new finite element models, *Journal of Materials Processing Technology*, Vol. 60 (1-4), pp. 243-247, 1996

Oller S., Oñate E. and Miquel J.

Mixing anisotropic formulation for analysis of composites, *Communications in Numerical Methods in Engineering*, Vol. 12 (8), pp. 471-482, 1996

Oñate E. and Matias W.T.

A critical displacement approach for predicting structural instability, *Computer Methods in Applied Mechanics and Engineering*, Vol. 134 (1-2), pp. 135-161, 1996

Oñate E., Idelsohn S., Zienkiewicz O., Taylor R.L. and Sacco C.

A stabilized finite point method for analysis of fluid mechanics problems, *Computer Methods in Applied Mechanics and Engineering*, Vol. 139 (1-4), pp. 315-346, 1996

Oñate E., Idelsohn S., Zienkiewicz O.C. and Taylor R.L.

A finite point method in computational mechanics. Applications to convective transport and fluid flow, *Int. Journal for Numerical Methods in Fluids*, Vol. 39 (22), pp. 3839-3866, 1996

Oller S. and Oñate E.

A hygro-thermo-mechanical constitutive model for multiphase composite materials, *International Journal of Solids and Structures*, Vol. 33 (20-22), pp. 3179-3186, 1996

Idelsohn S.R., Heinrich J.C. and Oñate E.

Petrov-Galerkin methods for the transient advective-diffusive equation with sharp gradients, *Int. Journal for Numerical Methods in Engineering*, Vol. 39 (9), pp. 1455-1473, 1996

Oller S., Oñate E., Miquel J. and Botello S.

A plastic damage constitutive model for composite materials, *International Journal of Solids and Structures*, Vol. 33 (17), pp. 2501-2518, 1996

Celentano D., Oller S. and Oñate E.

A coupled thermomechanical model for the solidification of cast metals, *International Journal of Solids and Structures*, Vol. 33 (5), pp. 647-673, 1996

Heinrich J.C., Idelsohn S.R., Oñate E. and Vionnet C.A.

Boundary conditions for finite element simulations of convective flows with artificial boundaries, *Int. Journal for Numerical Methods in Engineering*, Vol. 39 (6), pp. 1053-1071, 1996

Barbat A.H., Cervera M., Cirauqui C., Hanganu H. y Oñate E.

Evaluación de la presión de fallo del edificio de contención de una central nuclear tipo PWR-W tres lazos. Parte II: Simulación numérica, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 11 (3), pp. 451-475, 1995

Oñate E., Rojek J. and García Garino C.

NUMISTAMP: a research project for assessment of finite-element models for stamping processes, *Journal of Materials Processing Technology*, Vol. 50 (1-4), pp. 17-38, 1995

Heege A., Alart P. and Oñate E.

Numerical modelling and simulation of frictional contact using a generalised Coulomb law, *Engineering Computations*, Vol. 12 (7), pp. 641-656, 1995

Flores F.G., Oñate E. and Zarate F.

New assumed strain triangles for non linear shell analysis, *Computational Mechanics*, Vol. 17 (1-2), pp. 107-114, 1995

Botello S., Oñate E. and Miquel J.

Un modelo de elementos finitos con aproximación bidimensional por capas para el análisis de estructuras multilaminares, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 11 (2), pp. 225-246, 1995

Cervera M., Barbat A.H., Hanganu H., Oñate E. and Cirauqui C.

Evaluación de la presión de fallo del edificio de contención de una central nuclear tipo PWR-W tres lazos. Parte I: Metodología, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 11 (2), pp. 271-293, 1995

Lombera G., Bugada G., Cervera M. and Oñate E.

Análisis de procesos de estereolitografía por el método de los elementos finitos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 11 (2), pp. 205-224, 1995

Bugada G., Cervera M., Lombera G. and Oñate E.

Numerical analysis of stereolithography processes using the finite element method, *Rapid Prototyping Journal*, Vol. 1 (2), pp. 13-23, 1995

Oller S., Botello S., Miquel J. and Oñate E.

An anisotropic elastoplastic model based on an isotropic formulation, *Engineering Computations*, Vol. 12 (3), pp. 245-262, 1995

Cruchaga M., Oñate E. and Idelsohn S. R.

On the pseudomaterial approach for the analysis of transient forming processes, *Communications in Numerical Methods in Engineering*, Vol. 11 (2), pp. 137-148, 1995

Oñate E.

On the derivation and possibilities of the secant stiffness matrix for non linear finite element analysis, *Computational Mechanics*, Vol. 15 (6), pp. 572-593, 1995

Bugada G. and Oñate E.

Optimum aerodynamic shape design including mesh adaptivity, *International Journal for Numerical Methods in Fluids*, Vol. 20 (8-9), pp. 915-934, 1995

Oñate E., Cervera M. and Zienkiewicz O.C.

A finite volume format for structural mechanics, *Int. Journal for Numerical Methods in Engineering*, Vol. 37 (2), pp. 181-201, 1994

Oñate E., Zárate F. and Flores F.

A simple triangular element for thick and thin plate and shell analysis, *Int. Journal for Numerical Methods in Engineering*, Vol. 37 (15), pp. 2569-2582, 1994

Codina R., Schäfer U. and Oñate E.

Mould filling simulation using finite elements, *International Journal of Numerical Methods for Heat and Fluid Flow*, Vol. 4, pp. 291-310, 1994

Celentano D., Oñate E. and Oller S.

A temperature-based formulation for finite element analysis of generalized phase-change problems, *Int. Journal for Numerical Methods in Engineering*, Vol. 37 (20), pp. 3441-3465, 1994

Idelsohn S. R. and Oñate E.

Finite volumes and finite elements: two "good friends", *Int. Journal for Numerical Methods in Engineering*, Vol. 37 (19), pp. 3323-3341, 1994

Bugeda G. and Oñate E.

A methodology for adaptive mesh refinement in optimum shape design, *Computing Systems in Engineering*, Vol. 5 (1), pp. 91-102, 1994

Celentano D., Oller S. and Oñate E.

A finite-element model for thermomechanical analysis in casting processes, *Journal de Physique IV*, Vol. 3 (C7), pp. 1171-1180, Part 2, 1993

Codina R., Cervera M. and Oñate E.

A penalty finite element method for non-Newtonian creeping flows, *Int. Journal for Numerical Methods in Engineering*, Vol. 36 (8), pp. 1395-1412, 1993

Oñate, E. and Cervera M.

Derivation of thin plate bending elements with one degree of freedom per node: a simple three node triangle, *Engineering Computations*, Vol. 10, pp. 543-561, 1993

Oñate, E. and Bugeda G.

A study of mesh optimality criteria in adaptive finite element analysis, *Engineering Computations*, Vol. 10, pp. 307-321, 1993

Sosnowski W., Oñate E. and Agelet de Saracibar C.

Comparative-study on sheet-metal forming processes by numerical modelling and experiment, *Journal of Materials Processing Technology*, Vol. 34 (1-4), pp. 109-116, 1992

Codina R., Oñate E. and Cervera M.

The intrinsic time for the streamline upwind Petrov-Galerkin formulation using quadratic elements, *Computer Methods in Applied Mechanics and Engineering*, Vol. 94 (2), pp. 239-262, 1992

Oñate E., Zienkiewicz O.C., Suárez B. and Taylor R.L.

A general methodology for deriving shear constrained Reissner-Mindlin plate elements, *Int. Journal for Numerical Methods in Engineering*, Vol. 33 (2), pp. 345-367, 1992

Oñate E.

Simulación por ordenador de problemas de conformado por el Método de los Elementos Finitos, *Deformación Metálica*, Vol. 176, pp. 63-73, 1991

Oñate E. and Agelet de Saracibar C.

Finite-element analysis of sheet-metal forming problems using a selective viscous bending membrane formulation, *Int. Journal for Numerical Methods in Engineering*, Vol. 30 (8), pp. 1577-1593, 1990

Oñate E., Agelet de Saracibar C. y Dalin J.B.

Análisis por elementos finitos de procesos de embutición de chapa mediante un modelo viscoplastico con degradación por huecos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 6 (1), pp. 7-23, 1990

Zienkiewicz O.C., Taylor R.L., Papadopoulos P. and Oñate E.

Plate bending elements with discrete constraints: New triangular elements, *Computers and Structures*, Vol. 35 (4), pp. 505-522, 1990

Cervera M., Oliver J., Herrero E. and Oñate E.

A computational model for progressive cracking in large dams due to the swelling of concrete, *International Journal of Engineering Fracture Mechanics*, Vol. 35 (1-3), pp. 573-585, 1990

Oller S., Oñate E., Oliver J. and Lubliner J.

Finite element nonlinear-analysis of concrete structures using a plastic-damage model, *International Journal of Engineering Fracture Mechanics*, Vol. 35 (1-2-3), pp. 219-231, 1990

Miquel J., Suárez B. and Oñate E.

Dynamic analysis of structures using a Reissner-Mindlin finite strip formulation, *Computers and Structures*, Vol. 31 (6), pp. 967-975, 1989

Lubliner J., Oller S., Oliver J. and Oñate E.

A plastic damage model for concrete, *International Journal of Solids and Structures*, Vol. 25 (3), pp. 299-326, 1989

Oller S., Oliver J., Lubliner J. y Oñate E.

Un modelo constitutivo de daño plástico para materiales friccionales. Parte I: Variables fundamentales, funciones de fluencia y potencial, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 4 (4), pp. 397-431, 1988

Oller S., Oliver J., Lubliner J. y Oñate E.

Un modelo constitutivo de daño plástico para materiales friccionales. Parte I: Variables fundamentales, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 4 (4), pp. 397-431, 1988

Suárez B., Miquel J. y Oñate E.

Análisis dinámico de estructuras utilizando una formulación de bandas finitas de Reissner-Mindlin, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 4 (3), pp. 257-274, 1988

Dvorkin E., Oñate E. and Oliver J.

On a non linear formulation for curved Timoshenko beam elements considering large displacement/rotation increments, *Int. Journal for Numerical Methods in Engineering*, Vol. 26 (7), pp. 1597-1613, 1988

Oñate E., Kleiber M. and Agelet de Saracibar C.

Plastic and visco-plastic flow of void-containing metals -Applications to axisymmetric sheet metal forming problems, *Int. Journal for Numerical Methods in Engineering*, Vol. 25 (1), pp. 227-251, 1988

Oñate E., Oller S., Oliver J. and Lubliner J.

A constitutive model for cracking of concrete based on the incremental theory of plasticity, *Engineering Computations*, Vol. 5 (3), pp. 309-320, 1988

Oller S., Oliver J. Lubliner J. y Oñate E.

Un modelo constitutivo de daño plástico para materiales friccionales. Parte II: Generalización para procesos con degradación de rigidez. Ejemplos, *Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería*, Vol. 4 (4), pp. 433-462, 1988

Suárez B., Miquel J. and Oñate E.

Free vibration analysis of plates, bridges and axisymmetric shells using a thick finite strip method, *Engineering Computations*, Vol. 5 (2), pp. 158-164, 1988

Agelet de Saracibar C. y Oñate E.

Un modelo plástico no asociado para el análisis de localización en procesos de embutición de metales, *Anales de Ingeniería Mecánica*, Vol. 5 (1), pp. 7-12, 1987

Oliver J. and Oñate E.

A total lagrangian formulation for the geometrically nonlinear-analysis of structures using finite-elements. Part II: arches, frames and axisymmetric shells, *Int. Journal for Numerical Methods in Engineering*, Vol. 23 (2), pp. 253-274, 1986

Oliver J., Oñate E., Peraire J. y Chueca R.

Análisis no lineal de tanques criogénicos bajo cargas térmicas, *Hormigón y Acero*, Vol. 155, pp. 99-123, 1985

Oliver J. and Oñate E.

A finite element formulation for the analysis of marine pipelines during laying operations, *Int. Journal of Pipelines*, Vol. 5, pp. 15-35, 1985

Oñate E. y Suárez B.

Estudio de la distribución transitoria del gas en redes urbanas por el método de los elementos finitos, *Anales de Ingeniería Mecánica*, Vol. 1, pp. 59-68, 1984

Oliver J. and Oñate E.

A total lagrangian formulation for the geometrically nonlinear-analysis of structures using finite-elements. Part I: Two dimensional problems: shell and plate structures, *Int. Journal for Numerical Methods in Engineering*, Vol. 20 (12), pp. 2253-2281, 1984

Oliver J. y Oñate E.

Una formulación para el estudio por el método de los elementos finitos de la deformación de tuberías marinas durante su instalación, *Revista de Obras Públicas*, Vol. 130 (3218), pp. 747-763, 1983

Oñate E., Gaona A., Oliver J. y Suárez B.

Posibilidades de los ordenadores personales en el cálculo de estructuras por el método de los elementos finitos, *Revista de Obras Públicas*, Vol. 130 (3212), pp. 231-248, 1983

Oñate E. and Suárez B.

A unified approach for the analysis of bridges, plates and axisymmetric shells using the linear Mindlin strip element, *Computers and Structures*, Vol. 17 (3), pp. 407-426, 1983

Oñate E. and Suárez B.

A comparison of the linear quadratic and cubic mindlin strip elements for the analysis of thick and thin plates, *Computers and Structures*, Vol. 17 (3), pp. 427-439, 1983

Oñate E. and Zienkiewicz O.C.

A viscous shell formulation for the analysis of thin sheet metal forming, *Int. Journal of Mechanical Science*, Vol. 25 (5), pp. 305-335, 1983

Oliver J., Suárez B., Blanco E. y Oñate E.

El laboratorio de ensayo de estructuras en modelo reducido de la Escuela de Ingenieros de Caminos de Barcelona, *Hormigón y Acero*, Vol. 145, 1982

Oñate E.

A comparison of Kirchhoff and Mindlin strips in the analysis of plate and bridge structures, *Annals of the Polish Academy of Sciences*, Tom XXIII, ZESZYT, Vol. 3, pp. 1196-220, 1981

Zienkiewicz O.C., Oñate E. and Heinrich J.C.

A general formulation for coupled thermal flow of metals using finite elements, *Int. Journal for Numerical Methods in Engineering*, Vol. 17 (10), pp. 1497-1514, 1981

Oñate E.

La formulación del flujo viscoplástico y sus diversas aplicaciones prácticas por el método de elementos finitos, *Revista de Obras Públicas*, Vol. 127 (3178), pp. 115-129, 1980

Zienkiewicz O.C., Jain P. C. and Oñate E.

Flow of solids during forming and extrusion: Some aspects of numerical solutions, *International Journal of Solids and Structures*, Vol. 14 (1), pp. 15-38, 1978

Oñate E.

Análisis de puentes mediante el método de las bandas finitas, *Hormigón y Acero*, Vol. 124, 1977

Middleton J. y Oñate E.

Diseño óptimo de vasijas de presión, utilizando el método de elementos finitos y un optimizador no lineal, *Revista E.T.S.I.I.T.*, Vol. 11, 1977

Zienkiewicz O.C., Bauer J., Morgan K. and Oñate E.

A simple and efficient element for axisymmetric shells, *Int. Journal for Numerical Methods in Engineering*, Vol. 11 (10), pp. 1545-1558, 1977

Book Series Edited

Editor of the Book Series "Theory and Engineering Applications of Computational Methods", published by CIMNE, Barcelona, Spain

Editor of the Book Series "Computational Methods in Applied Sciences" published by Springer Verlag, Heidelberg, Germany

Editor of the Book Series "Lecture Notes on Numerical Methods in Engineering and Sciences", published by CIMNE, Barcelona, Spain

Chapters in Books with ISBN

Oñate E., Franci A. and Carbonell J.M.

A particle finite element method (PFEM) for coupled thermal analysis of quasi and fully incompressible flows and fluid-structure interaction problems, *Numerical Simulations of Coupled Problems in Engineering*, pp. 129-156, S. R. Idelsohn (Ed.), Springer, 2014

Oñate E., Bellomo F.J., Monteiro V., Oller S. and Nallim L.G.

Characterization of mechanical properties of biological tissue – Application to the FEM analysis of the urinary bladder , *Multiscale Simulations and Mechanics of Biological Materials*, S. Li et al (Eds), Wiley, 2014

Oñate E., Idelsohn S., Celigueta M.A. and Suárez B.

The particle finite element method (PFEM). An effective numerical technique for solving marine, naval and harbour engineering problems, *Marine 2011, IV Int. Conference on Computational Methods in Marine Engineering. Selected papers*, L. Eça, E. Oñate, J. García-Espinosa, T. Kvamsdal and P. Bergan (Eds.), pp. 65-81, Springer, 2013

Oñate E., Idelsohn S.R., Celigueta M.A., Salazar F. and Suárez B.

The particle finite element method. An effective numerical technique for solving fluid-soil-structure interaction problems, *Issues on Mechanical and Civil Engineering. A Symposium to honour Prof. Enrique Alarcón*, M. Doblaré, Ja. Domínguez, Jo. Domínguez, A. Fraile, F. García, S. Gómez, A. Martín, F. París (Eds.), 2012

Idelsohn S.R., Mier-Torrecilla M. and Oñate E.

The particle finite element method for multi-fluid flows, *Particle-Based Methods, Computational Methods in Applied Sciences*, Springer, E. Oñate and R. Owen (Eds.), Vol. 25, 2011

Oñate E., Idelsohn S.R., Celigueta M.A., Rossi R., Marti J., Carbonell J.M., Ryzhakov P. and Suárez B.

Advances in the particle finite element method (PFEM) for solving coupled problems in engineering, *Particle-Based Methods, Computational Methods in Applied Sciences*, Springer, E. Oñate and R. Owen (Eds.), Vol. 25, 2011

Lee D.S., Periaux J., Srinivas K., Gonzalez L.F., Qin N. and Oñate E.

Shock control bump design optimization on natural laminar aerofoil, *Computational Fluid Dynamics Review 2010*, Part 9, 253-259, Edited by M M Hafez (University of California, Davis, USA), K Oshima (University of Tokyo, Japan), & Dochan Kwak (NASA Ames Research Center, USA), 2010

Rudenick P., Bordone M., Bijmens B., Soudah E., Oñate E., Garcia-Dorado D. and Evangelista A.

A multi-method approach towards understanding the pathophysiology of aortic dissections – the complementary role of in-silico, in-vitro and in-vivo information, *Lecture Notes in Computer Science*, Camara, O; Pop, M; Rhode, K; et al. (Eds.), Book Series: Lecture Notes in Computer Science, Vol. 6364, pp. 114-123, 2010

Rojek J., Oñate E., Labra C., Kargl H. and Akerman J.

Optimizing rock cutting through computer simulation, *Technology Innovation in Underground Construction (TUNCONSTRUCT)*, G. Beer (Ed.), 2010

Idelsohn S.R., Oñate E., Rossi R., Marti J. and Del Pin F.

New computational challenges in fluid-structure interactions problems, *ECCOMAS Multidisciplinary Jubilee Symposium*, J. Eberhardsteiner, Ch. Hellmich, H. Mang and J. Périaux (Eds.), 2009

Oñate E., Flores F.G. and Marcipar J.

Membrane Structures Formed by Low Pressure Inflatable Tubes. New Analysis Methods and Recent Constructions, *Textile Composites and Inflatable Structures*, E. Oñate and B. Kröplin (eds.), pp. 163-196, 2008

Löhner R., Yang Ch. and Oñate E.

Simulation of structural response to violent-free surface flows, *Numerical Modeling of Coupled Phenomena in Science and Engineering*, M.C. Suárez Arriaga, J. Bundschuh, F.J. Dominguez-Mota (Eds.), 2008

Oñate E., Flores F. and Neamtu L.

Enhanced rotation-free basic shell triangle. Applications to sheet metal forming, *Computational Plasticity*, E. Oñate and R. Owen (Eds.), pp. 239-265, 2007

Idelsohn S. R., Oñate E. and Marti J.

A unified symmetrical formulation for interactions between elastic solids and incompressible fluids, *Vairational Formulations in Mechanics: Theory and Applications*, E. Taroco, E.A. de Souza Neto and A. A. Novotny (Eds.), pp. 163-182, 2007

Valls A., García J. and Oñate E.

LES Turbulence models. Relation with stabilized numerical methods, *Models, Experiments and Computation in Turbulence*, R. Castilla, E. Oñate, J. M. Redondo (Eds.), pp. 17-64, 2007

Oñate E., Suárez B. y Miquel J.

Posibilidades de los métodos numéricos en obras subterráneas, *Avances en Mecánica de Medios Continuos. Simposium en honor al Profesor J. A. Garrido García*, E. Alarcón, A. Foces, F. París (Eds.), pp. 195-210 2007

Idelsohn S. R., Oñate E. and Marti J.

A unified symmetrical formulation for interactions between elastic solids and incompressible fluids, *Vairational Formulations in Mechanics: Theory and Applications*, E. Taroco, E.A. de Souza Neto and A. A. Novotny (Eds.), pp. 163-182, 2007

Valls A., García J. and Oñate E.

LES Turbulence models. Relation with stabilized numerical methods, *Models, Experiments and Computation in Turbulence*, R. Castilla, E. Oñate, J. M. Redondo (Eds.), pp. 17-64, 2007

Oñate E., Suárez B. y Miquel J.

Posibilidades de los métodos numéricos en obras subterráneas, *Avances en Mecánica de Medios Continuos. Simposium en honor al Profesor J. A. Garrido García*, E. Alarcón, A. Foces, F. París (Eds.), pp. 195-210 2007

Idelsohn S., Oñate E. and Marti J.

A unified symmetrical formulation for interactions between elastic solids and incompressible fluids, *Variational Formulations in Mechanics: Theory and Applications*, E. Taroco, E.A. de Souza Neto and A.A. Novotny (Eds.), CIMNE, Barcelona, Spain, 2006

López R. and Oñate E.

A variational formulation for the multilayer perceptron, *ICANN*, S. Kollias et al (Eds.), ICANN 2006, Part I, LNCS 4131, pp. 19-168, Germany.

Oñate E., Idelsohn S.R. and Celigueta M.A.

Lagrangian formulation for fluid-structure interaction problems using the particle finite element method, *Verification and Validation Methods for Challenging Multiphysics Problems*, CIMNE, pp. 125-150, 2006

Marcipar J., Oñate E. and Miquel J.

Experiences in the design analysis and construction of low pressure inflatable structures, *Recent Advances in Textile Membranes and Inflatable Structures*, Springer Verlag, pp. 241 - 257 2005

Taylor R.L., Oñate E. and Ubach P.-A.

Finite element analysis of membrane structures, *Recent Advances in Textile Membranes and Inflatable Structures*, Springer Verlag, pp. 47 - 68, 2005

Flores F. and Oñate E.

Applications of a rotation-free triangular element for finite strain analysis of thin shells and membranes, *Recent Advances in Textile Membranes and Inflatable Structures*, Springer Verlag, pp. 69 - 88, 2005

Rossi R., Vitaliani R. and Oñate E.

FE analysis of membrane systems including wrinkling and coupling, *Recent Advances in Textile Membranes and Inflatable Structures*, Springer Verlag, pp. 89 - 108, 2005

Oñate E., García J. and Idelsohn S.R.

Ship hydrodynamics, *Encyclopedia of Computational Mechanics*, Encyclopedia of Computational Mechanics, E. Stein, R. de Borst and T.J.R. Hughes (Eds.), John Wiley & Sons Ltd, Vol. 3, Chapter 18, pp. 579 - 607, 2004

Oñate E.

Stabilization via finite element computations, *Finite Element Methods: 1970's and Beyond*, Franca L.P., Tezduyar T.E. and Masud A. (Eds.), CIMNE, Barcelona, Spain, 2004

Oñate E., García J., Bugada G. and Idelsohn S.R.

A general stabilized formulation for incompressible fluid flow using finite calculus and the finite element method, *Fluid Dynamics and Aeronautics New Challenges*, Périaux J., Champion M., Gagnepain J.-J., Pironneau O., Stoufflet B. and Thomas Ph.(Eds.), CIMNE, Barcelona, Spain, 2003

Oñate E., Idelsohn S.R. and Del Pin F.

