

Ramon Codina

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Current position

Full professor of Continuum and Structural Mechanics, Universitat Politècnica de Catalunya

Education

Civil Engineering, Escola Tècnica Superior d'Enginyers de Camins, Canals i Ports de Barcelona (1989)
Mathematics, Universitat Autònoma de Barcelona (1989)
Doctor in Civil Engineering, Universitat Politècnica de Catalunya (1992)

Research interests

Computational methods in applied sciences and engineering,
Finite elements, fluid mechanics.

Career

Full Professor of Continuum and Structural Mechanics, Universitat Politècnica de Catalunya, since 2003.
Associate Professor, Universitat Politècnica de Catalunya, 1993-2003
Assitant Professor, Universitat Politècnica de Catalunya, 1990-93
Research assistant, Universitat Politècnica de Catalunya, 1989-90
Visiting Scholar, University of California Berkeley, 1997-98

Honors and awards

Scholarship from the Spanish Ministry of Education, 1983-1989.
Grant from the UPC, January 1989.
Research Grant, CIMNE, July 1989--September 1989.
Second DRAGADOS Award to MS Thesis in Civil Engineering, October 1989.
Grant from the UPC for Doctoral Thesis, January 1990.
Fellowship from the Spanish Ministry of Education for young researchers (FPI), January 1990-July 1990.
Grant from the Catalan Government for initiation to research, January 1990.
Award of the UPC for the best Doctoral Thesis in Civil Engineering, June 1992.
Fellowship from the Spanish Ministry of Education for stays in foreign research centers (UC Berkeley, USA), July 1998-July 1999.
Award from the Catalan Government to young researchers (first edition of the "Distinció de la Generalitat de Catalunya per a la promoció de la recerca universitària"), June 2000.
J.L. Lions Award to Young Scientists in Computational Mathematics, from ECCOMAS (European Community on Computational Methods in Applied Sciences), September 2000.
IACM Young Investigator Award, from IACM (The International Association for Computational Mechanics), September 2004
ICREA award, Catalan Government, 2011

Professional activities

Member of the Editorial Board:

Computer Methods in Applied Mechanics and Engineering, since 2011
International Journal for Numerical Methods in Fluids, since 2005
International Journal for Numerical Methods in Heat and Fluid Flow, since 2002
Communications in Numerical Methods in Engineering, since 2002.

Summary of journal publications

Journal	Number of papers
Computer Methods in Applied Mechanics and Engineering	26
International Journal for Numerical Methods in Engineering	15
Journal of Computational Physics	7
SIAM Journal on Numerical Analysis	5
Other papers in refereed journals	54

Selected publications (max. 5)

R. Codina, Pressure stability in fractional step finite element methods for incompressible flows, Journal of Computational Physics, Vol. 170, Issue 1 (2001), 112-140 (**116 times cited**)

R. Codina, Stabilized finite element approximation of transient incompressible flows using orthogonal subscales, Computer Methods in Applied Mechanics and Engineering, Vol. 191, (2002), 4295-4321 (**166 times cited**).

R. Codina, Stabilization of incompressibility and convection through orthogonal sub-scales in finite element methods, Computer Methods in Applied Mechanics and Engineering, Vol. 190 (2000), 1579-1599 (**132 times cited**).

R. Codina, Comparison of some finite element methods for solving the diffusion - convection - reaction equation, Computer Methods in Applied Mechanics and Engineering, Vol. 156 (1998), 185-210 (**232 times cited**).

O.C. Zienkiewicz and R. Codina, A general algorithm for compressible and incompressible flow. Part I: The split, characteristic based scheme, International Journal for Numerical Methods in Fluids, Vol. 20, Num. 8/9 (1995), 869-885 (**254 times cited**).

Other relevant information

Student supervision:

- 12 Master thesis supervised
- 12 PhD thesis supervised
- 5 PhD thesis under supervision

Research projects:

- Participation in 18 international research projects, 5 of which as leader.
- Participation in 12 Spanish research projects with public funding, 8 of which as leader
- Participation in 13 contracts with public and private institutions, all of them as leader.

Total number of publications:

- 7 research monographs
- 7 book chapters
- 107 papers in referred journals
- 85 papers in conference proceedings (53 international, 32 national)
- 67 technical reports

Courses, conferences and seminars:

- 10 courses in different international universities
- 20 plenary lectures in congresses
- 35 invited lectures in congresses
- 41 contributed lectures in congresses
- 20 presentations in scientific symposia
- 24 invited seminars in different universities