

Eugenio Oñate

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Current position

Full professor in Structural Mechanics, Universitat Politècnica de Catalunya (UPC)

Education

Civil Engineering, Universidad Politécnica de Valencia (1975)
Master in Science, University College of Swansea, United Kingdom(1976)
Doctor in Philosophy, University College of Swansea, United Kingdom (1978)
Doctor Ingeniero de Caminos, Canales y Puertos (1979)

Research Interests

Computational Structural and Fluid Mechanics, Computational Bio-Medicine, Finite Element Methods,
Computer Simulation for Industrial Forming Processes, Decision Support Systems in Engineering

Career

Honorary President, Spanish Society for Numerical Methods in Engineering (SEMNI) 2004
President, International Association for Computational Mechanics (IACM) 2002
President, European Community on Computational Methods in Applied Sciences (ECCOMAS) 2000 - 2004
General Secretary, International Association for Computational Mechanics (IACM) 1994
Vice-President, European Community on Computational Methods in Applied Sciences (ECCOMAS) 1993-96
Director, Dept. of Strength of Materials and Structural Analysis in Engineering at UPC 1992-95
President, Scientific Council of the Centre for Supercomputing of Catalonia (CESCA) 1992-95
President, Spanish Society for Numerical Methods in Engineering (SEMNI) 1989 - 2004
Vice-President and Director, International Centre for Numerical Methods in Engineering (CIMNE) 1987
Director, School of Civil Engineering, UPC 1983 - 89
Full Professor in Structural Mechanics, Universidad Politécnica de Catalunya (UPC) 1981
Associated Professor, E. T. S. Ingenieros de Caminos, Canales y Puertos (UPC) 1979

Honors and awards

2004 Duran i Farell Award of Investigation and Technology, Universidad Politécnica de Cataluña
2004 University of Jyväskylä Medal (Finland)
2002 Literary Award for Excellence to the best article published in Engineering Computations
2002 City of Barcelona Award in Technological Research
2001 Medal of the School of Civil Engineering of Barcelona to Professional Achievements
2000 Asociación Argentina de Mecánica Computacional (AMCA) Award
2000 Doctor Honoris Causa, University Ovidius, Constanza, Rumania
2000 Grupo Español de Fractura Award
1999 Narcis Monturiol Award, Catalanian Government, to the Scientific Merit of CIMNE (as Director of CIMNE)
1999 Accessit to the City of Barcelona Award in Technological Research
1998 Computational Mechanics Award
1998 Fellow of the International Association for Computational Mechanics (IACM)
1997 Member of Royal Academy of Doctors
1996 Eric Reissner Medal in Computational Mechanics
1995 Medal to Professional Merit of Spanish Institution of Civil Engineering
1990 Catalanian Medal for Research "Narcís Monturiol"

Professional activities

Editorial boards

- Revista Internacional de Métodos Numéricos para Cálculo y Diseño en Ingeniería (UPC).
- Archives of Computational Methods in Engineering. State of the art reviews. (CIMNE).
- Engineering Computations (Pineridge Press, U. K.).
- International Journal for Numerical Methods in Engineering (J. Wiley)
- International Journal of 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 Forming Processes (Hermes)
- International Journal of Computational Methods (World Scientific)
- Revista de Obras Públicas (Colegio de Ingenieros de Caminos, Canales y Puertos)

Community services

- Associated member of the Institute for Numerical Methods in Engineering (University of Swansea. UK).
- Member of the Instituto Eduardo Torroja and of the Asociación Española del Pretensado (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 Centres for Computer Applications (INCCA) of UNESCO.
- Member of the New York Academy of Sciences.
- EU. Res. Community of Flow, Turbulence & Combustion (ERCOFTAC). Director, Pilot Spain Centre since April 1991.
- Member, Real Academia de Doctores.
- Member, Int. Advisory Council, Centre of Advanced Materials and Structures (AMAS), Polish Academy of Sciences.

Summary of journal publications

Journal	Impact factor	Number of papers
International Journal for Numerical Methods in Engineering	1,691	28
Computer Methods in Applied Mechanics and Engineering	1,252	15
Computers and Structures	0,634	11
Other indexed journals		43
Other papers in refereed journals		25

Selected publications (max. 5)

Oñate E, Idelsohn S, Zienkiewicz Oc, Taylor RI, "A finite point method in computational mechanics. Applications to convective transport and fluid flow", Int. Journal for Numerical Methods in Engineering, 1996 (97 times cited)

Oñate E, Zienkiewicz Oc, "A viscous shell formulation for the analysis of thin sheet-metal forming". International Journal of Mechanical Sciences, 1983. (47 times cited)

Zienkiewicz Oc, Oñate E, Heinrich Jc, "A general formulation for coupled thermal flow of metals using finite-elements", International Journal for Numerical Methods in Engineering, 1981. (59 times cited)

Zienkiewicz Oc, Jain Pc, Oñate E, "Flow of solids during forming and extrusion - some aspects of numerical solutions", Journal of Solids and Structures, 1978. (137 times cited)

Zienkiewicz Oc, Bauer J, Morgan K, Oñate E, "Simple and efficient element for axisymmetric shells", International Journal for Numerical Methods in Engineering, 1977. (65 times cited)

Other relevant information

Organiser or Co-organiser of the following Conferences:

"Aplicaciones del Método de los Elementos Finitos en Ingeniería", Barcelona, 1986

2nd "International Conference on Computational Plasticity: Models, Software and Applications", 1987

EUROMECH colloquium 233 on "Numerical Simulation of Metal Forming Processes", 1989

2nd, 3rd, 4th, 5th, 6th, 7th, and 8th International Conference on Computational Plasticity: Models, Software and Applications (COMPLAS)", Barcelona, 1989, 1992, 1995, 1997, 2000, 2003, 2005

"I International Conference on Computer Aided Training in Science and Technology (CATS'90)", Barcelona, 1990

"International Conference on Parallel Computing and Transputers Applications'92 (PACTA'92)", Barcelona, 1992

1st, 2nd, 3rd "Congreso Internacional de Métodos Numéricos en Ingeniería y Ciencias Aplicadas", 1992, 2002, 2004

"VIII International Conference on Finite Elements in Fluids, New Trends and Applications", Barcelona, 1993

"International Seminar on Structural Analysis of Historical Constructions", Barcelona 1995

4th "World Congress on Computational Mechanics", Buenos Aires, Argentina, 1998

"II International Seminar on Structural Analysis of Historical Constructions", Barcelona 1998

"European Congress on Computational Methods in Applied Sciences and Engineering (ECCOMAS)", Barcelona 2000

"I Congreso de Métodos Numéricos en Ciencias Sociales", 2000

5th "Congreso de Métodos Numéricos en Ingeniería", 2002

International Conference on Textile Composites and Inflatable Structures (Structural Membranes 2003), 2003

International Conference on Adaptive Modeling and Simulation (ADMOS 2003), 2003

Computational Methods for Coupled Problems in Science and Engineering, 2005

Computational Methods in Marine Engineering (Marine 2005), 2005

II International Conference on Textile Composites and Inflatable Structures (Structural Membranes 2005), 2005

Editorial Works

Editor of 33 books since 1982