Lagrangian formulation for incompressible fluids using finite calculus and the finite element method, *Numerical Methods for Scientific Computing Variational Problems and Applications*, Kuznetsov Y., Neittanmaki P. and Pironneau O. (Eds.), CIMNE, Barcelona, Spain, 2003

Oñate E., García J., Bugada G. and Idelsohn S.R.

A general stabilized formulation for incompressible fluid flow using finite calculus and the finite element method, *Towards a New Fluid Dynamics with its Challenges in Aeronautics*, J. Périaux, M. Champion, B. Stoufflet, J.J. Gagnepain, Ph. Thomas and O. Pironneau (Eds.), CIMNE, Barcelona, Spain, 2002

Car E., Oller S. y Oñate E.

Materiales compuestos - Simulación del comportamiento anisótropo, *Análisis y Cálculo de Estructuras de Materiales Compuestos*, Oller S. (Ed.), pp. 95-144, CIMNE, Barcelona, Spain, 2002

Chiandussi G., Bugada G. and Oñate E.

A simple method for automatic adaption of finite element meshes to changes in the boundary shape, *Innovative Tools for Scientific Computation in Aeronautical Engineering*, J. Periaux, P. Joly, O. Pironneau and E. Oñate (Eds.), pp. 149-167, CIMNE, Barcelona, Spain, 2001

Oñate E., Sacco C. and Idelsohn S.

Meshless analysis of incompressible flows using the finite point method, *Innovative Tools for Scientific Computation in Aeronautical Engineering*, J. Periaux, P. Joly, O. Pironneau and E. Oñate (Eds.), pp. 208-232, CIMNE, Barcelona, Spain, 2001

Oñate E. and García J.

A finite element method for fluid-structure interaction with surface waves, *Trends in Computational Structural Mechanics*, W. A. Wall, K.-U. Bletzinger and K. Schweizerhof (Eds.), CIMNE, Barcelona, Spain, 2001

Oñate E. and Manzan M.

Stabilization techniques for finite element analysis of convection-diffusion problems, *Convection Heat Transfer*, B. Sundén and G. Comini (Eds.), WIT Press, Southampton, United Kingdom, 2000

Zárate F., Hurtado J.E. and Oñate E.

Stochastic analysis of an impact problem, *Stochastic Analysis of Multivariate Systems in Computational Mechanics and Engineering*, I. Doltsinis (Ed.), CIMNE, Barcelona, Spain, 1999

Roca P., Pellegrini L., Oñate E., and Hanganu A.

Analysis of the structure of gothic cathedrals. Application to Barcelona cathedral, *Structural Analysis of Historical Constructions II*, P. Roca, J.L. González, E. Oñate and P. B. Lourenço (Eds.), CIMNE, Barcelona, Spain, 1998

Oñate E., García J. and Idelsohn S.

An alpha-adaptive approach for stabilized finite element solution of advective-diffusive problems with sharp gradients, *New Advances in Adaptive Computational Methods in Mechanics*, P. Ladeveze and J.T. Oden (Eds.), Elsevier, 1998

Oñate E., Hanganu A., Barbat A., Oller S., Vitaliani R., Sietta A. and Scotta R.

Structural analysis and durability assesment of historical constructions using a finite element damage model, *Structural Analysis of Historical Constructions I*, P. Roca, J.L. González, A.R. Marí and E. Oñate (Eds.), CIMNE, Barcelona, Spain, 1997

Oñate E.

Possibilities of parallel computing in the finite element analysis of industrial forming processes, *Vector and Parallel Processing - VECPAR'96*, Springer, 1997

Duffett G.A., Cendoya P., Rojek J. and Oñate E.

Efficient computational aspects for analyses of sheet stamping problems, *Recent Developments in Computational and Applied Mechanics. A Book in Honour of John B. Martin*, B. D. Reddy (Ed.), CIMNE, 1997

Oñate E. and Rojek J.

Prediction of elastic springback deffects in sheet stamping processes using finite element methods, *Advanced Methods in Materials Processing Defects*, Elsevier, 1997

Oñate E.

Possibilities of parallel computing in the finite element analysis of industrial forming processes, *Advances in Vector and Parallel Computing*, Palma J. (Ed.), Springer-Verlag, 1996

Oñate E. and Matias W.T.

Enhanced prediction of structural instability points using a critical displacement method, *Advances in Finite Element Technology*, N.-E. Wiberg (Ed.), CIMNE, Barcelona, 1995

Oñate E.

Reliability analysis of concrete structures. Numerical and experimental studies, *Evoluzione nella Sperimentazione per le Costruzioni*, CIAS, Merano, April 1994

Oñate E.

A review of some finite element families for thick and thin plate and shell analysis, *Recent Developments in Finite Element Analysis*, Hughes J., Oñate E. and Zienkiewicz O. (Eds.), CIMNE, Barcelona 1994

Bugeda G. and Oñate E.

Aerodynamic shape optimization, *Optimum Shape Design in Aeronautics*, J. Periaux et al (Eds.), Springer Verlag, 1993

Zienkiewicz O. C. and Oñate E.

Finite elements versus finite volumes. Is there really a choice?, *Non Linear Computational Mechanics. State of the Art*, P. Wriggers y R. Wagner (Eds.), Springer Verlag, 1992

Oñate E. and Agelet de Saracibar C.

Numerical modelling of sheet metal forming problems, *Numerical Modelling of Material Deformation Processes*, C. Sturgess et al (Eds.), Springer Verlag, London, 1991

Oñate E., Suárez B. and Hinton E.

Finite Streifenmethode für Mindlinsche Platten und axialsymmetrische Schalen, *Finite Elemente Programme für Platten und Schalen*, Springer-Verlag, Berlin, Germany, 1990

Oñate E. and Castro J.

Adaptive refinement techniques for structural problems, *The Finite Element Method in the 1990's*, E. Oñate et al (Eds.), CIMNE/Springer Verlag, 1990

Oliver J., Oller S. y Oñate E.

Fractura elastoplástica: Modelos elastoplásticos para la simulación numérica de procesos de fractura, *Métodos Numéricos Aplicados a la Mecánica de Fractura*, J. Oliver et al (Eds.), CIMNE, Barcelona, pp. 27-60, 1988

Oñate E. and Agelet de Saracibar C.

Finite element analysis of sheet metal forming problems using a viscous voided shell formulation, *Modelling of Metal Forming Processes*, J.L. Chenot y E. Oñate (Eds.), Kluwer Academic Publisher, pp. 163-178, 1988

Oliver J. and Oñate E.

A finite element formulation for the geometrically non linear analysis of shells using a total lagrangian approach, *Computational Methods for Non Linear Problems*, C. Taylor (Ed.) Pineridge Press, pp. 29-55, 1988

Oñate E. and Pérez Lama R.

Possibilities of the finite element viscous shell approach in the analysis of thin sheet forming, *Finite Element Applications to Metal Forming Processes*, A.E. Tekaya y A. Lange (Eds.) Springer Verlag, Berlin, 1986

Oñate E., Suárez B., Miquel J. and Hinton E.

Free vibration analysis of bridge, plate and axisymmetric shell structures by the finite strip method, *Finite Element Software for Dynamic Analysis of Plates and Shells*, E. Hinton (Ed.), Pineridge Press, 1986

Oñate E. and Suárez B.

The finite strip method for the analysis of plate, bridge and axisymmetric shell structures, *Finite Element Software for Plates and Shells*, E. Hinton y R. Owen (Eds.), Pineridge Press, 1986

Oñate E. and Oliver J.

Lagrangian formulations for the geometrically non-linear analysis of shell and plate structures using finite elements, *Finite Element Methods for Plates and Shells*, E. Hinton y R. Owen (Eds.), Pineridge Press, 1986

Oñate E. y Miquel J.

Efectos de los terremotos en las construcciones, *Riesgos Naturales en Ingeniería*, E. Alonso et al (Eds.), Ediciones UPC, 1986

Oñate E.

Métodos de cálculo y simulación en CAD. Diseño y simulación por computador, Boixareu Eds., Barcelona, 1986

Oñate E., Suárez B. and Hinton E.

Mindlin finite strip and axisymmetric finite element shell analysis, *Finite Elements Software for Plates and Shells*, Hinton E. y Owen D.R.J. (Eds.), Pineridge Press, 1984

Oliver J. and Oñate E.

A total lagrangian formulation for the geometrically non-linear analysis of shells, *Flexible Shells*, E.L. Axelrad, F.A. Emmerlind (Eds.), Berlín, 1984

Monographs with ISBN

Eijo A., Oñate E. and Oller S.

Finite element modeling of delamination in advanced composite beams and plates using one and two dimensional finite elements based on the refined zigzag theory, CIMNE, Monografía N° M149, 246 pp., Depósito Legal: B-23557-2014, Barcelona, España, 2014

Coll A., Oñate E. and Dadvand P.

Robust volume mesh generation for non-watertight geometries, CIMNE, Monografía N° M146, 284 pp., Depósito Legal: B-23555-2014, Barcelona, España, 2014

Diego X., Oñate E. and Chiumenti M.

On the theory of cell migration: Durotaxis and chemotaxis, CIMNE, Monografía N° M144, 326 pp., Depósito Legal: B-15425-2014, Barcelona, España, 2014

Ortega E., Oñate E. and Idelsohn S.

Development and applications of the finite point method to compressible aerodynamics problems CIMNE, Monografía N° M143, 257 pp., Depósito Legal: B-15424-2014, Barcelona, España, 2014

Kamran K., Oñate E., Idelsohn S. and Rossi R.

A compressible Lagrangian framework for the simulation of underwater implosion problems CIMNE, Monografía N° M150, 147 pp., Depósito Legal: B-23558-2014, Barcelona, España, 2013

Monteiro V., Oñate E. and Oller S.

Computational model of the human urinary bladder, CIMNE, Monografía N° M148, 20 pp., Depósito Legal: B-23556-2014, Barcelona, España, 2013

Larese A., Oñate E. and Rossi R.

A coupled Eulerian-PFEM model for the simulation of overtopping in rockfill dams, CIMNE, Monografía N° M133, 233 pp., ISBN: 978-84-940243-6-8, Barcelona, España, 2012

Labra C., Oñate E. and Rojek J.

Advances in the development of the discrete element method for excavation processes, CIMNE, Monografía N° M132, 192 pp., ISBN: 978-84-940243-5-1, Barcelona, España, 2012

Gavidia G., Soudah E. and Oñate E.

Clasificadores basados en máquinas de soporte vertical para el diagnóstico y predicción de la enfermedad de Alzheimer, CIMNE, Monografía N° M131, 153 pp., ISBN: 978-84-940243-4-4, Barcelona, España, 2012

Nadukandi P., Oñate E. and García-Espinosa J.

Stabilized Finite Element Methods for Convection-Diffusion-Reaction, Helmholtz and Stokes Problems, CIMNE, Monografía N° M130, 217 pp., ISBN: 978-84-940243-3-7, Barcelona, España, 2012

Ryzhakov P., Oñate E., Rossi R. and Idelsohn S.R.

Lagrangian FE methods for coupled problems in fluid mechanics, CIMNE, Monografía N° M121, 199 pp, ISBN: 978-84-96736-97-9, Barcelona, España, 2010

Carbonell J.M., Oñate E. and Suárez B.

Modeling of ground excavaton with the particle finite element method, CIMNE, Monografía N° M116, 199 pp, ISBN: 978-84-96736-85-6, Barcelona, España, 2010

De Mier M., Idelsohn S.R. and Oñate E.

Numerical simulation of multi-fluid flows with the particle finite element method, CIMNE, Monografía N° M115, 178 pp, ISBN: 978-84-96736-87-0, Barcelona, España, 2010

Di Capua D., Marí A. y Oñate E.

Modelo higo-termo-mecánico para estructuras de hormigón armado expuestas al fuego, CIMNE, Monografía N° M113, 242 pp, ISBN: 978-84-96736-61-0, Barcelona, España, 2009

Soudah E., López R., Bordone M. and Oñate E.

Decision support system for cardiovascular problems, CIMNE, Monografía N° M108, 120 pp, ISBN: 978-84-96736-43-6, Barcelona, España, 2008

Valdés J. G., Oñate E. and Miquel J.

Nonlinear analysis of orthotropic membrane and shell structures including fluid-structure interaction, CIMNE, Monografía N° M107, 219 pp, ISBN: 978-84-96736-37-5, Barcelona, España, 2007

Morán A., Oñate E. y Miquel J.

Formulaciones tangentes y secantes en análisis no lineal de vigas Cosserat, CIMNE, Monografía N° M103, 385 pp, ISBN: 978-84-96736-286-9, Barcelona, España, 2007

Rastellini F., Oller S. y Oñate E.

Modelización numérica de la no-linealidad constitutiva de laminados compuestos, CIMNE, Monografía N° M100, 210 pp, ISBN: 978-84-96-736, Barcelona, España, 2007

Aubry R., Idelsohn S. R. and Oñate E.

Incompressible Lagrangian Fluid Flow with Thermal Coupling, CIMNE, Monografía N° M95, 169 pp, ISBN: 84-95999-92-7, Barcelona, España, 2006

Recarey C.A., Oñate E., Miquel J., Zárate F., Rojek J. y Burrel S.

Estudio de estimación de parámetros constitutivos en el método de elementos discretos o de partículas, CIMNE, Monografía N° M93, 140 pp, ISBN: 84-96736-05-9, Barcelona, España, 2005

Oñate E., Piazzese J., Dolz J., Gómez M. and Bladé E.

Decision support system for risk assessment and management of floods. Ramflood Project, CIMNE, Monografía N° M92, 118 pp, ISBN: 84-95999-75-7, Barcelona, España, 2005

Rojek J., Oñate E., Zárate F. and Recarey C.A.

Discrete Element Modelling of Rock Cutting Processes Interaction with Evaluation of Tool Wear, CIMNE, Monografía N° M87, 152 pp, ISBN: 84-95999-44-7, Barcelona, España, 2003

Balsa-Canto E., Mora J., Banga J.R. y Oñate E.

II International Workshop (AFOT). Information Technologies and Computing Techniques for the Agro-Food Sector, CIMNE, Monografía N° M86, 154 pp, ISBN: 84-95999-46-3, Barcelona, España, 2003

Perazzo F., Miquel Canet J. y Oñate E.

Una metodología numérica de malla para la resolución de las emociones de elasticidad mediante el método de puntos finitos, CIMNE, Monografía N° M81, 96 pp, ISBN: 84-95999-43-9, Barcelona, España, 2003

Evaluación y rehabilitación estructural de edificios. Posibilidades de las técnicas numéricas y experimentales

Roca P., Díaz C., González J.L., Marí A.R., Molins C., Oñate E. y Serrà I. (Eds.), CIMNE, Monografía N° M65, 340 pp., ISBN: 84-89925-99-2, Barcelona, España, 2002

Tschöpe H., Wriggers P. and Oñate E.

Direct computation of instability points with inequality constraints using the finite element method, CIMNE, Monografía N° M61, 158 pp., ISBN: 84-89925-81-X, Barcelona, España, 2001

García J., Oñate E. y Sierra H.

Un método de elementos finitos para análisis hidrodinámico de estructuras navales, CIMNE, Monografía N° M59, 269 pp., ISBN: 84-89925-75-5, Barcelona, España, 2000

Ribo R., Oñate E. y Bugada G.

Desarrollo de un sistema integrado para tratamiento de geometría, generación de malla y datos para el análisis por el método de los elementos finitos, CIMNE, Monografía N° M56, 220 pp., Barcelona, España, 2000

Car E., Oller S. y Oñate E.

Tratamiento numérico de los materiales compuestos, CIMNE, Monografía N° M57, 350 pp., ISBN: 84-89925-66-6, Barcelona, España, 2000

Estupiñán J., Oñate E. y Suárez B.

Métodos evolutivos en la optimización topológica, CIMNE, Monografía N° M47, 222 pp., ISBN: 84-89925-35-6, Barcelona, España, 1999

Jovicevic J. and Oñate E.

Analysis of beams and shells using a rotation - free finite element - finite volume formulation, CIMNE, Monografía N° M43, 270 pp., ISBN: 84-89925-36-4, Barcelona, España, 1999

López J., Oller S. y Oñate E.

Cálculo del comportamiento de la mampostería mediante elementos finitos, CIMNE, Monografía N° M46, ISBN: 84-89925-29-1, Barcelona, España, 1998

Hanganu, A.D., Barbat A.H. y Oñate E.

Metodología de evaluación del deterioro en estructuras de hormigón armado, CIMNE, Monografía N° M39, ISBN: 84-87867-01-1, Barcelona, Spain, 1997

Cendoya P., Oñate E. y Miquel J.

Nuevos elementos finitos para el análisis dinámico elastoplástico no lineal de estructuras laminares, CIMNE, Monografía N° M36, ISBN: 84-87867-90-1, Barcelona, Spain, 1997

Matias Silva W.T. y Oñate E.

El método de desplazamiento crítico para la predicción de puntos límite y de bifurcación en estructuras, CIMNE, Monografía N° M35, ISBN: 84-87867-89-8, Barcelona, Spain, 1997

Fischer T. and Oñate E.

Finite element methods for analysis of compressible flows, *Centro Internacional de Métodos Numéricos en Ingeniería*, CIMNE, ISBN: 84-87867-85-5, Barcelona, Spain, 1996

Miquel J., Oñate E., García Garino C., Botello S., Flores F. and Rojek J.

Análisis de problemas de choque e impacto entre sólidos deformables por el método de los elementos finitos, CIMNE, Monografía N° M25, ISBN: 84-87867-51-0, Barcelona, Spain, 1994

Hanganu, A.D., Barbat A.H., Oller S. y Oñate E.

Simulación del daño sísmico en edificios de hormigón armado, CIMNE, Monografía N° MIS04, ISBN: 84-87867-40-5, Barcelona, Spain, 1994

Oñate E.

Numerical simulation of sheet forming processes using finite element methods, *Centro Internacional de Métodos Numéricos en Ingeniería*, CIMNE, ISBN: 84-87867-27-8, Barcelona, 1992

Oñate E.

Lectures on non linear analysis of concrete shells, *Centro Internacional de Métodos Numéricos en Ingeniería*, CIMNE, ISBN: 84-87867-06-5, Barcelona, 1992

Agelet de Saracibar C. y Oñate E.

Modelado numérico de procesos de conformado de láminas metálicas, *Centro Internacional de Métodos Numéricos en Ingeniería*, CIMNE, ISBN: 84-87867-07-3, Barcelona, 1991

Miquel J., Botello S., Buil J. y Oñate E.

La presa bóveda de Talvacchia. Análisis estático y dinámico, *Centro Internacional de Métodos Numéricos en Ingeniería*, CIMNE, ISBN: 84-87867-03-0, Barcelona, 1991

Miquel J., Oñate E., Buil J. y Herrero E.

Análisis dinámico de presas, *Centro Internacional de Métodos Numéricos en Ingeniería*, CIMNE, ISBN: 84-404-8715-0, Barcelona, 1991

Oñate E., Oller S., Botello S. y Miquel J.

Métodos avanzados de cálculo de estructuras de materiales compuestos, *Centro Internacional de Métodos Numéricos en Ingeniería*, CIMNE, ISBN: 84-404-8684-7, Barcelona, 1991

Miquel J., Bugada G. y Oñate E.

Simulación numérica de la aerodinámica de vehículos, *Centro Internacional de Métodos Numéricos en Ingeniería*, CIMNE, ISBN: 84-404-8685-5, Barcelona, 1991

Oñate E.

Comparación entre las formulaciones de la banda finita con y sin inclusión de la deformación por cortante para análisis de puentes, *Monografía del Instituto Torroja, CSIC*, 1980

Papers in Proceedings

Oñate E., Celigueta M.A. and Idelsohn S.

The Particle Finite Element Method (PFEM). An effective numerical technique for analysis of fluid-soil-structure interaction in natural hazards, *1st International Conference on Computational Engineering and Science for Safety and Environmental Problems (COMPSAFE 2014)*, 13-16 April, Sendai, Japan, 2014

Maidana A., García-Espinosa J., Oñate E. and Celigueta M.A.

GIS/GPU-based simulation model for the shallow water equations and its application to flood/tsunami-risk assessment, *1st International Conference on Computational Engineering and Science for Safety and Environmental Problems (COMPSAFE 2014)*, 13-16 April, Sendai, Japan, 2014

Idelsohn S., Oñate E., Nigro, N. and Gimenez J.

Multi-fluids flows solved with large time-steps, *MeCom - ENIEF 2014*, Bariloche, Argentina, 23 Septiembre 2014

Cotela J., Rossi R. and Oñate E.

Towards the simulation of turbulent flows via stabilized finite element formulations , *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Roig C.A., Dadvand P., Santasusana M. and Oñate E.

Minimal surface partitioning for particle-based models , *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Zárate F., González J.M. and Oñate E.

A FEM-DEM formulation for pulsed fracturing in shale reservoirs , *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Pons-Prats J., Bugada G. and Oñate E.

Genetic algorithms operators for improving the optimization performance , *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Larese A., Rossi R., Wüchner R., Al Sofi H. and Oñate E.

FSI analysis of lightweight structures. Towards a virtual wind tunnel , *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Oñate E., Santasusana M., Celigueta M.A., Arrufat F., Valiullin K., Gandikota R.

A parallelized discrete element method for analysis of drill-bit mechanics problems in hard and soft soils, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Coll A., Dadvand P. and Oñate E.

Robust octree based tetrahedra mesher for non-watertight geometries, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Celigueta M.A., Latorre S., Casas G., Oñate E. Gandikota V. and Deshpande K.M.

A parallel FEM-DEM approach for analysis of cuttings transport in wellbores, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Sun S., Chen P., Fu X., Huang K., Rong Q., Sui J., Song Q., Wang W., Lafontaine N., Oñate E. and Yuan M.

SAPNOLM – A software package for landslide analysis, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Kamran K., Rossi R., Dadvand and Oñate E.

On the application of enriched two-fluid flow solver for the simulation of casting problems , *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Idelsohn S.R., Oñate E., Nigro N., Marti J., Becker P.A. and Giménez J.

Particle Methods: The most efficient way to solve fluid mechanics problems, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Flores R., Ortega E., Valles J. and Oñate E.

A simulation tool for parachute/ payload systems, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Marti J., Idelsohn S.R. and Oñate E.

A new version of the PFEM for the free surface and multi-fluid problems, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Jarauta A., Ryzhakov P., Pons-Prats J., Secanell M., Idelsohn S.R. and Oñate E.

Numerical model of droplet dynamics on the GDL surface of a PEM fuel cell cathode , *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Franci A., Oñate E. and Carbonell J.M.

Unified Lagrangian formulation for fluid-structure interaction problems with thermal coupling using PFEM, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Feng Ch., Oñate E. and Li S.

A FEM-DEM coupled and evolved formulation for analysis of multifracture in solids, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Becker P.A., Idelsohn S.R. and Oñate E.

PFEM for multi-fluids and solid interaction with fixed mesh and large time-steps , *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Dadvand P., Coll A., Rossi R., Wüchner R. and Oñate E.

Efficient parallel algorithms for embedded fluid structure interaction with unstructured mesh, *11th World Congress on Computational Mechanics (WCCM XI)*, Barcelona, Spain, July 20-25, 2014

Oñate E., Idelsohn S., Celigueta M.A., Ryzhakov P., Martí J., Carbonell J.M., Suárez B., Salazar F. and Rossi R.

Advances in the particle finite element method (PFEM) for coupled problems in engineering, *Computational Methods for Coupled Problems in Science and Engineering V. A conference celebrating the 60th birthday of Eugenio Oñate*, S. Idelsohn, M. Papadrakakis and B. Schrefler (Eds.), CIMNE, Barcelona (Spain), Ibiza, Spain, 17-19 June 2013

San Mauro J., Salazar F., Rossi R., Oñate E., Morera L., Toledo M.A., Morán R., Caballero F. J., Martínez B. y Guerrero J.

Modelación física y numérica de aliviaderos con cajeros altamente convergentes, *III Jornadas de Ingeniería del Agua. La protección contra los riesgos hídricos*, Valencia, España, 23-24 Octubre 2013

Salazar F., Oñate E. y Toledo M. A.

Posibilidades de la inteligencia artificial en el análisis de auscultación de presas, *III Jornadas de Ingeniería del Agua. La protección contra los riesgos hídricos*, Valencia, España, 23-24 Octubre 2013

Oñate E., Arrufat F., Zárate F. and Ubach P. A.

A discrete element method for analysis of drilling problems, *Computational Methods in Marine Engineering V*, Hamburg, Germany, 29-31 May 2013

Carbonell J. M., Oñate E. and Suárez B.

Advances in the modelling of excavation and cutting tool wear with the particle finite element method, *Computational Methods in Tunneling and Subsurface Engineering (EuroTun 2013)*, Bochum, Germany, 17-19 April, 2013

Lee D.S., Periaux J., Gonzalez L. F. and Oñate E.

Robust aerodynamic design optimisation of morphing aerofoil/wing using distributed MOGA, *28th Congress of the International Council of the Aeronautical Sciences (ICAS 2012)*, Brisbane, Australia, 23-28 September 2012

Lee D.S., Periaux J., Bugada E. and Oñate E.

Design optimisation of morphing UAV aerofoil/wing using computational intelligence system coupled game strategies, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2012)*, Vienna, Austria, 10-14 September, 2012

Lee D.S., Fruitos O., Espinoza H. and Oñate E.

Multi-objective CAE based design optimisation of stamping process using robust multi-objective optimisation platform, *10th World Congress on Computational Mechanics (WCCM 2012)*, Sao Paulo, Brasil, 8-13 July 2012

Lee D.S., Periaux J., Bugada G. and Oñate E.

Multi-objective S-rail design optimisation using robust multi-objective optimisation platform, *10th World Congress on Computational Mechanics (WCCM 2012)*, Sao Paulo, Brasil, 8-13 July 2012

Lee D.S., Periaux J., Bugada G. and Oñate E.

Computational intelligence system for single and multi-objective design problems in aeronautics, *10th World Congress on Computational Mechanics (WCCM 2012)*, Sao Paulo, Brasil, 8-13 July 2012

Lee D.S, Pons-Prats J., Espinoza H., Fruitos O. and Oñate E.

Multi-objective design optimisation of stamping process for advanced high strength steels, *10th World Congress on Computational Mechanics (WCCM 2012)*, Sao Paulo, Brasil, 8-13 July 2012

Lee D.S, Srinivas K., Periaux J. and Oñate E.

Shock-free aerofoil/wing design optimisation via morphing technique: Leading and trailing edge deformation, *7th International Conference on Computational Fluid Dynamics*, Big Island of Hawaii, 9-13 July, 2012

Morillo C., Lee D.S, Oller S., Bugada G. and Oñate E.

Low environmental impact composite structure design optimisation using robust multi-objective optimisation platform, *International Conference on Mechanics of Nano, Micro and Macro Composite Structures*, Politecnico de Torino, 18-20 June, 2012

Lee D.S, Morillo C., Oller S., Bugada G. and Oñate E.

Robust design optimisation in advanced hybrid (fiber-metal laminates) composite structures, *International Conference on Mechanics of Nano, Micro and Macro Composite Structures*, Politecnico de Torino, 18-20 June, 2012

Lee D.S., Periaux J., Gonzalez L. F. and Oñate E.

Morphing aerofoil/wing design optimization using computational intelligence system coupled to game strategy, *World Congress on Computational Intelligence (IEEE WCCI 2012)*, Brisbane, Australia, 10-15 June 2012

Lee D.S., Periaux J., Oñate E. and Gonzalez L.F.

Advanced Computational Intelligence System for Inverse Aeronautical Design Optimisation, *9th IEEE International Symposium on Parallel and Distributed Processing with Applications Workshops, ISPAW 2011*, Busan, Korea, 26-28 May, 2011

Nigro N., Gimenez J., Limache A., Idelsohn S. and Oñate E.

Searching efficient Navier-Stokes solver using a particle method, *Trends & Challenges in Computational Mechanics (TCCM2011). A Conference in honor of Peter Wriggers' 60th birthday*, Padua, Italy, 12-14 September 2011

Pons J., Bugada G., Zárate F. and Oñate E.

Robust design optimization in aeronautics using stochastic analysis and evolutionary algorithms, *Proceedings of the Institution of Mechanical Engineers, Vol. 225 (10), pp. 1131, October, 2011*

Salazar F., Pozo D., Morán R. and Oñate E.

Applications of the particle finite element method in DAM engineering, *II Int. Conference on Particle-based Method - Fundamentals and Applications (PARTICLES 2011)*, Barcelona, Spain, 26-28 October, 2011

Rojek J., Labra C. and Oñate E.

Studies of a rock cutting process using the discrete element model, *II Int. Conference on Particle-Based Methods (Particles 2011)*, Barcelona, Spain, October 26-28, 2011

Rojek J. and Oñate E.

Simulation of fluid-particle flows using the PFEM-DEM coupled algorithm, *II Int. Conference on Particle-Based Methods (Particles 2011)*, Barcelona, Spain, October 26-28, 2011

Larese A., Rossi R. and Oñate E.

A visco-rigid model using PFEM for simulating the failure of non-cohesive granular material, *II Int. Conference on Particle-Based Methods (Particles 2011)*, Barcelona, Spain, October 26-28, 2011

Salazar F., Moran R. and Oñate E.

Numerical modeling of landslides in reservoirs using the Particle Finite Element Method (PFEM), *III Semana Internacional de Análisis de Riesgos, Seguridad de Presas y Gestión de Infraestructuras Críticas*, Valencia, España, 20-21 Octubre 2011

Labra C, Oñate E, Zárate F, Rojek J.

Modelling and simulation of the effect of blast loading on structures using an adaptive blending of discrete and finite element methods, *II Int. Conference on Particle-Based Methods (Particles 2011)*, pp. 457-465, Barcelona, Spain, October 26-28, 2011

Carbonell J.M^a, Oñate E. and Suárez B.

Advances in excavation modelling using the PFEM, *II Int. Conference on Particle-Based Methods (Particles 2011)*, Barcelona, Spain, October 26-28, 2011

Flores R. and Oñate E.

A rotation free shell triangle with embedded stiffeners, *International Conference on Textile Composites and Inflatable Structures (STRUCTURAL MEMBRANES 2011)*, pp. 92-103, Barcelona, Spain, 5-7 October 2011

Flores R., Ortega E. and Oñate E.

Numerical tools for the analysis of parachutes, *International Conference on Textile Composites and Inflatable Structures (STRUCTURAL MEMBRANES 2011)*, Barcelona, Spain, 5-7 October 2011

Lee D.S., Periaux, J., Bugada G. and Oñate E.

Multi-objective high lift systems design optimisation using hybridised evolutionary algorithm with Nash-game, *International Conference on Evolutionary and Deterministic Methods for Design, Optimization and Control with Applications to Industrial and Societal Problems*, Capua, Italy, 14-16 September 2011

Zárate F., Labra C. and Oñate E.

Advances in the modelling and simulation of the effect of blast loading on structures using a blending of discrete and finite element methods, *International Defense and Homeland Security Simulation Workshop*, Rome, Italy, 12-14 September 2011

Eijo A., Oñate E. and Oller S.

Delamination model for laminated composite structures using zig zag theory, *XI Int. Conference on Computational Plasticity (COMPLAS XI)*, Barcelona, 7-9 September 2011

Rojek, J., Oñate E., Labra C. and Su O.

Modelling brittle failure of materials using the discrete element method, *XI Int. Conference on Computational Plasticity (COMPLAS XI)*, Barcelona, 7-9 September 2011

Carbonell J.M^a, Suárez B. and Oñate E.

Modelling of surface wear by the particle finite element method. Application to tunnelling processes, *XI Int. Conference on Computational Plasticity (COMPLAS XI)*, Barcelona, 7-9 September 2011

Pons-Prats J., Bugeda G., Zárata F. and Oñate E.

Robust shape optimization in aeronautics using stochastic analysis with uncertainties, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Lee D.S., Morillo C., Bugeda G., Oller S., Oñate E. and Fruitos O.

Multilayered composite structure design optimisation using distributed/parallel multi-objective evolutionary algorithms, *16th International Conference on Composite Structures (ICCS 16)*, Porto, Portugal, 28-30 June 2011

Lee D.S., Periaux J., Gonzalez L.F. and Oñate E.

Coupling Hybrid-Game Strategies with Particle Swarm Optimisation for Multi-Objective High Lift Systems Design Optimisation, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Idelsohn S.R., Nigro N. and Oñate E.

Multi-fluid flow simulations using large time-steps, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Oñate E., Idelsohn S.R. and Zárata F.

Finite calculus. A paradigm for deriving stabilized finite element methods in computational mechanics, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Lee D.S., Périaux J., González L.F. and Oñate E.

Coupling hybrid-game strategies with particle swarm optimisation for multi-objective high lift system design optimisation, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Rojek J. and Oñate E.

Coupled fluid-particle dynamics algorithm using the PFEM and DEM, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Kamran K., Rossi R., Idelsohn S. and Oñate E.

3D FSI modeling of tank implosion, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Larese A., Rossi R., and Oñate E.

A combined PFEM-level set model to simulate the behavior of a rockfill dam in overtopping scenarios, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Marti J., Oñate E. and Idelsohn S.

A new strategy for simulation of polymers in fire situations, *IV International Conference on Computational Methods for Coupled Problems in Science and Engineering (COUPLED PROBLEMS 2011)*, Kos, Greece, 20-22 June 2011

Rojek J., Labra C. and Oñate E.

Contact analysis in the discrete element method – modelling and computational aspects, *II International Conference on Computational Contact Mechanics (ICCCM 2011)*, Hannover, Germany, 15-17 June 2011

Lee D.S., Périaux J., Bugada G. and Oñate E.

Multi-objective high lift systems design optimisation using hybridised evolutionary algorithm with nash-game, *9th World Congress on Structural and Multidisciplinary Optimization*, Shizuoka, Japan, June 13 -17, 2011

Lee D.S., Periaux J., Oñate E. and Gonzalez L.F.

Advanced computational intelligence system for inverse aeronautical design Optimisation, *International Conference on Advanced Software Engineering (ICASE-11)*, Busan, Korea, 26-28 May, 2011

Arnau P., Oñate E., Jiménez J. and Piazzese J.

Development and application of decision support systems for environmental monitoring, *MAMERN11: 4th International Conference on Approximation Methods and Numerical Modelling in Environment and Natural Resources*, Saidia, Morocco, May 23-26, 2011

Lee D.S., Periaux J., Bugada G., Gonzalez L.F. and Oñate E.

Hierarchical robust design optimisation of shock control bump devices for airfoil drag reduction, *ECCOMAS CFD & Optimization*, Antalya, Turkey, 23-25 May 2011

Lee D.S., Bugada G., Periaux J. and Oñate E.

Robust active shock control bump design optimisation using parallel hybrid-MOGA, *23rd International Conference on Parallel Computational Fluid Dynamics 2011 (ParCFD)*, Barcelona, Spain, May 16-20, 2011

Dadvand P., Rossi R., Cotella J., Pasenau M., Coll A. and Oñate E.

Scalable system for large unstructured mesh simulation, *23rd International Conference on Parallel Computational Fluid Dynamics (Parallel CFD 2011)*, Barcelona, Spain, 16-20 May 2011

Cotella J., Rossi R., Oñate E., Lafontaine N. and Idelsohn S.R.

Parallel adaptive mesh refinement for incompressible flow problems, *23rd International Conference on Parallel Computational Fluid Dynamics (Parallel CFD 2011)*, Barcelona, Spain, 16-20 May 2011

Dadvand P., Rossi R., Gil M., Martorell X., Cotela J., Juanpere E., Idelsohn S.R. and Oñate E.
Migration of a generic multi-physics framework to HPC environments, *23rd International Conference on Parallel Computational Fluid Dynamics (Parallel CFD 2011)*, Barcelona, Spain, 16-20 May 2011

Bugeda G., Lee D.S., Periaux J., Pons J. and Oñate E.
Stochastic robust MDO for aerial vehicle design optimisation, *NATO RTO - Virtual Prototyping of Affordable Military Vehicles Using Advanced MDO*, Bulgaria, 16-18 May 2011

Cotela J., Rossi R., Oñate E. and Dadvand P.
Comparison of different parallel techniques applied to the solution of the Navier-Stokes equations, *The Second International Conference on Parallel, Distributed, Grid and Cloud Computing for Engineering*, Ajaccio, France, 12-15 April, 2011

Cristiano F., Fava S., Arnau P. and Oñate E.
Study of mesoscale convective clouds formation from satellite's data analysis, *International Conference on Data Flow from Space to Earth: Applications and interoperability*, Venice, Italy, March 21-23, 2011

Lee D.S., Periaux J., Gonzalez L.F., Oñate E. and Qin N.
Adaptive wing/aerofoil design optimisation using MOEA coupled to uncertainty design method, *The 49th AIAA Aerospace Science Meeting including the New Horizons Forum and Aerospace Exposition*, Orlando, Florida USA, January 4 -7, 2011

Monteiro V., Dadvand P., Oller S. and Oñate E.
Numerical simulation of the urinary bladder, *9th Int. Symposium on Computer Methods in Biomechanics and Biomedical Engineering (CMBBE)*, Valencia, Spain, 24-27 February 2010

Riquelme F., Morán R., Celigueta M. A., Salazar F. y Oñate E.
Válvulas de asiento plano y paso circular: criterios de diseño y análisis de su funcionamiento mediante modelación numérica, *II Congreso Internacional de Conservación y Rehabilitación de Presas*, Zaragoza, 23-25 Noviembre 2010

Larese A., Rossi R., Toledo M. A. and Oñate E.
Physical and numerical modelization of the behaviour of rockfill dams during overtopping scenarios, *II Congreso Internacional de Conservación y Rehabilitación de Presas*, Zaragoza, España, 28-30 Septiembre, 2010

Kouhi M., Bugeda G., Lee D.S. and Oñate E.
Aerodynamic shape optimization using adaptive remeshing, *2nd International Conference on Engineering Optimization*, Lisbon, Portugal, 6-9 September, 2010

Lee D.S., Gonzalez L.F., Walker R., Periaux J. and Oñate E.
Reduction environmental effects of civil aircraft through multi-objective flight plan optimisation, *IOP Conference Series: Materials Science and Engineering. Proceedings of WCCM/APCOM 2010*, Sydney, Australia, July 19-23, 2010

Idelsohn S.R., Oñate E., Marti J., Rossi R. and Butler K.M.

A flame model for melting and dripping polymers, *12th Int. Conference on Fire, Science and Engineering (Interflam)*, University of Nottingham, UK, 5-7 July 2010

Lee D.S., Periaux J., Gonzalez L. F., Qin N. and Oñate E.

Shock control bump design optimization on natural laminar aerofoil, *ICCFD: International Conference on Computational Fluid Dynamics 2010*, Kowloon, Hong Kong, 28-30 September 2010

Lee D.S., Periaux J., Oñate E., Pons J. and Bugea G.

Double shock control bump design optimization using hybridised evolutionary algorithms, *IEEE World Congress on Computational Intelligence (WCCI 2010)*, Barcelona, Spain, July 18-23, 2010

Carbonell J.M^a, Suárez B. and Oñate E.

Modeling of surface wear by the particle finite element method. Application to tunneling processes, *Computational Plasticity X: Fundamentals and Applications*, E. Oñate, D.R.J. Owen and B. Suárez (Eds.), Barcelona, Spain, 2-4 September 2009

Carbonell J.M., Oñate E. and Suárez B.

Modelling and simulation of excavation problems with the particle finite element method, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Larese A., Rossi R. and Oñate E.

Analysis of stability of earth dams in overtopping scenarios with the particle finite element method, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Kamran K., Rossi R., Idelsohn S.R. and Oñate E.

Underwater implosion using FEM, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Celigueta M.A., Oñate E., Latorre S. and Suárez B.

Developments and applications of PFEM in harbour engineering, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Ryzhakov P., Rossi R., Idelsohn S. R. and Oñate E.

Advances in the particle finite element method for fluid-structure interaction, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Ortega E., Oñate E. and Idelsohn S. R.

A finite point method for compressible flow fluid-structure interactions problems, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Laurel-Castillo J. A., Oñate E., Cruz-Leon S. and Celigueta M. A.

Simulation of surface breaking waves with the particle finite element method, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Mier-Torrecilla M., Geyer A., Idelsohn S. R. and Oñate E.

Multi-fluid flows with the particle FEM, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Martí J., Oñate E. and Idelsohn S. R.

Analysis of burning and melting of objects in fire situations with the particle FEM, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Rojek J., Oñate E., Labra C., Kargl H. and Akerman J.

Discrete element modelling of rock cutting, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Labra C., Rojek J. and Oñate E.

Dynamic DEM/FEM coupling for geomechanical problems, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Oñate E. and Idelsohn S.R.

Advances in the particle finite element method for multidisciplinary problems in engineering, *Particle-Based Methods. Fundamentals and Applications (PARTICLES 2009)*, Barcelona, Spain, November 25- 27, 2009

Oñate E., Idelsohn S.R., Celigueta M.A., Rossi R. and Latorre S.

Possibilities of the particle finite element method in computational mechanics, *18th Int. Conference on Computer Methods in Mechanics*, Zielona Gora, Poland, May 18-21, 2009

Oliveira T. C. A., Celigueta M. A., Gironella X., Oñate E. and Sánchez-Arcilla A.

Absorption of water waves in a two-dimensional numerical flume, *Computational Methods in Marine Engineering III*, June 2009

Rojek J., Kargl H., Labra C. and Oñate E.

3D simulation of rock cutting in underground excavation, *Euro:Tun 2009, 2nd International Conference on Computational Methods in Tunnelling*, (In press), 2009

Tang Z., Périaux J., Bugada G. and Oñate E.

Lift maximization with uncertainties for the optimization of high lift devices using multi-criterion evolutionary algorithms, *IEEE Congress on Evolutionary Computation*, Trondheim, Norway, 18 - 21 May 2009

Lechuga C., Toledo M. A. y Oñate E.

Análisis del comportamiento de las presas de escollera ante un vertido por coronación, *XXIII Congreso Latinoamericano de Hidráulica*, Cartagena de Indias, Colombia, Septiembre 2008

Oñate E., Idelsohn S.R., Celigueta M.A. and Rossi R.

Advances in the particle finite element method for the analysis of multibody-fluid interaction, *International Symposium in DEN*, Beijing, China, 2008

Souto-Iglesias A., Idelsohn S. R., Martí J., Zamora-Rodríguez R. and Oñate E.

Modeling of free surface flows with elastic bodies interactions, *27th Symposium on Naval Hydrodynamics*, Seoul, Korea, 5-10 October 2008

Larese A., Rossi R., Oñate E. and Idelsohn S.R.

Particle finite element method and level set method for the simulation of the failure of rockfill dams due to overtopping phenomena, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Boroomand B., Kamran K. and Oñate E.

Combining linear tetrahedral elements to solve problems with incompressible behaviour through an iterative force based method, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Rojek J. and Oñate E.

Coupled discrete/finite element modelling of geotechnical problems, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Oñate E., Idelsohn S.R. and Celigueta M.A.

Advances in the particle finite element for fluid soil-structure interaction, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Zárate F. and Oñate E.

A new rotation-free triangular plate element with shear deformation effects, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Carbonell J.M., Oñate E. and Suárez B.

Simulation of ground excavation processes with the particle finite element method (PFEM), *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Idelsohn S.R., Oñate E., Martí J. and Rossi R.

Fluid-structure-interaction problems including “added-mass effects”, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Soudah E. and Oñate E.

One dimensional numerical models for simulation of the blood flow on arteries, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

López R., Diego X., Flores R., Chiumenti M. and Oñate E.

Artificial neural networks for the solution of optimal shape design problems, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Bugeda G., Ródenas J.J., Fuenmayor F.J. and Oñate E.

Low cost adaptive remeshing strategies for the solution of structural shape optimization problems using hybrid (evolutionary-gradient) methods, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

García Espinosa J. and Oñate E.

A new unstructured mesh FE method for the analysis of ship hydrodynamics, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Oñate E., Zárate F. and Idelsohn S.

Stabilized finite element formulation for convective transport problems with sharp gradients via higher order finite calculus, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Idelsohn S.R., Oñate E., Marti J. and Rossi R.

Recent advances in particle method to solve fluid-structure-interaction problems, *IX International Congress on Numerical Methods in Engineering and Applied Sciences*, Venezuela, 1-4 April, 2008

Rossi R., Davdand P., Idelsohn S. and Oñate E.

Strong coupling, partitioned methods in FSI, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Ryzhakov P.B., Rossi R, Idelsohn S. and Oñate E.

Quasi-incompressible updated lagrangian fluid and monolithic formulation for the the fluid-structure interaction problems involving highly deformable solids, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Dadvand P., Rossi R. and Oñate E.

A framework for developing finite element codes for multi-disciplinary applications, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

López R., Flores R., Escolano E. and Oñate E.

Artificial neuralnetworks for optimal airfoil design, *4th Conference on Advances and Applications of GiD*, Ibiza, Spain, 8-9 May 2008

Oñate E., Bugada G., Zhili T. and Periaux J.

Multi-element Airfoil Lift Maximization Problems with Uncertainties using Evolutionary Optimization and Unstructured Meshes, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Oñate E.

New generation of rotation-free triangles for analysis of thin and thick plates and shells, *8th. World Congress on Computational Mechanics (WCCM8)*, *5th. European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2008)*, Venice, Italy, June 30 – July 5, 2008

Oliveira T. C. A., Gonzalez-Marco D., Sánchez-Arcilla A., Gironella X., Celigueta M. A. and Oñate E.

Aplicação de um canal numérico de ondas ao estudo do comportamento hidráulico de estruturas marítimo, *5as Jornadas Portuguesas de Engenharia Costeira e Portuária*, Lisboa, Portugal

Oliveira T. C. A., Gonzalez-Marco D., Sánchez-Arcilla A., Gironella X., Celigueta M. A. and Oñate E.

La generación de oleaje en canales numéricos y físicos. Implicaciones para el proyecto de estructuras, *Proceedings of IX Jornadas Españolas de Puertos y Costas*, AZTI-Tecnalia (Ed.), pp. 139-149, San Sebastián, Spain

Oliveira T. C. A., Gonzalez-Marco D., Sánchez-Arcilla A., Celigueta M. A., and Oñate E.

Generation and propagation of water waves in a two-dimensional numerical flume, *Computational Methods in Marine Engineering II*, E. Oñate, J. García, P. Bergan, and T. Kvamsdal, eds., pp. 241-244, CIMNE, Barcelona, Spain

Oliveria T.C.A., González-Marco D., Sánchez-Arcilla A., Gironella X., Celigueta M. A. y Oñate E.

La generación de oleaje en canales numéricos y físicos. Implicaciones para el proyecto de estructuras, *IX Jornadas Españolas de Ingeniería de Costas y Puertos*, San Sebastián, 2007

Soudah E. and Oñate E.

One dimensional numerical model for the simulation of blood flow on arteries, *IBEC Symposium 2007*, Barcelona, 7 November 2007

Rossi R., Butler K., Oñate E and Idelsohn S.

Modeling and simulation of the melting of polymers under fire conditions using the particle finite element method, *Fire Computer Modeling*, Santander, Spain, 18-20th October, 2007

Pérez J. S., Oñate E., Soudah E., García J., Escolano E., Mena A., Heidenreich E., Rodríguez J.F. and Doblaré M.

Fluid-Structure interaction applied to blood flow simulations, *ECCOMAS Thematic Conference on Computational Vision and Medical Image (VIPIMAGE)*, Porto, Portugal, 17-19th October, 2007

Larese A., Rossi R., Oñate E. and Idelsohn S.R.

Particle finite element method (PFEM) in hydraulic and geotechnical civil engineering, *2nd GACM Colloquium on Computational Mechanics*, Technical University of Munich, October 10 - 12, 2007

Rojek, J., Oñate E., Labra C. and Kargl H.

DEM/FEM computation of excavation processes, *IX Int. Conference on Computational Plasticity (COMPLAS IX)*, Barcelona, 5-7 September 2007

Ródenas J.J., Bugeda G., Albelda J. y Oñate E.

Influence of the finite element discretization error over the convergence of structural shape optimization algorithms, *2007 IEEE Congress on Evolutionary Computation (CEC2007)*, Singapore, 25-28 September 2007

Neamtu L., Flores F. and Oñate E.

Analysis of industrial sheet metal forming processes using an enhanced rotation-free basic shell triangle, *IX Int. Conference on Computational Plasticity (COMPLAS IX)*, Barcelona, 5-7 September 2007

Butler K., Oñate E., Idelsohn S. and Rossi R.

Modelling polymer melt flow using the Particle Finite Element Method, *11th Int. Fire Science & Engineering Conference*, University of London, Royal Holloway College, UK, Interscience Communications Limited, 3-5 September 2007

Rojek J., Akerman J., Oñate E. and Zarate F.

Numerical prediction of wear of roadheader picks, *ECCOMAS Thematic Conference on Computational Methods in tunnelling (EURO:TUN 2007)*, Vienna, Austria, August 27-29, 2007

Labra C., Oñate E., Rojek J. and Zárate F.

Discrete element method on tunnel constructions, *ECCOMAS Thematic Conference on Computational Methods in tunnelling (EURO:TUN 2007)*, Vienna, Austria, August 27-29, 2007

Zárate F., Labra C., Rojek J., and Oñate E.

A methodology to determine the particle properties in 2 and 3D DEM simulations, *ECCOMAS Thematic Conference on Computational Methods in tunnelling (EURO:TUN 2007)*, Vienna, Austria, August 27-29, 2007

Rojek J., Labra C. and Oñate E.

Coupled discrete/finite element modelling of underground excavation, *ECCOMAS Thematic Conference on Computational Methods in tunnelling (EURO:TUN 2007)*, Vienna, Austria, August 27-29, 2007

Rojek J., Kargl H., Restner U. and Oñate E.

Simulation of rock cutting in underground excavation with roadheaders, *ECCOMAS Thematic Conference on Computational Methods in tunnelling (EURO:TUN 2007)*, Vienna, Austria, August 27-29, 2007

Soudah E., Mussi F. and Oñate E.

Validation of the one-dimensional numerical model in the ascending-descending aorta with real flow profile, *3rd World Congress on Bioengineering, (WACBE 2007)*, Bangkok, Thailand, July 9 -11, 2007

Soudah E., Rodríguez J.F., López R. and Oñate E.

Neural Networks For Simulation Of Computational Processes In Bioengineering, *3rd World Congress on Bioengineering (WACBE 2007)*, Bangkok, July 9-11, 2007

Lau K., López R. and Oñate E.

Neural networks for optimal control of aircraft landing systems, *World Congress on Engineering. International Conference of Applied and Engineering Mathematics (ICAEM 2007)*, London, UK, 2-4 July, 2007

Idelsohn S., Marti J. and Oñate E.

A unified formulation for fluid-structure interaction problems, *CMNE/CILAMCE 2007*, Porto, Portugal, 13 -15 de Junio, 2007

Oñate E. y Zárate F.

Un elemento de placa triangular libre de rotaciones incluyendo la deformación por cortante, *CMNE/CILAMCE 2007*, Porto, Portugal, 13 -15 de Junio, 2007

Bugeda G., Ródenas J.J., Albelda J. y Oñate E.

Influencia del nivel de error de la discretización por elementos finitos en la convergencia de los procesos de optimización de forma, *CMNE/CILAMCE 2007*, Porto, Portugal, 13 -15 de Junio, 2007

Valls A., Oñate E. and García Espinosa J.

Advances on FIC stabilization method: numerical modelling of turbulence, *CMNE/CILAMCE 2007*, Porto, Portugal, 13 -15 June, 2007

López R. and Oñate E.

Artificial neural networks for the solution of optimal shape design problems, *Evolutionary and Deterministic Methods for Design, Optimization and Control with Applications to Industry and Social Problems (EUROGEN 2007)*, Jyväskylä, Finland, 11-13 June, 2007

Idelsohn S.R., Oñate E., Celigueta M.A. and Marti J.

The particle finite element methods applied to solve several marine engineering problems, *Computational Methods in Marine Engineering II (Marine 2007)*, Barcelona, 5-7 June, 2007

Oliveira T.C.A, González-Marco D., Sánchez-Arcilla A., Celigueta M.A. and Oñate E.

Generation and propagation of water waves in a two-dimensional numerical flume, *Computational Methods in Marine Engineering II (Marine 2007)*, Barcelona, 5-7 June, 2007

Valls A., García J. and Oñate E.

FIC/FEM formulation. A new computational model for prediction of turbulence, *Computational Methods in Marine Engineering II (Marine 2007)*, Barcelona, 5-7 June, 2007

Celigueta M.A., Oñate E. and Idelsohn S.R.

Simulation of ship sinking situations with the particle finite element method, *Computational Methods in Marine Engineering II (Marine 2007)*, Barcelona, 5-7 June, 2007

Löhner R., Yang C. and Oñate E.

Simulation of rigid and flexible moving objects in heavy sea states, *Computacional Methods in Marine Engineering II (Marine 2007)*, Barcelona, 5-7 June, 2007

García J., Valls A. and Oñate E.

An overlapping domain decomposition level set (ODDLS) Method for simulation of free surface problems, *Computacional Methods in Marine Engineering II Marine 2007*, Barcelona, 5-7 June, 2007

Delorme L., Celigueta M. A., Oñate E. and Souto-Iglesias A.

Pressure measurement in 2D sloshing simulations with SPH, *2nd International Spheric SPH Workshop*, Madrid, Spain, May 2007

Rastellini F., Salomón O., Oller S. and Oñate E.

Non-linear mechanical damage modelling for long fibre-reinforced laminates, *The e-Journal & Exhibition of Nondestructive Testing*, Document ID: 4176 - NDT.net: www.ndt.net. (CDCM 2006) Conference on Damage in Composite Materials 2006, September in Stuttgart, Germany, 2006

Bladé E., Gómez M., Dolz J., Piazzese J., Corestein G. and Oñate E.

Decision support system for flood risk assessment and management, *7th International Conference on Hydroinformatics*, Acropolis, Nice, France, 4-8 September 2006

Neamtu L., Flores F., Weyler R. and Oñate E.

A numerical simulation approach to the aerosols and food cans manufacture and decoration, *IDDRG*, Oporto, Portugal, 19 - 22 June 2006

Oñate E., Idelsohn S.R., Celigueta M.A. and Rossi R.

Advances in the particle finite element method for fluid-structure interaction problems, *III European Conference on Computational Mechanics, Solids, Structures and Coupled Problems in Engineering*, Lisbon, Portugal, 5 - 8 June 2006

Bugeda G., Ródenas J.J., Pahl E. and Oñate E.

An adaptive mesh generation strategy for the solution of structural shape optimization problems using evolutionary methods, *III European Conference on Computational Mechanics, Solids, Structures and Coupled Problems in Engineering*, Lisbon, Portugal, 5 - 8 June 2006

Löhner R., Yang Ch. and Oñate E.

On the simulation of flows with violent free surface motion, *44th Aerospace Sciences Meeting and Exhibit*, American Institute of Aeronautics and Astronautics (AIAA), Reno, NV, USA, Paper 2006-0291, January 2006

Arteaga-Gómez J., Löhner R., Rojek J. and Oñate E.

Coupling of FEFLO with SIMPACT, *44th Aerospace Sciences Meeting and Exhibit*, American Institute of Aeronautics and Astronautics (AIAA), Reno, NV, USA, Paper 2006-0696, January 2006

Oñate E., Flores F. and Neamtu L.

Enhanced rotation-free basic shell triangle. Applications to sheet metal forming, *8th Int. Conference on Computational Plasticity (COMPLAS VIII)*, Barcelona, Spain, September 5-8th, 2005

Celigueta M.A., Oñate E., Del Pin F. and Idelsohn S.R.

Possibilities of the particle finite element method (PFEM) for hydrodynamic and fluid-structure interaction analysis of port structures, *2nd Int. Conference on Maritime Heritage/4th Int. Conference on Maritime Engineering, Ports and Waterways*, Barcelona, Spain, April 18-20, 2005

Perazzo F., Martin A., Miquel J. y Oñate E.

Análisis y estimación del error en el método de puntos finitos para mecánica de sólidos, *Congreso de Métodos Numéricos en Ingeniería (SEMNI 2005)*, Granada, 4 - 7 Julio, 2005

Oñate E., Valls A. y García Espinosa J.

Avances en el método de cálculo finito en dinámica de fluidos computacional por el MEF, *Congreso de Métodos Numéricos en Ingeniería (SEMNI 2005)*, Granada, 4 - 7 Julio, 2005

Idelsohn S., Oñate E., Del Pin F., Aubry R. and Calvo N.

A particle method based on the finite element shape functions, *Congreso de Métodos Numéricos en Ingeniería (SEMNI 2005)*, Granada, 4 - 7 Julio, 2005

Recarey C., Oñate E., Miquel J., Rojek J. y Zárate F.

Estimación de propiedades micro-estructurales de un modelo de contacto lineal en el método de los elementos discretos, *Congreso de Métodos Numéricos en Ingeniería (SEMNI 2005)*, Granada, 4 - 7 Julio, 2005

Idelsohn S., Oñate E. and Del Pin F.

Fluid-structure interaction problems with free-surfaces flows and breaking waves, *Int. Conference on Computational Methods in Marine Engineering (MARINE 2005)*, Oslo, Norway, 27-29 June, 2005

Del Pin F., Idelsohn S., Oñate E. and Aubry R.

The particle finite element method applied to naval engineering, *Int. Conference on Computational Methods in Marine Engineering (MARINE 2005)*, Oslo, Norway, 27-29 June, 2005

García Espinosa J., Oñate E. and Helmers B.

Advances in the finite element formulation for naval hydrodynamics problems, *Int. Conference on Computational Methods in Marine Engineering (MARINE 2005)*, Oslo, Norway, 27-29 June, 2005

Rossi, R., Vitaliani R. and Oñate E.

Validation of a FSI simulation procedure - bridge aerodynamics model problem, *Computational Methods for Coupled Problems in Science and Engineering*, Santorini Island, Greece, 25-27 May, 2005

Idelsohn S., Oñate E., del Pin F., Aubry R. and Celigueta M.A.

Applications of the particle finite element method (PFEM) to solve coupled problems, *Computational Methods for Coupled Problems in Science and Engineering*, Santorini Island, Greece, 25-27 May, 2005

Flores F. and Oñate E.

A rotation-free shell element for the analysis of kinked and branching surfaces, *5th International Conference on Computation of Shell and Spatial Structures (IASS/IACM)*, E. Ramm, W. A. Wall, K.-U. Bletzinger, M. Bischoff (Eds.), Salzburg, Austria, June 1-4, 2005

Oñate E., Flores F. and Marcipar J.

Analysis of inflatable structures using a rotation-free triangle, *5th International Conference on Computation of Shell and Spatial Structures (IASS/IACM)*, E. Ramm, W. A. Wall, K.-U. Bletzinger, M. Bischoff (Eds.), Salzburg, Austria, June 1-4, 2005

Rossi, R. and Oñate E.

Aeroelastic analysis of thin membrane structures, *5th International Conference on Computation of Shell and Spatial Structures (IASS/IACM)*, E. Ramm, W. A. Wall, K.-U. Bletzinger, M. Bischoff (Eds.), Salzburg, Austria, June 1-4, 2005

Valdés J. G., Oñate E. y Miquel J.

Cálculo de velas para competición mediante un análisis no-lineal de membrana ortótropo, *Congreso de Métodos Numéricos en Ingeniería (SEMNI 2005)*, Granada, 4 - 7 Julio, 2005

Löhner R., Yang C. and Oñate E.

Large-scale simulation of flows with violent free surface motion, *Int. Conference on Computational Methods in Marine Engineering (MARINE 2005)*, Oslo, Norway, 27-29 June, 2005

Rojek J., Oñate E. and Zárate F.

Modelling and computational aspects of contact analysis in discrete element methods, *Congreso de Métodos Numéricos en Ingeniería (SEMNI 2005)*, Granada, 4 - 7 Julio, 2005

Ortega E., Oñate E. y Sacco C.

Avances en el método de puntos finitos para problemas de dinámica de fluidos, *Congreso de Métodos Numéricos en Ingeniería (SEMNI 2005)*, Granada, 4 - 7 Julio, 2005

Rojek J., Zárate F. and Oñate E.

Non linear dynamic analysis of shells with frictional contact using the rotation-free BST shell element, *5th International Conference on Computation of Shell and Spatial Structures (IASS/IACM)*, E. Ramm, W. A. Wall, K.-U. Bletzinger, M. Bischoff (Eds.), Salzburg, Austria, June 1-4, 2005

Oñate E., Flores R., Ortega E. and Idelsohn S.

Stabilized fem-fic formulation for fluid-flow problems with sharp gradients, *Eighth U.S. National Congress on Computational Mechanics (USNCCM 8)*, Austin, Texas, June 14-18, 2005

Agüero A., Pallarés F. and Oñate E.

Possibilities of the rotation-free BST shell element for instability analysis and design of steel structures, *5th International Conference on Computation of Shell and Spatial Structures (IASS/IACM)*, E. Ramm, W. A. Wall, K.-U. Bletzinger, M. Bischoff (Eds.), Salzburg, Austria, June 1-4, 2005

Oñate E., Duffet G., et Chiumenti M.

Advances in stabilized finite element methods for bulk and sheet metal forming processes, *8th Int. Conference on Numerical Methods in Industrial Forming Processes*, Columbus, USA, June 13-17, 2004

Oñate E., Flores F. and Neamtu L.

Enhanced rotation-free basic shell triangle for sheet stamping problems, *8th Int. Conference on Numerical Methods in Industrial Forming Processes*, Columbus, USA June 13-17, 2004

Oñate E., Guzmán F., Bugeda G., Corestein G. y Zárata F.

Red aulas CIMNE - Espacios de colaboración en temas docentes y de I+D en distintas universidades, empresas y centros de investigación de diversos países, *XII Congreso Universitario de Innovación Educativa en las Enseñanzas Técnicas*, Escola Universitària d'Enginyeria Tècnica Industrial de Barcelona (EUETIB), Barcelona, 26 - 28 de julio, 2004

Idelsohn S. R. and Oñate E.

Mesh or meshless methods? Is this the right question?, *6th World Congress on Computational Mechanics (WCCM VI)*, Beijing, China, September 5-10, 2004

Aubry R., Idelsohn S. R. and Oñate E.

Particle finite element method with thermal coupling, *6th World Congress on Computational Mechanics (WCCM VI)*, Beijing, China, September 5-10, 2004

Rojek J. and Oñate E.

Unified DEM/FEM approach to geomechanics problems, *6th World Congress on Computational Mechanics (WCCM VI)*, Beijing, China, September 5-10, 2004

Rojek J., Oñate E. and Taylor R.L.

CBS stabilization in dynamics of solids using explicit time integration, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2004)*, P. Neittaanmäki, T. Rossi, S. Korotov, E. Oñate, J. Periaux and D. Knörzer (Eds.), Jyväskylä, 24 - 28 July 2004

Oñate E. y Zárata F.

Las tecnologías de información y comunicaciones y los métodos numéricos. Una unión de futuro para la ingeniería, *III Congreso Internacional sobre Métodos Numéricos en Ingeniería y Ciencias Aplicadas*, S. Gallegos et al (Eds.), Monterrey, México, 22-24 Enero 2004

Maggiolo C., Balsa-Canto E., Chiumenti M., Cervera M., Oñate E., Alonso A.A. and Banga J.R.

Advanced tools for simulation, optimisation and control of food preservation processes, *ICEF9-2004, International Conference Engineering and Food*, Presented at ICEF9-2004, International Conference on Engineering and Food, Montpellier, France, 7-11 March, 2004

Rossi R., Lazzari M., Vitaliani R. and Oñate E.

Convergence of the modified material model for wrinkling simulation of light-weight membrane structures, *International Conference on Textile Composites and Infaltable Structures (Structural Membranes 2003)*, E. Oñate and B. Kröplin (Eds.), Barcelona, España, 30 June - 3 July 2003

Oñate E., Arteaga J., García J. and Flores R.

A residual power approach for error estimation and mesh adaptivity in incompressible viscous flows using finite calculus and the FEM, *First Internactional Conference on Adaptive Modelling and Simulation (ADMOS'03)*, CIMNE, Barcelona, Spain, 2003

Oñate E.

Sistemas de ayuda a la decisión en Ingeniería Civil. Posibilidades y perspectivas, *IV Congreso Nacional de la Ingeniería Civil*, Colegio de Ingenieros de Caminos, Canales y Puertos, Madrid, 26-28 Noviembre 2003

Oñate E.

Posibilidades de los métodos numéricos en la ingeniería naval, 4º y 5º *Avances de la Ciencia y de la Tecnología*

Flores F. and Oñate E.

Rotation-free element for finite strain analysis of elastic-plastic thin shell and membrane structures, *International Conference on Textile Composites and Infaltable Structures (Structural Membranes 2003)*, E. Oñate and B. Kröplin (Eds.), Barcelona, España, 30 June - 3 July 2003

Marcipar J., Oñate E., Sarrablo V. and Miquel J.

Experiences in the design, analysis and construction of low pressure inflatable structures, *International Conference on Textile Composites and Infaltable Structures (Structural Membranes 2003)*, E. Oñate and B. Kröplin (Eds.), Barcelona, España, 30 June - 3 July 2003

Rossi R., Lazzari M., Saeta A. and Oñate E.

Enhanced internal volume model, *International Conference on Textile Composites and Infaltable Structures (Structural Membranes 2003)*, E. Oñate and B. Kröplin (Eds.), Barcelona, España, 30 June - 3 July 2003

Bugeda G., Balsa E., Thamotheram C., Oñate E., and Zárate F.

Global search methods for nonlinear optimisation: a new probabilistic-stochastic approach, *International Congress on Evolutionary Methods for Design, Optimization and Control with Applications to Industrial Problems (EUROGEN 2003)*, G. Bugeda et al (Eds), CIMNE, Barcelona, España, 15 - 17 September 2003

Oñate E., Rojek J., Zárate F., Miquel J., Burrell S., Recarey C. and Balsa E.

Study and estimation of the micro-structural mechanical properties of a linear contact model for the discrete element method, *7th International Conference on Computational Plasticity (COMPLAS VII)*, E. Oñate and D.R.J. Owen (Eds), Barcelona, España, 7 - 10 April 2003

Rastellini F., Oller S., Salomon O. and Oñate E.

Advanced serial-parallel mixing theory for composite materials analysis. Continuum basis and finite element applications, *7th International Conference on Computational Plasticity (COMPLAS VII)*, E. Oñate and D.R.J. Owen (Eds), Barcelona, España, 7 - 10 April 2003

García Espinosa J. and Oñate E.

Fluid dynamic analysis of america's cup boats including dynamic sinkage and trim effects, *Marnet-CFD Workshop*, Portsmouth, UK, 20-21 March 2003

Oñate E., Rojek J., Taylor RL. and Zienkiewicz OC.

Non linear dynamic analysis of solids using linear triangles and tetrahedra, *7th International Conference on Computational Plasticity (COMPLAS VII)*, E. Oñate and D.R.J. Owen (Eds), Barcelona, España, 7 - 10 April 2003

Oñate E.

Posibilidades de las nuevas tecnologías de información y comunicaciones en el sector de la construcción, *I Jornadas Nacionales sobre Innovación y Nuevas Tecnologías en la Ingeniería Civil*, Colegio de Ingenieros de Caminos, Canales y Puertos, Madrid, 4 - 5 Diciembre 2002

García Espinosa J., Luco-Salman R., López-Rodríguez M. and Oñate E.

An advanced finite element method for fluid-dynamic analysis of America's cup boat, *Presented at the High Performance Yatch Design Conference*, Auckland, 4 - 6 December, 2002

Rojek J., Oñate E., Piela A. and Neamtu L.

Numerical modelling and simulation of Tailor welded blanks, *Proceedings of the Fifth International Conference and Workshop on Numerical Simulation of 3D Sheet Forming Processes (NUMISHEET'02)*, Vol. 1, pp. 177 - 182, Je Ju Island, Korea, October 21 - 25, 2002

Oñate E. and Arraez J.A.

Possibilities of finite calculus for deriving advanced computational methods in engineering, *Second International Conference on Advanced Computational Methods in Engineering (ACOMEN'2002)*, Liège, Belgium, May 28-31, 2002

Oñate E., Idelsohn S., Sacco E., Perazzo F. y Miquel J.

Avances en el método de puntos finitos en mecánica de fluídos y de sólidos, *V Congreso de Métodos Numéricos en Ingeniería*, Madrid, 3-6 Junio 2002

Oñate E. y Arraez J.A.

Avances del cálculo finitesimal en mecánica computacional, *V Congreso de Métodos Numéricos en Ingeniería*, Madrid, 3-6 Junio 2002

Oñate E., Hanganu A., Miquel J. y Suárez B.

Análisis de la resistencia última de edificios utilizando un sencillo modelo de daño, *Seminario sobre Tecnología de la Evaluación y Rehabilitación Estructural de Edificios. Posibilidades de las técnicas numéricas y experimentales*, Barcelona, 3-5 Abril 2002

Marcipar J., Oñate E., Ubach P.A. and Miquel J.

Experiences in the design, analysis and construction of low pressure inflatable structures, *First European Workshop on Inflatable Space Structures*, Estec, Noordwijk, The Netherlands, 21-22 May 2002

Idelsohn S.R., Oñate E., Del Pin F. and Calvo N.

Lagrangian formulations: the only way to solve some free-surface fluid mechanic problems, *Fifth World Congress on Computational Mechanics (WCCM V)*, H. A. Mang et al (Eds.), Vienna, Austria, July 7 - 12, 2002

Dadvand P., Mora J., González C., Arráez A., Ubach P.A. and Oñate E.

KRATOS: An object-oriented environment for development of multi-physics analysis software, *Fifth World Congress on Computational Mechanics (WCCM V)*, H. A. Mang et al (Eds.), Vienna, Austria, July 7 - 12, 2002

Marcipar J., Oñate E. and Sarrablo V.

Inflatable structures. A synthesis of innovative materials, design, analysis and construction methods, *Fifth World Congress on Computational Mechanics (WCCM V)*, H. A. Mang et al (Eds.), Vienna, Austria, July 7 - 12, 2002

Oñate E. and Arráez J.A.

Possibilities of finite calculus for deriving advanced computational methods in engineering, *Fifth World Congress on Computational Mechanics (WCCM V)*, H. A. Mang et al (Eds.), Vienna, Austria, July 7 - 12, 2002

García J. and Oñate E.

Advances in the finite element analysis of ship hydrodynamics problems, *Fifth World Congress on Computational Mechanics (WCCM V)*, H. A. Mang et al (Eds.), Vienna, Austria, July 7 - 12, 2002

Alonso-Pardo B., García Espinosa J., Papanikolaou A., Pérez de Lucas A. and Oñate E.

Sheaks project: A development and experimental validation of numerical methods for seakeeping analysis, *International conference on Applied Simulation and Modelling (ASM 2002)*, Crete, Greece, June 25-28, 2002

Miquel J., Perazzo F. y Oñate E.

El método del punto finito estabilizado en la mecánica de sólidos, *II Congreso Internacional sobre Métodos Numéricos en Ingeniería y Ciencias Aplicadas*, Guanajuato, México, 17 - 19 Enero 2002

Oñate E.

Posibilidades del cálculo finitesimal en mecánica computacional, *II Congreso Internacional sobre Métodos Numéricos en Ingeniería y Ciencias Aplicadas*, Guanajuato, México, 17 - 19 Enero 2002

Zárate F., Hurtado J., Oñate E. y Rodríguez J.A.

Un entorno para análisis estocástico en mecánica computacional, *II Congreso Internacional sobre Métodos Numéricos en Ingeniería y Ciencias Aplicadas*, Guanajuato, México, 17 - 19 Enero 2002

Suárez B., Oñate E. and Zárate F.

Advances in the development of rotation free thin plate and shell elements, *First Assian-Pacific Congress on Computational Mechanics (APCOM'01)*, Sydney, Australia, November 20-23, 2001

Oñate E.

Possibilities of finite calculus in computational mechanics, *First Assian-Pacific Congress on Computational Mechanics (APCOM'01)*, Sydney, Australia, November 20-23, 2001

Oñate E. and García J.

Finite element analysis of incompressible flows with free surface waves using a finite calculus formulation, *ECCOMAS Computational Fluid Dynamics Conference (ECCOMAS CFD 2001)*, Swansea, Wales, UK, 4-7 September 2001

Oñate E., Idelsohn S., Miquel J., Sacco C. y Perazzo F.

El método de puntos finitos aplicado a problemas de mecánica de fluidos incompresibles y elasticidad lineal, *XVII Congreso de Ecuaciones Diferenciales y Aplicaciones y VII Congreso de Matemática Aplicada*, Salamanca, España, 24 - 28 Septiembre, 2001

Chiumenti M., Agelet de Saracibar C., Cervera M., Oñate E. and Duffett G.

Constitutive modeling and numerical simulation of casting materials, *European Conference on Computational Mechanics (ECCM 2001)*, Cracow, Poland, June 26-29, 2001

Oñate E. and García J.

A finite element method for fluid-structure interaction with surface waves, *European Conference on Computational Mechanics (ECCM 2001)*, Cracow, Poland, June 26-29, 2001

Rojek J., Oñate E., Zárata F. and Miquel J.

Modelling of rock, soil and granular materials using spherical elements, *European Conference on Computational Mechanics (ECCM 2001)*, Cracow, Poland, June 26-29, 2001

Oñate E.

El bucle de los números, *Métodos Numéricos en Ciencias Sociales (MENCIS 2000)*, Barcelona, 20-21 Noviembre 2000

Oñate E.

Límites de los métodos numéricos, *Métodos Numéricos en Ciencias Sociales (MENCIS 2000)*, Barcelona, 20-21 Noviembre 2000

Oñate E., Hanganu A., Miquel J. y Suárez B.

Simulación por ordenador del comportamiento resistente de estructuras: el laboratorio virtual de estructuras, *Técnicas Avanzadas de Evaluación Estructural, Rehabilitación y Refuerzo de Estructuras*, IECA LEVANTE, ISBN: 84-931137-0-0, Murcia, 14-15 Noviembre 2000

Perazzo F., Oñate E. and Miquel J.

Advances in the finite point method for structural mechanics, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, 11-14 September 2000

Oñate E. and García J.

A stabilized finite element method for incompressible flow using a finite increment calculus formulation, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, 11-14 September 2000

Bugeda G. and Oñate E.

Pre and post-processing systems for numerical analysis, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, 11-14 September 2000

Oñate E., Car E., and Oller S.

A numerical approach to simulate the behaviour of fiber reinforced composite materials, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, 11-14 September 2000

D'Elia J., Storti M., Oñate E. and Idelsohn S.

A nonlinear panel method in the time domain for seakeeping flow problems, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, 11-14 September, 2000

Idelsohn S., Oñate E. and Sacco C.

The finite point method: an acceptable alternative to solve fluid mechanic problems, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, 11-14 September, 2000

Idelsohn S., Oñate E. and Storti M.

Meshless approximations and lagrangian formulation to solve free surface flows, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, 11-14 September, 2000

Bugeda G., Oñate E. and Ribó R.

A set of algorithms to correct a geometry in order to be meshed, *European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS 2000)*, Barcelona, 11-14 September 2000

Oñate E., Hanganu A. and Miquel J.

Prediction of damage and failure in civil engineering structures using a finite element model, *European Cost F3 Conference on System Identification & Structural Health Monitoring*, Universidad Politécnica de Madrid, Spain, 6 - 9 June 2000

Oñate E. and Zárate F.

Analysis of shells using rotation-free triangles, *Presented at the Fourth International Colloquium on Computation of Shell & Spatial Structures (IASS-IACM 2000)*, Chania, Crete, Greece, June 5 - 7, 2000

Rojek J., Zienkiewicz O.C., Oñate E. and Taylor R.L.

Simulation of metal forming using new formulation of triangular and tetrahedral elements, *8th Int. Conference on Metal Forming*, M. Pietrzyk et al (Eds.), A. A. Balkema, pp. 149-155, Krakow, Poland, September 3 - 7, 2000

Perazzo F., Oñate E. y Miquel J.

Análisis de problemas de mecánica estructural mediante el método de puntos finitos estabilizado, *VI Congreso Nacional de Mecânica Aplicada e Computacional*, Aveiro, Portugal, 17 - 19 April, 2000

Oñate E.

Posibilidades de cálculo finitesimal para desarrollo de métodos numéricos estables en mecánica de fluidos y sólidos, *VI Congreso Nacional de Mecânica Aplicada e Computacional*, Aveiro, Portugal, 17 - 19 April, 2000

Zárate F. and Oñate E.

Advances in the development and applications of the rotation free plate and shell elements, *Presented at VI Congreso Nacional de Mecânica Aplicada e Computacional*, Aveiro, Portugal, 17 - 19 April, 2000

Mora J., Miquel J., Oñate E., Sacco C. y Martínez L.M.

EMANT: Programa de análisis de problemas electrotécnicos mediante el método de los elementos finitos, *IV Congreso sobre Métodos Numéricos en Ingeniería*, Sevilla, España, 7 - 10 Junio, 1999

Rojek J., Las Casas E.B., Lima e Silva A., Borges R.N. and Oñate E.

Equivalent drawbeads: computer modeling and experiments, *Presented at the Fourth International Conference and Workshop on Numerical Simulation of 3D Sheet Forming Processes (NUMISHEET'99)*, Besançon, France, 13 - 17 September, 1999

Oñate E., Perazzo F. and Miquel J.

Advances in the stabilized finite point method for structural mechanics, *European Conference on Computational Mechanics (ECCM'99)*, München, Germany, August 31 - September 3, 1999

Oñate E., Zárate F., Cendoya P. and Miquel J.

A new rotation-free triangular shell element, *IASS Congress on Shell and Spatial Structures: From Recent Past to the Next Millennium*, Madrid, Spain, 20-24 September, 1999

Oñate E. and García Espinosa J.

A methodology for analysis of fluid structure interaction accounting for free surface waves, *European Conference on Computational Mechanics (ECCM'99)*, August 31 - September 3, München, Germany, 1999

Bugeda G., Chiandussi G. y Oñate E.

Un método simple para la deformación automática de mallas de elementos finitos minimizando la distorsión de los elementos, *Métodos Numéricos en Ingeniería*, R. Abascal, J. Domínguez y G. Bugeda (Eds.), Semni, Sevilla, 7-10 Junio 1999

Pellegrini L., Cervera M., Roca P. y Oñate E.

Análisis de la catedral de Barcelona mediante un modelo de daño, *Métodos Numéricos en Ingeniería*, R. Abascal, J. Domínguez y G. Bugeda (Eds.), Semni, Sevilla, 7-10 Junio 1999

Tschöpe H., Oñate E. and Wriggers P.

The critical displacement method with a constitutive damage model, *Métodos Numéricos en Ingeniería*, R. Abascal, J. Domínguez y G. Bugeda (Eds.), Semni, Sevilla, 7-10 Junio 1999

García Espinosa J. y Oñate E.

Un método estabilizado para análisis de problemas de interacción fluido estructura con superficie libre, *Métodos Numéricos en Ingeniería*, R. Abascal, J. Domínguez y G. Bugeda (Eds.), Semni, Sevilla, 7-10 Junio 1999

Oñate E.

Formulación de elementos finitos estabilizada para problemas de transporte convectivo y flujo incompresible mediante técnicas de cálculo finitesimal, *Métodos Numéricos en Ingeniería*, R. Abascal, J. Domínguez y G. Bugeda (Eds.), Semni, Sevilla, 7-10 Junio 1999

Rojek J., Zienkiewicz O.C., Oñate E. and Postek E.

Advances in finite element explicit formulation for simulation of metalforming processes, *International Conference on Advances in Materials and Processing Technologies (AMPT'99)*, Dublin, Ireland, August 3 - 6, 1999

Oñate E., Zárate F., Rojek J., Duffett G. and Neamtu L.

Advances in rotation free shell elements for sheet stamping analysis, *Fourth International Conference and Workshop on Numerical Simulation of 3D Sheet Forming Processes (NUMISHEET'99)*, Besançon, France, 13 - 17 September, 1999

Oñate E., Zárate F., Plana J. and Neamtu L

New rotation free shell triangle for crash-worthiness analysis in parallel PC networks, *European Automotive Congress*, Barcelona, 30 June - 2 July, 1999

Serrano E. y Oñate E.

Solución estabilizada de la ecuación de convección-reacción y difusión-reacción mediante cálculo finitesimal, *Presentado al XVI Cedy / VI CMA*, Gran Canaria, 21 - 24 Septiembre, 1999

Oñate E. y Hanganu A.

Métodos avanzados para el cálculo de la resistencia última de estructuras de hormigón, *Seminario sobre Nuevas Técnicas de Evaluación Estructural, Rehabilitación y Refuerzo de Estructuras*, J. Calavera y J. A. Sobrino (Eds.), Madrid, 24-25 Mayo, 1999

Oñate E. and García J.

A stabilized finite element method for analysis of fluid-structure interaction problem involving free surface waves, *International Symposium on Computational Methods for Fluid-Structure Interaction (FSI'99)*, T. Kvamsdal et al (Eds.), Trondheim, Norway, pp. 163 - 176, 15 - 17 February, 1999

Chiandussi G., Bugada G. and Oñate E.

Shape variable definition with C0, C1 and C2 continuity functions, *Nafems World Congress'99 on Effective Engineering Analysis*, Vol. 1, Newport, Rhode Island, USA, pp. 865-876, 25-28 April 1999

Oñate E.

New degrees of freedom in computational mechanics: mesh free finite point method, rotation free shell triangles and moving free meshes, *Nafems World Congress'99 on Effective Engineering Analysis*, Vol. 1, Newport, Rhode Island, USA, pp. 1-25, 25-28 April 1999

Mora J., Miquel J., Oñate E., Sacco C. y Martínez Ll.M.

EMANT: Programa de análisis de problemas electrotécnicos mediante el método de los elementos finitos, *Métodos Numéricos en Ingeniería*, R. Abascal, J. Domínguez y G. Bugada (Eds.), Semni, España, Sevilla, 7-10 Junio 1999

Car E., Zalamea F., Oller S., Miquel J. y Oñate E.

Simulación numérica de materiales compuestos reforzados con fibras, *Métodos Numéricos en Ingeniería*, R. Abascal, J. Domínguez y G. Bugada (Eds.), Semni, España, Sevilla, 7-10 Junio 1999

Hauke G. and Oñate E.

A model equation for shallow water flows, *XXVIII IARH Congress on Hydraulic Engng. for Sustainable Water Resources Management at the Turn of the Century*, Graz, Austria, 22-29 August 1999

Blanco E., Gil L., Oñate E. and Suárez B.

New software strategies for learning computational engineering mechanics, *7th World Conf. of Continuing Engineering Education*, COREP, Politecnico di Torino, Italy, Torino, Italy, 10 - 13 May 1998

Oñate E., García J. and Idelsohn S.

An alpha-adaptive stabilization procedure for the finite element solution of advective-diffusive problems, *Tenth Int. Conference on Finite Elements in Fluids*, Univ. of Tucson, M. Hafez and J. C. Heinrich (Eds.), Tucson, Arizona, January 5 - 8, 1998

Oñate E., Idelsohn S., Sacco C. and García J.

Stabilization of the numerical solution for the free surface wave equation in fluid dynamics, *IV Ecomas Computational Fluid Dynamics Conference*, John Wiley & Sons, Ltd., Athens, Greece, September 7 - 11, 1998

García J., Oñate E., Sierra H., Sacco C. and Idelsohn S.

A stabilized numerical method for analysis of ship hydrodynamics, *IV Ecomas Computational Fluid Dynamics Conference*, John Wiley & Sons, Ltd., Athens, Greece, September 7 - 11, 1998

Oñate E., García J. and Idelsohn S.

An alpha-adaptive approach for stabilized finite element solution of advective-diffusive problems with sharp gradients, *IV Ecomas Computational Fluid Dynamics Conference*, John Wiley & Sons, Ltd., Athens, Greece, September 7 - 11, 1998

Oñate E., Idelsohn S., Sacco C., García J. and Zienkiewicz O.C.

Possibilities of the finite point method for analysis of industrial flow problems, *Applied Mathematics For Industrial Flow Problems Conference*, Sant Feliu de Guíxols, Barcelona, Spain, 1 - 3 October 1998

López J., Oller S., Oñate E. and Lubliner J.

An homogeneous constitutive model for masonry, *4th World Congress on Computational Mechanics*, S. Idelsohn, E. Oñate and E. Dvorkin (Eds.), Buenos Aires, Argentina, 29 June - 2 July, 1998

Oñate E., Zárate F., Rojek J. and Jovicevic J.

Sheet stamping analysis using rotation-free shell elements, *First Esaform Conference on Material Forming*, Sophia-Antipolis, France, 17-20 March 1998

Oller S., Rubert J.B., Las Casas E.B., Oñate E. and Proença S.B.

Large strains elastoplastic formulation for anisotropic materials, *First Esaform Conference on Material Forming*, Sophia-Antipolis, France, 17-20 March 1998

Löhner R., Yang C. and Oñate E.

Viscous free surface hydrodynamics using unstructured grids, *22nd ONR Symposium of Naval Hydrodynamics*, Washington, USA, 1998

Car E., Oller S. y Oñate E.

Matrices tangentes algorítmicas en el problema elastoplástico, *XVIII Cilamce, Congresso Ibero Latino-Americano de Métodos Computacionais para Engenharia*, Cilamce, Univ. de Brasília, Brasil, 29 - 31 Octubre, 1997

Oñate E. and Zárate F.

New thin plate and shell triangles with translational degrees of freedom only, *IUTAM/IACM Symposium on Discretization Methods in Structural Mechanics*, Kluber Academic Publishers, pp. 79 - 89, Viena, Austria, June 2-6, 1997

Oñate E., García J. e Idelsohn S.

Estabilización de la solución numérica del problema de transporte convectivo mediante técnicas de cálculo finitesimal, *Quinto Congreso de Matemática Aplicada*, Vigo, España, 22 - 26 Septiembre 1997

Matias W.T. y Oñate E.

Obtención de la matriz de rigidez secante en mecánica no lineal del sólido, *XIV Brazilian Congress of Mechanical Engineering*, Bauru, Brasil, 8 - 12 Diciembre 1997

Matias W. T. y Oñate E.

El método de desplazamiento crítico en la predicción de inestabilidad estructural, *XVIII Cilamce, Congresso Ibero Latino-Americano de Métodos Computacionais para Engenharia*, Cilamce, Vol. III, pp. 1409 - 1416, Brasilia, Brasil, 29 - 31 Octubre 1997

Oñate E., Neamtu L. y Oller S.

Un modelo constitutivo para el análisis por el MEF para materiales compuestos, *II Congreso Nacional Matcomp 97*, Madrid, 25 - 28 Noviembre 1997

Neamtu L., Zárate F., Oñate E., Duffett G.A. and Cela J.M.

Stampar: A parallel processing approach for the explicit dynamic analysis of sheet stamping problems, *Euro-Par'97*, Euro-Par, Passau, Germany, 26-30 August 1997

Neamtu L., Oñate E., Zárate F. and Duffett G.A.

An approach for parallel computing in the explicit dynamic analysis, *2nd Congress of Croatian Society of Mechanics*, P. Marovic, J. Soric and N. Vrankovic (Eds.), Supetar, Croatia, 18-20 September 1997

Duffett G.A., Neamtu L., Oñate E., Rojek J. and Zárate F.

Stampar: A parallel processing approach for the analysis of sheet stamping problems, *V Int. Conference on Computational Plasticity*, Computational Plasticity, Barcelona, Spain, 1997

Oñate E., Cendoya P., Rojek J. and Miquel J.

Non linear explicit dynamic analysis of shell structures using a simple triangle with translational degrees of freedom only, *Int. Conference on Computational Engineering Science (ICES'97)*, Presented at ICES'97, San José, Costa Rica, May 4-9, 1997

Oñate E., Neamtu L. and Oller S.

Generalization of the classical mixing theory for analysis of composite materials, *Int. Conference on Computational Engineering Science (ICES'97)*, Presented at ICES'97, San José, Costa Rica, May 4-9, 1997

Ramos J.M., Robusté F. y Oñate E.

Un modelo híbrido discreto continuo para la asignación de tráfico mediante algoritmos genéticos, *IX Congreso Panamericano de Ing. de Tránsito y Transportes*, Ciudad de La Habana, Cuba, 2-6 Diciembre 1996

Oñate E., Celentano D., Codina R., Oller S., Soto O. Dabir A. y Duffett G.A.

Avances en la simulación del llenado de moldes y del proceso de solidificación y enfriamiento en fundición, *V Congreso Ibérico de Fundición*, Porto, Portugal, 27-29 Noviembre 1996

Oñate E., Idelsohn S., Zienkiewicz O.C., Taylor R.L. and Sacco C.

A finite point method for analysis of corrective transport and compressible flows, *III ECCOMAS Conference on Computational Fluid Dynamics'96*, J.A. Désidéri, C. Hirsch, P. Le Tallec, M. Pandolfi and J. Périaux (Eds.) John Wiley & Sons, Paris, September 9-13, 1996

Matias W. y Oñate E.

El método de desplazamiento crítico para análisis de inestabilidad estructural, *III Congreso sobre Métodos Numéricos en Ingeniería*, M. Doblaré et al (Eds.), SEMNI, Zaragoza, España, 3 - 6 Junio, 1996

Morán A., Miquel J. y Oñate E.

Cálculo de los coeficientes de deformación transversal en vigas prismáticas espaciales, *III Congreso sobre Métodos Numéricos en Ingeniería*, M. Doblaré et al (Eds.), SEMNI, Zaragoza, España, 3 - 6 Junio, 1996

Cendoya P., Oñate E., Miquel J. y Zárte F.

Análisis dinámico explícito no lineal de estructuras laminares sin variables rotacionales, *III Congreso sobre Métodos Numéricos en Ingeniería*, M. Doblaré et al (Eds.), SEMNI, Zaragoza, España, 3 - 6 Junio, 1996

Benaque J., Oller S., B. Las Casas E. y Oñate E.

Implementación explícita de un modelo anisótropo para compuestos multifásicos, *III Congreso sobre Métodos Numéricos en Ingeniería*, M. Doblaré et al (Eds.), SEMNI, Zaragoza, España, 3 - 6 Junio, 1996

Zárte F. y Oñate E.

Nuevos elementos de placa y lámina con variables de desplazamiento nodales, *III Congreso sobre Métodos Numéricos en Ingeniería*, M. Doblaré et al (Eds.), SEMNI, Zaragoza, España, 3 - 6 Junio, 1996

Botello S., Marroquín J.L. y Oñate E.

Un algoritmo general de búsqueda estocástica aplicado a la optimización de estructuras de acero, *III Congreso sobre Métodos Numéricos en Ingeniería*, M. Doblaré et al (Eds.), SEMNI, Zaragoza, España, 3 - 6 Junio, 1996

Oñate E., Idelsohn S., Zienkiewicz O.C. and Taylor R.L.

A finite point method for analysis of convective transport and fluid flow, *2nd Greek Congress on Computational Mechanics*, Chania, Crete, Greece, 6-8 June, 1996

Las Casas E.B., Rubert J.B., Oller S. and Oñate E.

Application of the mapped stress tensor concept for anisotropy analysis in sheet metal forming, *3rd Int. Conference on Numerical Simulation of 3D Sheet Forming Processes (NUMISHEET'96)*, Dearborn, Michigan, USA, 29 Sept. - 3 October, 1996

Pérez E., Celentano D. y Oñate E.

Simulación del proceso de solidificación de la fundición gris considerando un modelo microestructural, *Enief'95*, Bariloche, Argentina, Noviembre 1995

Celentano D., Visconte D., Dardati P., Oller S. and Oñate E.

A thermomechanical model for solidification problems: experimental validation, *Computational Plasticity: Fundamentals and Applications*, Owen D.R.J., Oñate E. and Hinton E. (Eds.), CIMNE/Pineridge Press, Part II, pp. 2385-2395, April 1995

Oñate E., Celentano D., Codina R. Oller, S. and Soto O.

Finite element models for analysis of mould filling and solidification in casting, *Conference on Modelling of Casting, Welding & Advanced Solidification Processes*, London, 10-15 September, 1995

García Garino C., Rojek J. and Oñate E.

Simulation of sheet metal stamping processes using a solid finite strain model, *IV Pan American Congress of Applied Mechanics (PACAM IV)*, Buenos Aires, 3-6 January, 1995

Oñate E., Codina R. and Vázquez M.

Cost-efficiency analysis of finite element solutions for high speed Euler flows, *II European Conference on Computational Fluid Dynamics*, II European Conference on Computational Fluid Dynamics, Stuttgart, 5 - 8 September 1994

Hanganu A., Oller S., Oñate E. and Barbat A.H.

A finite element model for damage analysis of nuclear reactor containment shells, *2nd National Conference on Boundary and Finite Elements*, Sibiu, Romania, May 1993

Soto O., Oñate E. y Codina R.

Una formulación euleriana lagrangiana para el análisis por elementos finitos de procesos de laminación en caliente, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina y M. Casteleiro (Eds.), SEMNI, La Coruña, España. 7-11 Junio, 1993

Flores F. y Oñate E.

Un elemento triangular cuadrático basado en la teoría de láminas de Simo, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina y M. Casteleiro (Eds.), SEMNI, La Coruña, España. 7-11 Junio, 1993

Hanganu A., Oller S., Oñate E. y Barbat A.H.

Evaluación del daño sísmico en modelos 3D de edificios de hormigón armado, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina y M. Casteleiro (Eds.), SEMNI, La Coruña, España. 7-11 Junio, 1993

Suárez B., Gil Ll., Blanco E., Escalante F. y Oñate E.

Propuesta de metodología de software educativo para cálculo estructural por métodos numéricos, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina y M. Casteleiro (Eds.), SEMNI, La Coruña, España. 7-11 Junio, 1993

Oñate E. y Cervera M.

Formulación de nuevos elementos de placa delgada con un grado de libertad por nodo, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina y M. Casteleiro (Eds.), SEMNI, La Coruña, España. 7-11 Junio, 1993

Soto O. y Oñate E.

Una formulación euleriana lagrangiana para el análisis por E, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina y M. Casteleiro (Eds.), SEMNI, La Coruña, España. 7-11 Junio,1993

Flores F. y Oñate E.

Un elemento triangular cuadrático para análisis no lineal de láminas, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina y M. Casteleiro (Eds.), SEMNI, La Coruña, España. 7-11 Junio,1993

Hanganu A. y Oñate E.

Evaluación del daño sísmico en modelos 3-D de edificios de H, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina y M. Casteleiro (Eds.), SEMNI, La Coruña, España. 7-11 Junio,1993

Bugeda G. and Oñate E.

FLAVIA: A standard interactive flow visualization package, *III Congreso Español de Informática*, Granada, España, 1993

Bugeda G. y Oñate E.

Una metodología para la simulación de las deformaciones en prototipo rápido, *Forum de Rapid Prototyping*, pp. 102-125, ASCAMM, Barcelona, España, 1993

Fischer T., Miquel J., Codina R. and Oñate E.

Adaptive finite element computations for viscous high speed flows, *VIII Int. Conference on Finite Elements in Fluids*, K. Morgan et al (Eds.), CIMNE-Pineridge Press, Barcelona, 20-24 Sept., 1993

Agelet de Saracibar C. and Oñate E.

Simulation of thin sheet superplastic forming processes, *4th Int. Conf. on Technology of Plasticity*, Beijing, China, 1993

Oller S., Oñate E. and Miquel J.

Simulation of anisotropic elastic-plastic behaviour of materials by means of an isotropic formulation, *2nd US National Congress on Computational Mechanics*, Washington, USA, August 16-18, 1993

Celentano D., Oller S. and Oñate E.

A finite element model for thermomechanical analysis in casting processes, *III European Conference on Advanced Materials and Processes*, Paris, 8-10 June, 1993

Suárez B. y Oñate E.

Propuesta de metodología de software educativo para cálculo, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina and M. Casteleiro (Eds.). La Coruña 7-11 June, Spain, 1993

Flores F. and Oñate E.

2D Draw-bending simulation, *NUMISHEET'93*, Isehara, Tokyo, Japan, 1993

Oller S. and Oñate E.

A finite element model for analysis of multiphase composites, *9th Int. Conf. on Composite Materials*, Madrid, Spain, 1993

Bugeda G. y Oñate E.

Utilización de remallados automáticos en la optimización de formas estructurales, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina and M. Casteleiro (Eds.). La Coruña 7-11 June, Spain, 1993

Bugeda G. and Oñate E.

Técnicas de remallado adaptable para problemas de flujo aéreo, *II Congreso de Métodos Numéricos en Ingeniería*, F. Navarrina and M. Casteleiro (Eds.). La Coruña 7-11 June, Spain, 1993

Oller S. and Oñate E.

Simulation of anisotropic elastic-plastic behaviour of materials, *2nd US National Congress on Computational Mechanics*, Washington, USA, 1993

Bugeda G. and Oñate E.

Mesh adaptivity in shape optimization. Application to Incompressible potential flow problems, *Finite Elements in Fluids. New Trends and Applications*, Barcelona, Spain, September 20-23, 1993

Bugeda G. and Oñate E.

Mesh quality control in optimum aerodynamic shape design, *2nd US National Congress on Computational Mechanics*, Washington, USA, 1993

Hanganu A., Oller S., Oñate E. and Barbat A.H.

A finite element model for damage analysis of nuclear reactor, *2nd National Conf. on Boundary and Finite Elements*, Sibiu, Rumania, 1993

Oñate E.

NUMISTAMP: A research project for assessment of finite element formulations for sheet forming analysis, *NUMISHEET'93*, Isehara, Tokyo, Japan, 1993

Barbat A.H., Hanganu A., Oñate E., and Oller S.

Numerical evaluation of the seismic damage degree in building structures, *Sporirea Eficientei Structurilor Rezistente la Cutremur*, Iasi, Romania, September 1992

Bugeda G. y Oñate E.

FLAVIA: Un visualizador para elementos finitos, *Jornada Técnica sobre Visualización Gráfica*, Zaragoza, España, 1992

Codina R., Schäfer U., Oñate E., Cervera M. and Soto O.

A finite element model to track free surfaces of viscous incompressible flows, *Congreso Internacional sobre Métodos Numéricos en Ingeniería y Ciencias Aplicadas*, Concepción, Chile. H. Alder et al (Eds.), Elsevier/CIMNE, 1992

Bugeda G. and Oñate E.

New adaptive techniques for structural problems, *First European Conf. on Numerical Methods in Engineering*, Brussels, Belgium. C. Hirsch et al (Eds.). Elsevier, 1992

Oñate E., Barbat A., and Oller S.

Numerical evaluation of the seismic damage degree in building structures, *Conferinta Nationala en tema: Sporiren Eficientei Structurila Resistente la Entremur*, Rumania, 1992

Barbat A., Oller S., Oñate E. and Hanganu A.

Simulation of damage phenomena in reinforced concrete buildings subjected to seismic actions, *Congreso Internacional sobre Métodos Numéricos en Ingeniería y Ciencias Aplicadas*, Concepción, Chile. H. Alder et al (Eds.), Elsevier/CIMNE, 1992

Agelet de Saracibar C., García C., Sosnowski W., Oliver J. and Oñate E.

Numerical simulation of sheet metal forming processes, *The 4th Brite/Euram Conference*, Sevilla, 1992

Celentano D., Oller S. and Oñate E.

A plastic constitutive model to solidification in casting problems, *III Int. Conf. on Computational Plasticity*, R. Owen, E. Oñate and E. Hinton(Eds.), Pineridge Press/CIMNE, Barcelona, Spain, 1992

Oller S. and Oñate E.

A damage model for seismic analysis of building structures, *X World Conf. on Earthquake Engineering*, Madrid, Spain, 1992

Agelet de Saracibar C. and Oñate E.

Some remarks about the flow formulation and the springback comutation, *Int. Conf. on Computational Mechanics*, Hong-Kong, Atluri et al (Eds.), 1992

Sosnowski W. and Oñate E.

Comparative study on the analysis of sheet metal forming processes by numerical methods, *4th Int. Conf. on Metal Forming Analysis*, Cracow, 1992

Oñate E.

Una panorámica de las posibilidades del MEF para análisis de problemas de conformado de metales, *Congreso Internacional sobre Métodos Numéricos en Ingeniería*, Concepción, Chile. H. Alder et al (Eds.), CIMNE, 1992

Sosnowski W., Oñate E. and Agelet de Saracibar C.

Computational aspects in the finite element analysis of sheet forming processes using a viscous shell approach, *III Int. Conf. on Computational Plasticity*, R. Owen, E. Oñate and E. Hinton(Eds.), Pineridge Press/CIMNE, 1992

Bugeda G. and Oñate E.

Adaptive mesh refinement techniques for aerodynamic problems, *Congreso Internacional sobre Métodos Numéricos en Ingeniería y Ciencias Aplicadas*, Concepción, Chile. H. Alder et al (Eds.), CIMNE, 1992

Oñate E.

Alternatives for finite element anlysis of sheet metal forming, *IV Int. Conf. on Num. Meth. in Industrial Forming Processes (NUMIFORM)*, Sophia Antipolis, France, J.L. Chenot et al (Eds.), Balkema, 1992

Oñate E.

Formulation of a secant stiffness matrix for geometrically nonlinear finite element analysis, *4th Int. Conference on Nonlinear Engineering Computations (NEC-91)*, Split, Yugoslavia, September 16-20, 1991

Oñate E., Botello S. y Miquel J.

Simulación numérica del choque de vehículos por el método de los elementos finitos, *Jornadas sobre Seguridad del Automóvil*, Barcelona, España, 1991

Agelet de Saracibar C. and Oñate E.

Numerical simulation of sheet metal forming, *Brite/Euram Workshop on Machining and Manufacturing*, Louvain-La-Neuve, Belgium, 1991

Oñate E.

Formulation of a secant stiffness matrix for geometrically non linear finite element analysis, *Non Linear Engineering Computations*, N. Bicanic et al (Eds.), Swansea, Pineridge Press, September, 1991

Codina R., Cervera M. y Oñate E.

Una formulacion de elementos finitos para el análisis de flujo viscoso incompresible, *XII CEDYA/"Congreso de Matemática Aplicada"*, Oviedo, Gijón, Spain, 1991

Oñate E., Castro J. and Kreiner R.

Error estimator and adaptivity for plate and shell problems, *Quality Assurance and Standards in the Finite Element Method*, Straford Upon-Avon, UK, NAFEMS, 1991

Oñate E.

Error estimator and mesh adaptive refinement techniques for structural and fluid problems, *Congreso Latinoamericano de Mecánica Computacional*, S. Idelsohn et al (Eds.), AMCA, Santa Fe, Argentina, 1991

Miquel J., Botello S. and Oñate E.

A finite formulation for analysis of composite laminate shells, *Mecánica Computacional*, Proceedings edited by S. Idelsohn et al and published by MECOM, Santa Fe, Argentina, 1991

Celentano D., Oller S. and Oñate E.

A constitutive thermomechanical model for solidification problems of metals, *Journées Numériques de Besançon: Problèmes de Changement de Phase*, Château de Roche Arc et Senams, France, 1991

Oller S., Celentano D. and Oñate E.

Análisis por elementos finitos de problemas de solidificación de metales, Universidad Nacional de Tucumán, Argentina, 1991

Quintana, F. Oñate E. and Miquel J.

Flow and temperature computations for space vehicles using adaptive finite element techniques, *First European Symposium on Aerothermodynamics for Space Vehicles*, Noordijk, The Netherlands, 1991

Oñate E. and Sosnowski W.

3D Finite element analysis of sheet metal forming program MFP2D/3D, *Workshop on 3D Sheet Metal Forming Processes in Automotive Industry*, CIMNE, Barcelona, Spain, 1991

Miquel J., Buil J., Botello S. and Oñate E.

Static and vibration finite element analysis of Talvacchia dam, *First Benchmark Workshop on Numerical Analysis of Dams*, ISMES, Bergamo, Italy, 1991

Miquel J., Oñate E. and Quintana F.

Finite element analysis of hipersonic flows, *Workshop on Hypersonics Flow for Reentry Problems. Part II*, Antibes, France, 1991

Oñate E., Botello S. and Miquel J.

A triangular element for analysis of composite laminated plates using a substructuring technique, *Int. Meeting on the "Cinquante Ans de Recherche en Acoustique et Mécanique"*, Marseille, France, 1991

Oñate E., Castro J. and Suárez B.

Some new plate elements based on assumed shear strain fields, *European Conf. on New Advances in Computational Mechanics*, Giens, France, J. Ladeveze et al (Eds.), 1991

Oñate E.

Formulación de nuevos elementos finitos para análisis de placas delgadas y gruesas, *I Congreso de Métodos Numéricos en Ingeniería*, Las Palmas de Gran Canaria, 10-14 Junio, G. Winter and M. Galante (Eds.), SEMNI, 1990

Bugeda G., Oliver J. y Oñate E.

Utilización de técnicas de control de errores y generación automática de mallas en la optimización estructural, *I Congreso de Métodos Numéricos en Ingeniería*, G. Winter and M. Galante (Eds.), SEMNI, Las Palmas de Gran Canaria, 10-14 Junio, 1990

Miquel J., Quintana F., Oñate E., Bugeda G., Peffer G. y Zienkiewicz O.C.

Análisis en problems de flujo compresible supersónico utilizando una formulación TG con elementos finitos adaptable, *I Congreso de Métodos Numéricos en Ingeniería*, G. Winter and M. Galante (Eds.), SEMNI, Las Palmas de Gran Canaria, 10-14 Junio, 1990

Oller S., Oliver J., Cervera M. y Oñate E.

Simulación de procesos de localización en mecánica de sólidos mediante un modelo plástico, *I Congreso de Métodos Numéricos en Ingeniería*, G. Winter and M. Galante (Eds.), SEMNI, Las Palmas de Gran Canaria, 10-14 Junio, 1990

Codina R., Oñate E. y Cervera M.

Una formulación de Petrov-Galerkin para el análisis de problemas de convección-difusión con elementos finitos cuadráticos, *I Congreso de Métodos Numéricos en Ingeniería*, G. Winter and M. Galante (Eds.), SEMNI, Las Palmas de Gran Canaria, 10-14 Junio, 1990

Oñate E., Suárez B. y Zienkiewicz O.C.

Formulación de nuevos elementos finitos para análisis de placas delgadas y gruesas, *I Congreso de Métodos Numéricos en Ingeniería*, G. Winter and M. Galante (Eds.), SEMNI, Las Palmas de Gran Canaria, 10-14 Junio, 1990

Oñate E.

Some topics in the analysis of sheet metal forming problems using viscous shell elements, *II World Congress on Computational Mechanics*, Stuttgart, 1990

Agelet de Saracibar C. and Oñate E.

Finite element analysis of sheet metal forming problems using a selective bending/membrane formulation, *3rd Int. Conf. on Technology of Plasticity*, Kyoto, Japan, 1990

Miquel J., Oñate E. and Quintana F.

Contribution to the finite element solution of 2D high speed flow problems, *Workshop of Hypersonics Flow for Reentry Problems*, Antibes, 22-25 January, 1990

Agelet de Saracibar C. and Oñate E.

Finite element simulations of sheet metal forming using viscous shell approach, *Current topics in finite element simulations of plastic deformation processes*, Kyoto, Japan, 1990

Agelet de Saracibar C. and Oñate E.

Numerical simulation of industrial sheet metal forming processes, *Brite/Euram Technological Days*, Brussels, Belgium, 1990

Escalante F., Suárez B. and Oñate E.

A methodology for computer-aided training in structural mechanics, *Computer Aided Training in Science and Technology (CATS'90)*, E. Oñate et al (Eds.) CIMNE/Pineridge Press. Barcelona, 1990

Miquel J., Oñate E., and Quintana F.

A formulation for the solution of Euler equations for compressible flow using finite elements, *5th Int. Symposium on Numerical Methods in Engineering*, Lausanne, 11-15 Sept., 1989

Oñate E., Miquel J. and Quintana F.

Finite element approximations for compressible low/high speed flows, *Hermes Working Group Meeting*, Brussels, April 24-25, 1989

Oñate E. y Suárez B.

Formulación consistente de elementos de placa de Reissner-Mindlin basados en campos de deformaciones transversales impuestas, *Métodos Computacionales*, Oporto, Portugal, 1989

Oñate E., Agelet de Saracibar C. and Dalin J.B.

Finite element analysis of sheet metal forming problems using a selective voided viscous shell membrane formulation, *3rd Int. Conf. on Num. Meth. in Indus. Forming Processes (NUMIFORM)*, Fort Collins, Colorado. E. Thompson et al (Eds.), Balkema, 1989

Miquel J., Oñate E., Quintana F., Wu J. and Zienkiewicz O.C.

Finite element analysis of high speed compressible flows, *Hermes Working Group Meeting*, Paris, Nov. 20-21, 1989

Agelet de Saracibar C. and Oñate E.

Plasticity models for porous metals, *Computational Plasticity*, Barcelona, Spain, 1989

Oñate E., Taylor R.L. and Zienkiewicz O.C.

A consistent formulation of shear constrained Reissner-Mindlin plate elements, *IUTAM Meeting on Discretization Methods in Structural Mechanics*, Vien, H. Mang (Ed.), Springer-Verlag, 1989

Dalin J.B. and Oñate E.

An automatic algorithm for contact problems. Application to sheet metal forming, *3rd Int. Conf. on Numerical Methods in Industrial Forming Problems*, E.G. Thompson et al (Eds.), Balkema, 1989

Miquel J., Suárez B., Oñate E. y Pérez R.

Análisis numérico-experimental de vehículos ferroviarios, *VII Congreso Nacional de Ingeniería Mecánica*, Valencia, Diciembre, 1988

Oñate E. and Oliver J.

Finite element modelling of marine pipelines during laying operations, *Int. Conference on Computer Modelling in Ocean Engineering*, Venecia, Italy, 1988

Oñate E. and Agelet de Saracibar C.

Finite element analysis of sheet metal forming problems using a viscous voided shell formulation, *Euromech Colloquium 233. Modelling of Metal Forming Processes*, Sophia-Antipolis, France. J. L. Chenot et al (Eds.), 1988

Miquel J. y Oñate E.

Análisis dinámico de presa bóveda. Estudio paramétrico, *Mecánica Computacional*, L. Godoy (Ed.), AMCA, Córdoba, Argentina, 1988

Oller S., Oliver J., Lubliner J. y Oñate E.

Un modelo de daño plástico con degradación para análisis no lineal de estructuras de hormigón, *Mecánica Computacional*, L. Godoy (Ed.), AMCA, Córdoba, Argentina, 1988

Suárez B., Godoy L. y Oñate E.

Análisis de estructuras prismáticas de espesor variable por el método de la banda finita, *Mecánica Computacional*, L. Godoy (Ed.), AMCA, Córdoba, Argentina, 1988

Oñate E., Agelet de Saracibar C. and Dalin J.B.

Análisis por elementos finitos de procesos de embutición de chapa mediante un modelo viscoplástico con degradación por huecos, *Mecánica Computacional*, L. Godoy (Ed.), AMCA, Córdoba, Argentina, 1988

Oñate E., Dvorkin E. and Oliver J.

On the obtention of a complete tangent matrix for geometrically non linear analysis of 3D beams and shells, *Computational Mechanics'88*, Atlanta, USA, S.N. Atluri and C. Yagawa (Eds.), 24-IV, Springer-Verlag, 1988

Miquel J. y Oñate E.

Interacción dinámica fluido-estructuras en problemas de presas, *Mecánica Computacional*, L. Godoy (Ed.), AMCA, Córdoba, Argentina, 1988

Oliver J., Cervera M., Oñate E. and Herrero E.

A case study of a gravity dam subjected to severe internal actions: description and numerical simulation, *Int. Congress of Large Dams*, San Francisco (USA), Comisión Int. de Grandes Presas C29, 1988

Agelet de Saracibar C. y Oñate E.

Un modelo plástico no-asociado para el análisis de localización y fractura dúctil de procesos de conformado de láminas, *Congreso Nacional de Ingeniería Mecánica*, Madrid, 1987

Miquel J., Suárez B., Oñate E., Oliver J. y Cervera M.

SICE:Un sistema integrado para cálculo de estructuras por el método de los elementos finitos, *I Symposium Internacional de Diseño Asistido en Ordenador para Arquitectura e Ingeniería Civil (ARECDAO)*, Barcelona, ITEC, 1987

Oñate E., Suárez B. and Miquel J.

Static and dynamic analysis of structures in small computers using the finite strip method, *II Int. Conf. on Education Practice and Promotion of Computation Methods in Engng. using Small Computers*, Canton, China, 1987

Oñate E., Oller S., Oliver J. and Lubliner J.

A constitutive model for cracking of concrete based on the incremental theory of plasticity, *Computational Plasticity*, R. Owen, E. Oñate and E. Hinton, pp.1311-1329, Barcelona, Spain, Pineridge Press/CIMNE, 1987

Oñate E., Oller S., Oliver J. and Lubliner J.

A constitutive model for cracking of concrete based on the incremental theory of plasticity, *Int. Conference on Numerical Methods, Theory and Applications, NUMETA 87*, Balkema, Swansea, UK, 1987

Oller S., Oliver J. and Oñate E.

Simulación numérica de procesos no-lineales de fractura y aplastamiento en hormigón mediante un modelo plástico, *I Jornadas Ibéricas de Fractura*, Braga, Portugal, 1987

Oñate E.

Una función incremental para problemas de no linealidad geométrica en estructuras por el método de los elementos finitos, *II Symposium de Aplicaciones del Método de los Elementos Finitos en Ingeniería*, E. Oñate et al (Eds.), Ediciones UPC, 1986

Oller S., Oñate E. y Oliver J.

Un modelo de fisuración del hormigón basado en la teoría de la plasticidad, *II Symposium Español sobre Aplicaciones del Método de los Elementos Finitos en Ingeniería*, E. Oñate et al (Eds.), Ediciones UPC, 1986

Oller S., Oñate E. y Oliver J.

Un modelo de plasticidad para el estudio del comportamiento no lineal de muros de fábrica, *II Symposium de Aplicaciones del Método de los Elementos Finitos en Ingeniería*, E. Oñate et al (Eds.), Ediciones UPC, 1986

Suárez B., Miquel J. y Oñate E.

Análisis dinámico de estructuras por el método de la banda finita, *II Simposium de Aplicaciones del Método de los Elementos Finitos en Ingeniería*, E. Oñate et al (Eds.), Ediciones UPC, 1986

Oñate E., Oliver J., Miquel J. and Suárez B.

A finite element formulations for geometrically non linear problems using a secant matrix. Applications to 3D trusses, *Computational Mechanics*, G. Yagawa and S.N. Atluri (Eds.) Tokyo, Springer Verlag, 1986

Oñate E., Oliver J., Miquel J. and Suárez B.

Alternative finite element lagrangian formulations for the geometrically non linear analysis of shells, *I World Congress on Computational Mechanics*, Austin, Texas, USA, September 22-25, 1986

Oñate E., Oliver J., Miquel J. and Suárez B.

A formulation for non linear analysis of shells, *I World Congress on Computational Mechanics*, Austin, Texas, USA, September 22-25, 1986

Oñate E. and Kleiber M.

Plastic flow of void containing metal. Application to sheet forming problems, *Int. Conf. on Num. Meth. in Industrial Forming Processes (NUMIFORM)*, A. Samuelsson et al (Eds.), Balkema, Göteborg, Sweden, 1986

Alonso E., Barbat A., Berga L., Casteleiro M., Dolz J., Losada M., Miquel J. y Oñate E., *Riesgos Naturales en Ingeniería Civil*, Ediciones UPC, Barcelona, 1986

Oliver J., Oñate E., Bugeda G., Feliu y Herrero A.

Un modelo numérico para análisis de la seguridad en presas de hormigón bajo cargas internas, *Primeras Jornadas Españolas de Presas*, Madrid, 1985

Oñate E., Suárez B. y Miquel J.

Cálculo estático y vibraciones libres de estructuras prismáticas por el método de la banda finita, *I Congreso Iberoamericano de Métodos Computacionales en Ingeniería*, Madrid, CEDEX, 1985

Miquel J., Bonet J. y Oñate E.

Efectos localizados debidos a choques de barcos en pilas de estructuras marinas, *I Congreso Iberoamericano de Métodos Computacionales en Ingeniería*, Madrid, CEDEX, 1985

Oñate E., Oliver J. and Bugeda G.

Finite element analysis of the non linear response of concrete dams subjected to internal loads, *Europe-US Symposium on Numerical Methods for Non Linear Problems*, Trondheim, Norway, 1985

Oñate E., Oliver J. and Bugeda G.

Non linear analysis of concrete dams subjected to internal loads, *US-Europe Symposium on Finite Element Methods for Non Linear Problems*, Trondheim, Norway, 1985

Oñate E. and Pérez Lama R.

Possibilities of the viscous shell approach in the analysis of finite elements to metal forming processes, *Int. Conf. on Numerical Methods in Forming Processes*, Univ. of Stuttgart, 1985

Oliver J., Oñate E., Peraire J. y Chueca R.

Análisis no lineal de tanques de hormigón criogénico, *XI Asamblea de la Asociación Técnica Española del Hormigón Pretensado*, Santander, 1984

Suárez, B. y Oñate E.

Estudio de la distribución del gas en redes urbanas por el método de los elementos finitos, *III Congreso Nacional de Ingeniería Mecánica*, Gijón, 1984

Oñate E. and Oliver J.

A total lagrangian finite element formulation for the large displacement/large rotation analysis of structures, *II Int. Conf. on Finite Element Methods for Non Linear Problems*, C. Taylor, R. Owen, E. Hinton and E. Oñate (Eds.), Barcelona, Spain, 1984

Suárez B., Oñate E. and Albareda R.

A finite element formulation for the analysis of non linear transient response of natural gas in urban pipelines, *II Int. Conf. on Finite Element Methods for Non Linear Problems*, C. Taylor, R. Owen, E. Hinton and E. Oñate (Eds.), Pineridge Press, 1984

Barbat A., Cervera M., Chueca R. and Oñate E.

Seismic analysis of cryogenic tanks, including interaction phenomena, *II Int. Conference on Cryogenic Concrete*, Delft, 1983

Oñate E., Oliver J., Chueca R., Peraire J. and Albareda R.

Non linear finite element analysis of cryogenic concrete tanks under thermal actions, *II Int. Conference on Cryogenic Concrete*, Amsterdam, 1983

Oñate E.

Posibilidades de la formulación del flujo viscoplastico para el análisis de sólidos sometidos a grandes deformaciones, *Aplicaciones del Método de los Eementos Finitos en Ingeniería*, E. Oñate et al (Eds.), Ediciones UPC, Barcelona, 1982

Oñate E. y Peñalva C.

Aplicaciones de la formulación del flujo viscoplastico al estudio de procesos de conformado de metales por el método de los elementos finitos, *I Congreso Nacional de la Ingeniería Mecánica*, Anales de Ingeniería Mecánica, Vol. 2, Madrid, 1982

Oliver J. y Oñate E.

Una formulación general para análisis elastoplástico de estructuras sometidas a grandes movimientos, *Aplicaciones del Método de los Eementos Finitos en Ingeniería*, E. Oñate et al (Eds.), Ediciones UPC, 1982

Suárez B. y Oñate E.

Una formulación de bandas finitas para el análisis de placas, puentes y láminas de revolución, *Aplicaciones del Método de los Elementos Finitos en Ingeniería*, E. Oñate et al (Eds.), Ediciones UPC, 1982

Casteleiro M., Oñate E. y Alonso, E.

Análisis tridimensional de presas bóveda y su interacción con el terreno considerado como material no-tracción, *Aplicaciones del Método de los Elementos Finitos en Ingeniería*, Ediciones UPC, 1982

Oliver J., Suárez B., Blanco E. y Oñate E.

El método híbrido (numérico-experimental) para el análisis de estructuras en modelo reducido, *X Asamblea de la ATEP*, Murcia, Spain, 1981

Alonso E., Oñate E. and Casanovas J.

An investigation into sampling disturbance, *10th Int. Congress on Soil Mechanics and Foundations*, ICSMFE, 1981

Oñate E.

Modelado numérico de procesos de conformado de metales usando la formulación del flujo viscoplástico y método de elementos finitos, *I Simposium Nacional sobre Modelado y Simulación en Industria y Servicios Públicos*, Madrid, Spain, May, 1980

Sánchez Pérez S. y Oñate E.

ANAPEL: Un programa para análisis plástico de los procesos de conformación, *II Congreso Nacional sobre Investigación, Diseño y Utilización de Máquinas Herramientas*, Bilbao, Octubre, 1980

Oñate E.

Líneas de investigación de la Cátedra de Estructuras de la ETSICCP de la UPC, *Jornadas sobre Investigación, Tecnología y Sociedad*, Diciembre, 1980

Sánchez Pérez S. y Oñate E.

Influencia del rozamiento en la modelización mediante elementos finitos de los problemas de rozamiento, *I Simposium Nacional sobre Modelado y Simulación en Industria y Servicios Públicos*, Madrid, Spain, May, 1980

Oñate E., Hinton E. and Glover N.

Methods to improve the performance of Ahmad shell elements, *Numerical Modelling*, E. Alarcón and C.A. Brebbia (Eds.) Pentech Press, London, 1979

Nieto, García de Jalón J. and Oñate E.

On elastodynamic behaviour of mechanisms, *Fifth World Congress on the Theory of Machines and Mechanisms*, Montreal, Canada, 1979

Oñate E. and Zienkiewicz O.C.

Some problems in the analysis of shells using isoparametric shell elements, *World Congress on Shell and Spatial Structures*, Madrid, IASS, 1979

Zienkiewicz O.C., Oñate E. and Heinrich J.C.

Finite element solution of coupled thermal flow in metals, *Numerical Methods in Thermal Problems*, R. Lewis and K. Morgan (Eds.), Pineridge Press England, 1979

Oñate E. and Zienkiewicz O.C.

Plastic flow of axisymmetric thin shells as a non newtonian flow problems and application to stretch forming and deep drawing problems, *10th Biannual Congress Int. Deep Drawing Research Group*, Warwick, England, 1978

Publications in Research Centers

Irazábal J., Salazar F. and Oñate E.

Validation of the particle finite element method (PDEM) for simulation of rock slides in lakes and reservoirs, CIMNE, Technical Report N° PI-390, 35 pp., Barcelona, Spain, 2012

Vargas P., Oñate E. and Oller S.

A family of finite element for composite-laminated thin-walled beams with open section, CIMNE, Technical Report N° PI-389, Barcelona, Spain, 2012

Ubach P.A. and Oñate E.

Rotation-free shell triangle based on a bezier interpolation over triangular patches, CIMNE, Technical Report N° PI-388, Barcelona, Spain, 2012

Flores R., Ortega E. and Oñate E.

Simple and efficient numerical tools for the analysis of parachutes, CIMNE, Technical Report N° PI-387, Barcelona, Spain, 2012

Oñate E.

El reto de la transferencia de los resultados de la investigación a la industria, CIMNE, Technical Report N° PI-386, 27 pp., Barcelona, Spain, 2012

Zárate F. and Oñate E.

Enhanced rotation-free beam and plate elements with shear deformation effects, CIMNE, Technical Report N° PI-385, Barcelona, Spain, 2012

Oñate E. and Zárate F.

Rotation-free beam elements. A review, CIMNE, Technical Report N° PI-384, Barcelona, Spain, 2012

Oñate E., Eijo A. and Oller S.

Modeling of delamination in composite laminated beams via 2-noded timoshenko beam element and zigzag kinematics, CIMNE, Technical Report N° PI-383, Barcelona, Spain, 2012

Eijo A., Oñate E. and Oller S.

A four-node composite laminated Reissner-Mindlin plate element based on the refined zigzag theory, CIMNE, Technical Report N° PI-382, Barcelona, Spain, 2012

Eijo A., Oñate E. and Oller S.

A four-noded quadrilateral element for composite laminated plates/shell using the refined zigzag theory, CIMNE, Technical Report N° PI-378, 44 pp., Barcelona, Spain, 2012

Suárez B., Miquel J. and Oñate E.

A general thick finite strip method for plates and shells, CIMNE, Technical Report N° PI-377, Barcelona, Spain, 2012

Oñate E., Eijo A. and Oller S.

Two-noded troncoconical element for composite laminated axisymmetric shells based on a refined zigzag theory, CIMNE, Technical Report N° PI-376, Barcelona, Spain, 2012

Oñate E., Celigueta M.A., Idelsohn S.R., Salazar F., Larese A., Rossi R., Suárez B. and Morán R.

Analysis of fluid soil-structure interaction problems with the particle finite element method (PFEM), CIMNE, Technical Report N° PI-374, 15 pp., Barcelona, Spain, 2012

Oñate E., Labra C., Zárate F. and Rojek J.

Modeling and simulation of the effect of blast loading on structures using an adaptive blending of discrete and finite element methods, CIMNE, Technical Report N° PI-373, 7 pp., Barcelona, Spain, 2012

Kamran K., Rossi R., Idelsohn S. and Oñate E.

Underwater implosion using particle finite element method, CIMNE, Technical Report N° PI-371, 10 pp., Barcelona, Spain, 2012

Salazar F., Morán R., Rossi R. and Oñate E.

Analysis of the discharge capacity of radial-gated spillways using numerical modeling application to Oliana dam, CIMNE, Technical Report N° PI-369, 28 pp., Barcelona, Spain, 2011

Ortega E., Oñate E. and Idelsohn S.R.

An adaptive finite point method for aeroelastic analysis, CIMNE, Technical Report N° PI-368, 25 pp., Barcelona, Spain, 2011

Oñate E., Eijo A. and Oller S.

Modeling of delamination in composite laminated beams using a two-noden beam element based in refined zigzag theory, CIMNE, Technical Report N° PI-367, Barcelona, Spain, 2011

Moretó M., Oñate E. i Carbonell J.M.

Modelització del reflectòmetre d'impacte amb el mètode dels elements finits i les partícules, CIMNE, Technical Report N° PI-366, 187 pp., Barcelona, Spain, 2011

Oñate E., Suárez B., Salazar F., Morán R., Celigueta M.A. y Latorre S.

Análisis de flujos en lámina libre y su interacción con sólidos y estructuras por el método de partículas y elementos finitos (PFEM), CIMNE, Technical Report N° PI-365, 12 pp., Barcelona, Spain, 2011

Oñate E.

Advances on finite element methods and particle-based methods for metal forming processes, CIMNE, Technical Report N° PI-360, 13 pp., Barcelona, Spain, 2011

Oñate E.

Reflexiones sobre el tránsito de la idea al producto en el entorno de la Escuela de Caminos de Barcelona, CIMNE, Technical Report N° PI-359, 4 pp., Barcelona, Spain, 2011

Oñate E.

The cycle of ideas in research development and technology transfer, CIMNE, Technical Report N° PI-358, 6 pp., Barcelona, Spain, 2011

Oñate E., Celigueta M.A., Idelsohn S.R., Salazar F. and Suárez B.

Possibilities of the particle finite element method for fluid-solid-structure interaction problems, CIMNE, Technical Report N° PI-357, 20 pp., Barcelona, Spain, 2011

Oñate E., Salazar F. and Morán R.

Modeling of landslides into reservoir with the particle finite element method, CIMNE, Technical Report N° PI-355, Barcelona, Spain, 2011

Oñate E.

El ciclo de las ideas en la I+D+i, CIMNE, Technical Report N° PI-354, 6 pp., Barcelona, Spain, 2011

Oñate E., Miquel Canet J. and Nadukandi P.

A stable and accurate finite element formulation for convection-diffusion-absorption problems using finite calculus, CIMNE, Technical Report N° PI-352, Barcelona, Spain, 2011

Flores R., Ortega E. and Oñate E.

Explicit dynamic analysis of thin membranes structures, CIMNE, Technical Report N° PI-351, 44 pp., Barcelona, Spain, 2011

Oñate E., Idelsohn S., Celigueta M. A., Rossi R. and Latorre S.

New explicit time integration schemes for the transport equations with increased stability and accuracy, CIMNE, Technical Report N° PI-350, Barcelona, Spain, 2011

Oñate E., Idelsohn S., Celigueta M. A., Rossi R. and Latorre S.

Possibilities of the particle finite element method in computational mechanics, CIMNE, Technical Report N° PI-345, 37 pp., Barcelona, Spain, 2010

Ortega E., Flores R. and Oñate E.

A 3D low-order panel method for unsteady aerodynamic problems, CIMNE, Technical Report N° PI-343, 28 pp., Barcelona, Spain, 2010

De Mier M., Idelsohn S. and Oñate E.

Advances in the simulation of multi-fluid flows with the particle finite element method application to bubble dynamics, CIMNE, Technical Report N° PI-342, 32 pp., Barcelona, Spain, 2010

Ortega E., Flores R., Oñate E., Sacco C. and González E.

Innovative numerical tools for the simulation of parachutes, CIMNE, Technical Report N° PI-341, 39 pp., Barcelona, Spain, 2010

Buachart C., Ortega E. and Oñate E.

A finite point method to solve shallow water equations, CIMNE, Technical Report N° PI-337, 32 pp., Barcelona, Spain, 2009

Rojek J., Oñate E., Labra C., Kazal H. and Akerman J.

Optimizing rock cutting through computer simulation, CIMNE, Technical Report N° PI-336, 11 pp., Barcelona, Spain, 2009

Lau L., López R. and Oñate E.

A neural networks approach to aerofoil noise prediction, CIMNE, Technical Report N° PI-335, 10 pp., Barcelona, Spain, 2009

Flores R., Ortega E. and Oñate E.

A numerical investigation of wind tunnel model deformations caused by the twin-sting system, CIMNE, Technical Report N° PI-334, 25 pp., Barcelona, Spain, 2009

Oñate E., Rossi R., Idelsohn S. and Butler K.

Melting and spread of polymers in fire with the particle finite element method, CIMNE, Technical Report N° PI-333, 22 pp., Barcelona, Spain, 2009

Oñate E., Idelsohn S., Celigueta M. A. and Rossi R.

Posibilities of the particle finite element method for complex coupled problems in fluid and solid mechanics, CIMNE, Technical Report N° PI-332, 38 pp., Barcelona, Spain, 2008

Kouhi M., Oñate E. and Bugada G.

Robust design methods in aerospace engineering, CIMNE, Technical Report N° PI-328, 33 pp., Barcelona, Spain, 2008

May M., Rossi R. and Oñate E.

Implementation of a General Algorithm for Incompressible and Compressible Flows within the Multi-Physics code KRATOS and Preparation of Fluid-Structure Coupling, CIMNE, Technical Report N° PI-327, 84 pp., Barcelona, Spain, 2008

Ortega E., Oñate E. and Idelsohn S.

A finite point method for adaptive three-dimensional compressible flow calculation, CIMNE, Technical Report N° PI-323, 13 pp., Barcelona, Spain, 2008

Tang Z., Periaux J., Bugada G. and Oñate E.

Lift maximization with uncertainties for high lift devices optimization, CIMNE, Technical Report N° PI-322, 25 pp., Barcelona, Spain, 2008

Oñate E. and Zárate F.

Rotation Fee-Element a review, CIMNE, Technical Report N° PI-321, 20 pp., Barcelona, Spain, 2008

Oñate E.

Las TIC en ingeniería civil, CIMNE, Technical Report N° PI-320, 10 pp., Barcelona, Spain, 2008

Oñate E.

Sistemas de apoyo a la decisión, CIMNE, Technical Report N° PI-319, 20 pp., Barcelona, Spain, 2008

Oñate E., Larese A., Idelsohn S., Celigueta M. A. y Rossi R.

Validación experimental del Particle Finite Element Method (PFEM), CIMNE, Technical Report N° PI-318, 81 pp., Barcelona, Spain, 2008

Bordone M., Soudah E., Chiumenti M. y Oñate E.

Desarrollo de un software metálico intravascular, CIMNE, Technical Report N° PI-317, 22 pp., Barcelona, Spain, 2008

Bordone M., Oñate E. and Soudah E.

Numerical validation of hemodynamic factors in vascular diseases, CIMNE, Technical Report N° PI-315, 128 pp., Barcelona, Spain, 2008

Tang Z., Periaux J., Oñate E. and Bugeda G.

Lift Maximization with uncertainties on angle of attack for high soft devices optimization, CIMNE, Technical Report N° PI-314, 50 pp., Barcelona, Spain, 2008

Ortega E., Oñate E. and Idelsohn S.

A finite point method for three-dimensional compressible flow, CIMNE, Technical Report N° PI-310, 77 pp., Barcelona, Spain, 2007

Daring A., López R., Bugeda G. and Oñate E.

Shape optimization in aeronautical applications using neural networks, CIMNE, Technical Report N° PI-306, 50 pp., Barcelona, Spain, 2007

Oñate E., Valls A. and García J.

Computational of turbulent flows using a finite element formulation, CIMNE, Technical Report N° PI-304, 29 pp., Barcelona, Spain, 2007

Oñate E., Flores F.G. and Marcipar J.

Membrane structures. Formed by low pressure inflatable tubes. New analysis methods and recent constructions, CIMNE, Technical Report N° PI-303, 32 pp., Barcelona, Spain, 2007

Oñate E., Flores F.G. and Neamtu L.

Enhanced rotation-free basic shell triangle. Applications to sheet metal forming, CIMNE, Technical Report N° PI-302, 26 pp., Barcelona, Spain, 2007

Oñate E., Suárez B. y Miquel J.

Posibilidades de los métodos numéricos en obras subterráneas, CIMNE, Technical Report N° PI-301, 166 pp., Barcelona, Spain, 2007

Oñate E., Celigueta M. A. and Idelsohn S.R.

Modeling bed erosion on free surface flows by the particle finite element methods, CIMNE, Technical Report N° PI-293, 26 pp., Barcelona, Spain, 2006

Valls A., García J. and Oñate E.

LES turbulence models. Relation with stabilized numerical methods, CIMNE, Technical Report N° PI-288, 47 pp., Barcelona, Spain, 2006

Oñate E. and Felippa C.

Variational formulation of the finite calculus equations in solid mechanics and diffusion-reaction problems, CIMNE, Technical Report N° PI-283, 17 pp., Barcelona, Spain, 2006

Oñate E., Valls A. and García J.

FIC/FEM formulation with matrix stabilizing terms for incompressible flows at low and high Reynolds numbers, CIMNE, Technical Report N° PI-282, 28 pp., Barcelona, Spain, 2006

Löhner R., Yang L. and Oñate E.

On the simulation of flows with violent free surface motion, CIMNE, Technical Report N° PI-281, 32 pp., Barcelona, Spain, 2006

Arteaga-Gómez J., Löhner R., Rojek J. and Oñate E.

Coupling of Feflo with Simpack, CIMNE, Technical Report N° PI-280, 13 pp., Barcelona, Spain, 2006

Jiménez J., Priegue A., Guzman F. y Oñate E.

Programación y gestión de redes de notas Via Internet I, CIMNE, Technical Report N° PI-279, 28 pp., Barcelona, Spain, 2005

Oñate E., Celigueta M.A., Idelsohn S.R. y Riu F.

El método de partículas y elementos finitos. Aplicaciones en ingeniería de puertos, CIMNE, Technical Report N° PI-278, 64 pp., Barcelona, Spain, 2005

Piazzese J. y Oñate E.

Plataforma WSN/NIMS III. Programación básica de motas, CIMNE, Technical Report N° PI-277, 20 pp., Barcelona, Spain, 2005

Ortega E., Flores R. and Oñate E.

An edge-based solver for compressible flow, CIMNE, Technical Report N° PI-275, 17 pp., Barcelona, Spain, 2005

Mora J., Otín R., Dadvand P., Escolano E., Pasenau M.A. and Oñate E.

Open tools for electromagnetic simulation programs, CIMNE, Technical Report N° PI-273, 14 pp., Barcelona, Spain, 2005

Jimenez J., Priegue A., Piazzese J. y Oñate E.

Plataforma WSN/NIMS II. Primeras experiencias en CIMNE, CIMNE, Technical Report N° PI-272, 28 pp., Barcelona, Spain, 2005

Fung A., Palh E., Bugada G. and Oñate E.

Evolutionary methods for optimal shape design, CIMNE, Technical Report N° PI-270, 74 pp., Barcelona, Spain, 2005

Oñate E., Miquel J. and Zárate F.

Stabilized FIF/FEM formulation for multidimensional advection-diffusion-reaction problems, CIMNE, Technical Report N° PI-269, 20 pp., Barcelona, Spain, 2005

Piazzese J., Jimenez J. y Oñate E.

Plataforma WSN/NIMS I, CIMNE, Technical Report N° PI-268, 11 pp., Barcelona, Spain, 2005

Rojek J., Luege M. and Oñate E.

Development of local models and their computational implementation for polymer coated steel sheets, CIMNE, Technical Report N° PI-265, 102 pp., Barcelona, Spain, 2004

Oñate E.

El valor del cálculo en los sistemas de ayuda a la toma de decisión en ingeniería, CIMNE, Technical Report N° PI-264, 12 pp., Barcelona, Spain, 2004

Oñate E.

Advances in stabilized finite elements and particle methods for bulk forming processes, CIMNE, Technical Report N° PI-261, 29 pp., Barcelona, Spain, 2004

Oñate E. y García J.

Desarrollo del código de elementos finitos TDYN para estudio de la hidrodinámica de barcos. Aplicaciones al diseño de veleros de la Copa América, CIMNE, Technical Report N° PI-255, 20 pp., Barcelona, Spain, 2004

Valls A., García J. y Oñate E.

El método de Level set: Revisión y nuevas propuestas, CIMNE, Technical Report N° PI-254, 65 pp., Barcelona, Spain, 2004

Rojek J., Luege M. and Oñate E.

Development of local modul for polymer computational analysis of coated steel sheets for the can industry, CIMNE, Technical Report N° PI-252, 101 pp., Barcelona, Spain, 2004

Boroomand B., Tabatabaie A. and Oñate E.

On application of the finite point method to heat and elasticity problems, CIMNE, Technical Report N° PI-249, 42 pp., Barcelona, Spain, 2004

Oñate E. y García J.

Desarrollo del código de elementos finitos TDYN para estudio de la liberodinámica de barcos. Aplicaciones al diseño de veleros de la Copa America, CIMNE, Technical Report N° PI-245, 11 pp., Barcelona, Spain, 2004

Oñate E., Idelsohn S.R., Del Pin F. and Aubry R.

The particle finite element method. An overview, CIMNE, Technical Report N° PI-243, 43 pp., Barcelona, Spain, 2004

Felippa C.A. and Oñate E.

Nodally exact Ritz discretization of 1D diffusion-absorption and Helmholtz equations by variational FIC and modified equation methods, CIMNE, Technical Report N° PI-237, 17 pp., Barcelona, Spain, 2004

Oñate E. and Flores F.

Advances in the formulation of the solution free basic shell triangle, CIMNE, Technical Report N° PI-241, 48 pp., Barcelona, Spain, 2003

Idelsohn S.R., Oñate E. and Ransan S.R.

A finite calculus formulation of the level set equation, CIMNE, Technical Report N° PI-239, 31 pp., Barcelona, Spain, 2003

Oñate E., Marcipar J. y Piazzese J.

Sistemas de ayuda a la desición en ingeniería civil.Posibilidades y perspectivas, CIMNE, Technical Report N° PI-238, 11pp., Barcelona, Spain, 2003

Oñate E., García J., Bugada G. and Idelsohn S.R.

A general stabilized formulation for incompressible fluid flow using finite calculus and the finite element method, CIMNE, Technical Report N° PI-223, 38pp., Barcelona, Spain, 2003

Oñate E., García J. and Idelsohn S.R.

Ship hydrodynamics, CIMNE, Technical Report N° PI-222, 48pp., Barcelona, Spain, 2003

Oñate E., Marcipar J. y Zárate F.

Posibilidades de las nuevas tecnologías de información y comunicaciones en el sector de la construcción, CIMNE, Technical Report N° PI-221, 12pp., Barcelona, Spain, 2003

Felippa C.A. and Oñate E.

Stress, strain and energy splittings for anisotropic elastic solids under volumetric constraints, CIMNE, Technical Report N° PI-217, 14 pp., Barcelona, Spain, 2002

Felippa C.A. and Oñate E.

Volumetric constraints models for anisotropic elastic solids, CIMNE, Technical Report N° PI-216, 26 pp., Barcelona, Spain, 2002

Oñate E.

Cálculo de estructuras con materiales compuestos laminados por el método de elementos finitos, CIMNE, Technical Report N° PI-212, 63 pp., Barcelona, Spain, 2002

Olausson J., Gustafsson J., Di Capua D. and Oñate E.

Development of an adaptive mesh generator, CIMNE, Technical Report N° PI-211, Barcelona, Spain, 2002

Oñate E. and García Espinosa J.

A finite element method for fluid-structure interaction with surface waves using a finite calculus, CIMNE, Technical Report N° PI-208, Barcelona, Spain, 2001

Hanganu A., Oñate E. and Barbat A.

A finite element methodology for local/global damage evaluation in civil engineering structures, CIMNE, Technical Report N° PI-206, Barcelona, Spain, 2001

Oñate E.

Possibilities of finite calculus in computational mechanics, CIMNE, Technical Report N° PI-205, Barcelona, Spain, 2001

Oñate E., Perazzo and Miquel J.

A finite point method for elasticity problems, CIMNE, Technical Report N° PI-202, Barcelona, Spain, 2001

Oñate E., Hanganu A. and Miquel J.

Prediction of damage and failure in civil engineering structures using a finite element model, CIMNE, Technical Report N° PI-1838 Barcelona, Spain, 2000

Oñate E. and Manzán M.

Stabilization techniques for convection-diffusion problems, CIMNE, Technical Report N° PI-183, Barcelona, Spain, 2000

Idelsohn S., Storti M.A. and Oñate E.

Lagrangian formulations to solve free surface incompressible fluid flows, CIMNE, Technical Report N° PI-182, Barcelona, Spain, 2000

Oñate E. and García J.

A finite element method for fluid-structure interaction accounting for surface waves using a finite increment calculus formulation, CIMNE, Technical Report N° PI-180, Barcelona, Spain, 2000

Codina R., Morton C., Oñate E. and Soto O.

Numerical aerodynamic analysis of large buildings using a finite element model with application to a telescope building, CIMNE, Technical Report N° PI-181, Barcelona, Spain, 1999

Car E., Oller S. and Oñate E.

A large strain plasticity model for anisotropic composite materials, CIMNE, Technical Report N° PI-179, Barcelona, Spain, 1999

Car E., Oller S. and Oñate E.

An anisotropic elastoplastic model for fiber reinforced composite materials, CIMNE, Technical Report N° PI-178, Barcelona, Spain, 1999

Oñate E. and Hanganu A.

Métodos avanzados para el cálculo de la resistencia última de estructuras de hormigón, CIMNE, Technical Report N° PI-176, Barcelona, Spain, 1999

Oñate E.

Formulación de elementos finitos estabilizada para problemas de transporte convectivo y flujo incompresible mediante técnicas de cálculo finitesimal, CIMNE, Technical Report N° PI-169, Barcelona, Spain, 1999

Oñate E., Zárate F., Plana X. and Neamtu L.

New rotation free shell triangle for crash-worthiness analysis in parallel Pc networks, CIMNE, Technical Report N° PI-168, Barcelona, Spain, 1999

Oñate E., Sacco C. and Idelsohn S.

A finite point method for incompressible flow problems, CIMNE, Technical Report N° PI-167, Barcelona, Spain, 1999

Oñate E. and García J.

A methodology for analysis of fluid structure interaction accounting for free surface waves, CIMNE, Technical Report N° PI-166, Barcelona, Spain, 1999

Oñate E., Perazzo F. and Miquel J.

Advances in the stabilized finite point method for structural mechanics, CIMNE, Technical Report N° PI-164, Barcelona, Spain, 1999

Oñate E.

New degrees of freedom in computational mechanics: Mesh free finite point method, rotation free shell triangles and moving free meshes, CIMNE, Technical Report N° PI-154, Barcelona, Spain, 1999

Oñate E.

A stabilized finite element method for incompressible viscous flows using a finite increment calculus formulation, CIMNE, Technical Report N° PI-150, Barcelona, Spain, 1999

Oñate E. and Zárate F.

Rotation-free triangular plate and shell elements, CIMNE, Technical Report N° PI-149, Barcelona, Spain, 1999

Botello S., Marroquín J.L., Oñate E., Valdés J.G., y Vázquez A.

Módulo de aplicaciones del método de los elementos finitos, Comunicaciones del CIMAT, Comunicación Interna No. M-99-12 (CC/CIMAT), 1999

Rojek J. and Oñate E.

Comments of the results of springback analysis of U-bending tests for aluminium, CIMNE, Technical Report N° IT 298, Barcelona, Spain, 1998

Mora J., Miquel J. y Oñate E.

Electromagnetic analysis with numerical tools version 1.0 - electrostática, Cálculo de campos electrostáticos por el método de elementos finitos, CIMNE, Informe Técnico N° IT 290, Barcelona, Spain, 1998

Chiandussi G., Bugeda G. and Oñate E.

A simple method for automatic update of finite element meshes, CIMNE, Technical Report N° PI 147, Barcelona, Spain, 1998

Chiandussi G., Bugada G. and Oñate E.

A simple method for automatic update of finite element meshes, CIMNE, Technical Report N° PI 145, Barcelona, Spain, 1998

Oñate E.

Elementos finitos y volúmenes finitos. Puntos de encuentro y posibilidad de nuevas aplicaciones, CIMNE, Publicación de Investigación N° PI 142, Barcelona, Spain, 1998

Chiandussi G., Bugada G., and Oñate E.

Shape variable definition with Co and C1 and C2 continuity functions, CIMNE, Technical Report N° PI 134, Barcelona, Spain, 1998

Marín de Mateo J.A., Zárata, F., Marín J.A., y Oñate E.

Presa de Ibiur, para abastecimiento y regulación del Oria Medio (Guipúzcoa). Estudio térmico, CIMNE, Informe Técnico N° IT 285, Barcelona, Spain, 1998

Rojek J. and Oñate E.

Prediction of spring back in sheet metal forming using the code Stampack, CIMNE, Technical Report N° IT 284, Barcelona, Spain, 1998

Car E., Oller S., y Oñate E.

Estudio del comportamiento de materiales compuestos, CIMNE, Informe Técnico N° IT 264, Barcelona, Spain, 1998

Löhner R., Yang C., and Oñate E.

Viscous free surface hydrodynamics using unstructured grids, CIMNE, Technical Report N° PI 130, Barcelona, Spain, 1998

Estupiñan J., Oñate E. and Suárez B.

Structural topology optimisation using genetic algorithms, evolution strategies and popular-based incremental learning, CIMNE, Technical Report N° PI 127, Barcelona, Spain, 1997

Neamtu L., Oñate E. y Duffett G.

Análisis de la deformación de una silla de bebé sometida a choque con el programa STAMPACK, CIMNE, Informe Técnico N° IT 261, Barcelona, Spain, 1997

Neamtu L., Oñate E. y Duffett G.

Estudio preliminar sobre impacto a velocidad alta con el programa SIMPACT, CIMNE, Informe Técnico N° IT 260, Barcelona, Spain, 1997

Rojek J. and Oñate E.

Verification of the sheet springback analysis using the program STAMPACK, CIMNE, Technical Report N° IT 259, Barcelona, Spain, 1997

Hanganu A., Miquel J. y Oñate E.

Estudio preliminar sobre el cálculo de la energía disipada en voladuras de macizos rocosos, CIMNE, Informe Técnico N° IT 256, Barcelona, Spain, 1997

García J., Morton C., León A., Oñate E. y Sacco C.

Análisis hidrodinámico de un transporte de productos químicos de AESA, CIMNE, Informe Técnico N° IT 250, Barcelona, Spain, 1997

Aleman F., Oller S. y Oñate E.

VULCAN-Análisis termomecánico 3D del diente M35S Metalogenia S.A., CIMNE, Informe Técnico N° IT 249, Barcelona, Spain, 1997

Chiandussi G., Bugada G. and Oñate E.

Design optimisation with response surface methodology, CIMNE, Technical Report N° IT 248, Barcelona, Spain, 1997

Aleman F., Celentano D., Oller S. y Oñate E.

VULCAN- Análisis termomecánico 3D de una caldera, CIMNE, Informe Técnico N° IT 247, Barcelona, Spain, 1997

Hanganu A., Miquel J. y Oñate E.

Estudio preliminar sobre la evaluación del grado de protección de un refugio para aviones, CIMNE, Informe Técnico N° IT 245, Barcelona, Spain, 1997

Codina R., Soto O. y Oñate E.

Simulación numérica del flujo en reactores químicos, CIMNE, Informe Técnico N° IT 237, Barcelona, Spain, 1997

Ferriz A., Frutos O. y Oñate E.

Análisis de la embutición de un recipiente de presión, CIMNE, Informe Técnico N° IT 231, Barcelona, Spain, 1997

Taylor R.L., Zienkiewicz O.C. and Oñate E.

A hierarchical finite element method based on the partition of unity, CIMNE, Technical Report N° PI 106, Barcelona, Spain, 1997

Rojek J. and Oñate E.

Sheet springback analysis using a simple shell triangle with translational degrees of freedom only, CIMNE, Technical Report N° PI 124, Barcelona, Spain, 1997

Löhner R. and Oñate E.

An advancing front point generation technique, CIMNE, Technical Report N° PI 120, Barcelona, Spain, 1997

Idelsohn S.R., Oñate E. y Sacco C.

Finite element solution of free surface ship-wave problems, CIMNE, Technical Report N° PI 119, Barcelona, Spain, 1997

Darakar R., Sacco C., Idelsohn S. and Oñate E.

Solution of the Navier-Stokes equations with the free-surface boundary conditions using unstructures finite element grids, CIMNE, Technical Report N° PI 116, Barcelona, Spain, 1997

Chiandussi G., Bugada G. and Oñate E.

Design optimisation with response surface methodology, CIMNE, Technical Report N° PI 115, Barcelona, Spain, 1997

Oñate E. and Idelsohn S.

A mesh-free finite point method for advective diffusive transport and fluid flow problems, CIMNE, Technical Report N° PI 110, Barcelona, Spain, 1997

Oñate E.

Possibilities of parallel computing in the finite element analysis of industrial forming processes, CIMNE, Technical Report N° PI 109, Barcelona, Spain, 1997

Oñate E.

Reliability analysis of concrete structures. Numerical and experimental studies, CIMNE, Technical Report N° PI 107, Barcelona, Spain, 1997

Hurtado J., Barbat A.H. and Oñate E.

PROMENVIR- Simulation methods in stochastic mechanics. State of the art report, Technical Report CIMNE, IT-214, Barcelona, June 1996

Scherf O., Bugada G., Oñate E. and Wriggers P.

Investigation of impact problems via adaptive finite element methods, Technical Report CIMNE, IT-210, Barcelona, June 1996

Celentano D., Dabir A., Duffett G.A. and Oñate E.

Thermo-mechanical analysis of the cooling and solidification of a steel roller, Technical Report CIMNE, IT-197, Barcelona, March 1996

Oñate E. y Botello S.

Modelización de problemas de gran tamaño en el sector transporte, utilizando métodos numéricos y supercomputadoras, Acta Universitaria, Vol. 5, No. 1, pp. 15-25, 1995

Celentano D., Dabir A., Oller S. and Oñate E.

Thermo-mechanical analysis of a S.G.: cast iron crankshaft during cooling and solidification in green moulding sand, Technical Report CIMNE, IT-182, Barcelona, November 1995

Oñate E., Rojek J., Jovicevic J. and Miquel J.

Análisis del pretensado y capacidad de carga del subsistema de separación ø1194, Publicación Técnica CIMNE, IT-181, Barcelona, Noviembre 1995

Jovicevic J., Rojek J. and Oñate E.

3D Numerical simulation of hydraulic forming, Technical Report CIMNE, IT-179, Barcelona, September 1995

Rojek J., Santiago García J. y Oñate E.

Experiencias en la utilización del programa Stampack por la empresa C.S.I. Planos, Publicación Técnica CIMNE, IT-175, Barcelona, Julio 1995

Jovicevic J., Rojek J. y Oñate E.

Experiencias en el análisis de la embutición de un fregadero de acero inoxidable, Publicación Técnica CIMNE, IT-164, Barcelona, Mayo 1995

Barbat A.H., Oller S., Oñate E. and Hanganu A.

Viscous damage model for Timoshenko beam structures, Publicación de Investigación CIMNE, PI 77, Barcelona, 1995

Taylor R.L., Zienkiewicz O.C., Oñate E. and Idelsohn S.R.

Moving least square approximations for solution of differential equations, Publicación de Investigación CIMNE, PI 74, Barcelona, 1995

Oñate E., Hanganu A., Barbat A.H., Oller S., Vitaliani R. and Saetta A.

Structural analysis and durability assessment of historical constructions using a finite element damage model, CIMNE, PI 73, Barcelona, 1995

Oñate E.

Análisis de procesos de conformado de metales por el método de los elementos finitos, CIMNE, PI 72, Barcelona 1995

Miquel J., Oñate E., y Rojek J.

Simulación del choque de vehículos por el método de los elementos finitos, CIMNE, PI 71, Barcelona, Octubre 1995

Oñate E., Idelsohn S.R. and Zienkiewicz O.C.

Finite point methods in computational mechanics, CIMNE, PI 67, Barcelona, 1995

Bugeda G. and Oñate E.

A strategy to combine optimum structural shape design with automatic mesh adaptation, CIMNE, PI 64, Barcelona, 1995

Oñate E. and Matias W.T.

A critical displacement approach for predicting structural instability, CIMNE, PI 62, Barcelona, 1995

Mestre J.C., Oñate E. and Bugeda G.

PARAMESH-two dimensional unstructured parallel mesh generation program, CIMNE, PI 61, Barcelona, 1995

Fischer T. and Oñate E.

Adaptive finite element computations of hypersonic inviscid flows around a double ellipsoid, CIMNE, PI 60, Barcelona, 1995

Oñate E., Barbat A.H., Cervera M. and Oliver J.

Reliability and cost efficiency of finite element methods for non-linear structural analysis, CIMNE, PI 59, Barcelona, 1995

Oñate E., Hanganu A., Barbat A.H., Oller S., Vitaliani R. and Sietta A.

Structural analysis and durability assessment of historical constructions using a finite element damage model, Publication CIMNE, N° 73, October 1995

Rojek J., Herre J. and Oñate E.

STAMPACK, an explicit finite element program for analysis of sheet stamping problems, Technical Report CIMNE, IT-159, Barcelona, December 1994

Oñate E.

Experiencias del Centro Internacional de Métodos Numéricos en Ingeniería en la modelización de problemas de gran tamaño en mecánica estructural y de flúidos relacionados con el sector del transporte, Publicación Técnica CIMNE, IT-151, Barcelona, Noviembre 1994

Oñate E. y Suárez B.

Projecte pilot de detecció d'incendis mitjançant dirigibles, Publicación Técnica CIMNE, IT-148, Barcelona, Octubre 1994

Oñate E.

Análisis por elementos finitos al alcance de la empresa española. Casos prácticos, Publicación Técnica CIMNE, IT-147, Barcelona, Octubre 1994

Hanganu A., Cervera M. y Oñate E.

Análisis de la presión de fallo del edificio de contención de la CN Vandellós II. Modelo tridimensional con carga térmica, Publicación Técnica CIMNE, IT-133, Barcelona, Julio 1994

Hanganu A., Cervera M., Martel E., Oñate E. y Barbat A.H.

Análisis de la presión de fallo del edificio de contención de la C.N. Vandellós II, Modelo tridimensional con losa de cimentación, Publicación Técnica CIMNE, IT-125, Barcelona, Junio 1994

Ribó R., Oñate E. y Miquel J.

Sistema integrado de análisis de estructuras por el método de los elementos finitos, Publicación Técnica CIMNE, IT-123, Barcelona, Junio 1994

Jovicevic J., Zárate F. and Oñate E.

An assesment of the plate elements implemented in program OMEGA, Technical Report CIMNE, IT-122, Barcelona, May 1994

Agelet de Saracibar C., Jovicevic J. and Oñate E.

3D Superplastic forming analysis of an Al-Li 8090 top specimen, Technical Report CIMNE, IT-121, Barcelona, April 1994

Hanganu A., Cervera M., Martel E., Oñate E. y Barbat A.H.

Análisis de la presión de fallo del edificio de contención de la CN Vandellós II. Modelo tridimensional, Publicación Técnica CIMNE, IT-118, Barcelona, Febrero 1994

Botello S. y Oñate E.

Calsef 2.0: Programa para cálculo de sólidos y estructuras por el método de los elementos finitos, Publicación de Investigación CIMNE, PI 57, Barcelona, 1994

Oñate E.

A review of some finite element families for thick and thin plate and shell analysis, Publicación de Investigación CIMNE, PI 53, Barcelona, Mayo 1994

Idelsohn S.R., Heinrich J.C. and Oñate E.

Petrov-Galerkin methods for the transient advective-diffusive equation with sharp gradients, Publicación de Investigación CIMNE, PI 51, Barcelona, Mayo 1994

Fischer T., Miquel J., Fruitos O. and Oñate E.

3D finite element computations for viscous aerodynamic flows around automobiles, Publicación de Investigación CIMNE, PI 50, Barcelona, Mayo 1994

Oñate E.

Derivation of the secant stiffness matrix for non linear finite element analysis of solids and trusses, Publicación de Investigación CIMNE, PI 49, Barcelona, Mayo 1994

Rojek J., García Garino C. and Oñate E.

Advanced finite element models for analysis of industrial sheet forming processes, Publicación de Investigación CIMNE, PI 48, Barcelona, Abril 1994

Lombera G., Bugada G., Cervera M. y Oñate E.

SLAP: Programa para modelado numérico de procesos de estereolitografía utilizando el método de los elementos finitos, Publicación de Investigación CIMNE, PI 47, Barcelona, 1994

Postek E., Oñate E., Hanganu A. y Barbat A.H.

Análisis de la presión de fallo del edificio de contención de la C.N. Vandellós II mediante un modelo de lámina de revolución, Publicación Técnica CIMNE, IT-110, Barcelona, Noviembre 1993

Celentano D., Oller S., Dardati P. and Oñate E.

Finite element thermomechanical coupled model for solidification and cooling in casting, Technical Report CIMNE, IT-91, Barcelona, February 1993

Oller S., Botello S., Miquel J. and Oñate E.

An anisotropic elasto-plastic model based on an isotropic formulation, Publicación de Investigación CIMNE, PI 41, Barcelona, Nov. 1993

Soto O., Oñate E. and Codina R.

Finite element analysis of hot rolling processes, Publicación de Investigación CIMNE, PI 40, Barcelona, 1993

Flores F. y Oñate E.

Análisis dinámico de estructuras de láminas y vigas, Publicación de Investigación CIMNE, PI 39, Barcelona, 1993

Flores F. y Oñate E.

Evaluación de diferentes elementos finitos basados en la teoría de láminas de Simó, Publicación de Investigación CIMNE, PI 38, Barcelona, 1993

Bugeda G., Joannas D. et Oñate E.

Utilization de maillages adaptatifs dans un processus d'optimisation de formes en aérodynamique, Publicación de Investigación CIMNE, PI 34, Barcelona, Mayo 1993

Oñate E., Zárate F. and Flores F.

A simple triangular element for thick and thin plate and shell analysis, Publicación de Investigación CIMNE, PI 33, Barcelona, Abril 1993

Oñate E. and Cervera M.

A general procedure for deriving thin plate bending elements with one degree of freedom per node, Publicación de Investigación CIMNE, PI 32, Barcelona, Abril 1993

Oñate E. and Bugeda G.

A methodology for adaptive mesh refinement in optimum shape design problems, Publicación de Investigación CIMNE, PI 31, Barcelona, Marzo 1993

Bugeda G., Oñate E. and Joannas D.

Aerodynamic shape optimization using automatic adaptive remeshing, Publicación de Investigación CIMNE, PI 29, Barcelona, Enero 1993

Celentano D., Oñate E. and Oller S.

A temperature-based formulation for finite element analysis of generalized phase-change problems, Publicación de Investigación CIMNE, PI 28, Barcelona, Enero 1993

Zarate F. y Oñate E.

CALTEP: Programa para el cálculo transitorio de la ecuación de Poisson, Publicación de Investigación CIMNE, PI 27, Barcelona, Enero 1993

Idelsohn S.R. and Oñate E.

Finite volumes and finite elements: two "good friends", Publicación de Investigación CIMNE, PI 26, Barcelona, Enero 1993

Oñate E. and Bugeda G.

A study of mesh optimality criteria in adaptive finite element analysis., Publicación de Investigación CIMNE, PI 25, Barcelona, Enero 1993

Lazorthes B., Agelet de Saracibar C. and Oñate E.

Modelisation numerique du formage superplastique de toles, Technical Report CIMNE, IT-75, Barcelona, July 1992

Oñate E.

Numerical simulation of industrial sheet forming processes, Technical Report CIMNE, IT-69, Barcelona, July 1992

Lazorthes B., Agelet de Saracibar C. and Oñate E.

Numerical simulation of thin sheet superplastic forming processes, Technical Report CIMNE, IT-66, Barcelona, June 1992

Sosnowski W., Oñate E. and Agelet de Saracibar C.

Numerical simulation of industrial sheet forming processes. Part I: Description of the experiments, Technical Report CIMNE, IT-60, Barcelona, May 1992

Celentano D., Oller S., Oñate E. y Dardati, P.

Modelización por elementos finitos del enfriamiento de piezas de fundición. Cálculo termomecánico, Publicación Técnica CIMNE, IT-58, Barcelona, Mayo 1992

Oñate E. y Miquel J.

Simulación numérica del comportamiento resistente y aerodinámico de vehículos, Publicación Técnica CIMNE, IT-56, Barcelona, Abril 1992

Oñate E. and Miquel J.

Numerical simulation of structural and aerodynamic behaviour of vehicles, Technical Report CIMNE, IT-52, Barcelona, January 1992

Codina R., Schafer U. and Oñate E.

Mould filling simulation using finite elements, Publicación de Investigación CIMNE, PI 24, Barcelona, Diciembre 1992

Oñate E.

Una panorámica de las posibilidades del MEF para análisis de procesos de conformado de metales, Publicación de Investigación CIMNE, PI 23, Barcelona, Diciembre 1992

Oñate E.

A perspective of recent Development in the Finite Element Simulation of Metal Forming Processes, CIMNE, Barcelona, PI 21, Julio 1992

Celentano D., Oller S. y Oñate E.

Modelización por elementos finitos del enfriamiento de piezas de fundición, Publicación Técnica CIMNE, IT-28, Barcelona, Abril 1991

Oñate E., Botello S. y Miquel J.

Simulación numérica del choque de vehículos, Publicación de Investigación CIMNE, PI 17, Barcelona, 1991

Fischer T., Miquel J. and Oñate E.

Finite Element Analysis of Flow Problems in two dimensions, Publicación de Investigación CIMNE, PI 16, Barcelona, 1991

Oñate E., Zienkiewicz O.C. and Cervera M.

A finite Volume Format for Structural Mechanics, Publicación de Investigación CIMNE, PI 15, Barcelona, 1991

Oñate E., Quintana F., Codina R. and Miquel J.

Finite Element Procedures for Incompressible and Compressible Flows, Publicación de Investigación CIMNE, PI 14, Barcelona, 1991

Codina R., Cervera M. and Oñate E.

A Penalty Finite Element Method for Non-Newtonian Creeping Flows, Publicación de Investigación CIMNE, PI 13, Barcelona, 1991

Hughes T.M., Oñate E. and Miquel J.

A finite element method for the solution of potencial flow in two dimensions, Publicación de Investigación CIMNE, PI 11, Barcelona, 1991

Botello S., Miquel J., Oller S. y Oñate E.

Métodos avanzados de cálculo de estructuras de vehículo con materiales compuestos. Análisis estático, dinámico y de choque, Publicación Técnica CIMNE, IT-18, Barcelona, Mayo 1990

Zienkiewicz O.C. and Oñate E.

Finite Volume vs Finite Element. Is there really a choice?, Publicación de Investigación CIMNE, PI 08, Barcelona, 1990

Codina R., Oñate E. and Cervera M.

The intrinsic time for SUPG formulation using quadratic elements, Publicación de Investigación CIMNE, PI 06, Barcelona, 1990

Oñate E., Zienkiewicz O.C., Suárez B. and Taylor R.L.

A general methodology for deriving shear constrained Reissner Mindlin plate elements, Publicación de Investigación CIMNE, PI 05, Barcelona, 1990

Oñate E. and Agelet de Saracibar C.

Numerical modelling of sheet metal forming problems, Publicación de Investigación CIMNE, PI 02, Barcelona, 1990

Nieto J., Oñate E. y Miramar J.

El método de los elementos finitos, Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos de Barcelona, UPC, Publicación Interna, 1981

Oñate E.

Manual para PLACAT. Programa para cálculo de placas delgadas y gruesas por el método de los elementos finitos, Escuela Técnica Superior de Ingenieros de Caminos, Canales y Puertos de Barcelona, UPC, Publicación Interna, Junio 1980

Heinrich J.C. y Oñate E.

Users manual for HOTROLL. A finite element-penalty function program for the solution of thermally coupled, viscoplastic, two dimensional hot rolling problems, Internal Report of the Institute for Numerical Methods in Engng., Univ. College of Swansea, 1979

Oñate E.

Users manual to program HOTFLOW finite element program for the analysis of two dimensional steady state completed temperature flow of viscoplastic materials/with special reference to metal forming problems, Internal Report C/R/342/79. Civil Engineering Dept., Univ. College of Swansea, 1979

Oñate E.

Users manual for SHELLK. Computer program for the analysis of smooth or branched shell structures, Internal Report C/R/345/79. Civil Engineering Dept., Univ. College of Swansea, 1979

Oñate E.

Users guide to program AXISHELL. Finite element program for axisymmetric elastic shells under axisymmetric loading using linear elements, Internal Report C/R/341/79. Civil Engineering Dept., Univ. College of Swansea, 1979

Heinrich J.C. y Oñate E.

Hot rolling fully thermal properties, Internal Report of the Institute for Numerical Methods in Engng., Univ. College of Swansea, 1978

Oñate E.

El método de la banda finita. Aplicación al cálculo de puentes en cajón, Internal Report. Civil Engineering Dept., Univ. College of Swansea, Mayo 1977

Oñate E.

Programación eficiente del método de los elementos finitos, Internal Report. Civil Engineering Dept., Univ. College of Swansea, Mayo 1977

Oñate E.

Users guide for MFIST and KFIST, finite strip programs for the analysis of boxgirder, Internal Report CR/91/76. Civil Engineering Dept., Univ. College of Swansea, 1976

Hinton E., Wood R. y Oñate E.

A preliminary report in bridge deck analysis, Internal Report BDAR/1/76. Civil Engineering Dept., Univ. College of Swansea, 1976

Nieto J., Oñate E. y Miramar J.

El método de los elementos finitos, Escuela Técnica Superior de Ingenieros Industriales, Publicación de la Cátedra de Cinemática de Máquinas, Valencia, 1976