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EDUCATION

Civil Engineer, Escola Tècnica Superior d'Enginyers de Camins, Canals i Ports de Barcelona (1990)
Ph. D in Civil Engineering, Universitat Politècnica de Catalunya, (1996)

CAREER

Full Professor, Department of Applied Mathematics 3, UPC, from 2007
Associate Professor, Department of Applied Mathematics 3, UPC, 1999-2007
Assistant Professor, Universitat Politècnica de Catalunya, 1993-1999
Lecturer, Universitat Politècnica de Catalunya, 1990-1993
Research Assistant, Universitat Politècnica de Catalunya, 1989

University Services and other positions

- Secretary (and member of the managing board) of ECCOMAS (European Community for Computational Methods and Applied Sciences), from 2001
- Visiting Professor, ENS Cachan (France), 2004 (1 month)
- Vice-director of the Department of Applied Mathematics, from February 2004
- Visiting Scientist, Joint Research Center of the European Commission, Ispra (Italy) 2001 (six months)
- Vice-dean of the Civil Engineering School (E.T.S. de Ing. de Caminos, Canales y Puertos de Barcelona) 1997-2001
- Visiting Researcher, ENS Cachan (France), 1994 (2 months)
- Member of the Consolidate Research Group for Numerical Methods in Applied Sciences and Engineering, Generalitat de Catalunya, from 1999

Workshop and Conference Committees

Chairmanship

- ADMOS2007. Third International Conference on Adaptive Modeling and Simulation, University of Chalmers, Goteborg (Sweden), October 22-24, 2007 (co-chairman : K. Runesson)
- ADMOS2005. Second International Conference on Adaptive Modeling and Simulation, University of Chalmers, Barcelona (Spain), September 8-10, 2005 (co-chairman : N.E. Wiberg)
- ADMOS2003. International Conference on Adaptive Modeling and Simulation, University of Chalmers, Goteborg (Sweden), September 29- October 1, 2003 (co-chairman : N.E. Wiberg)
- Error Assessment and Adaptivity in Finite Elements: Quality control of engineering outputs and complex problems, European Workshop on Computational Mechanics, Barcelona, March 29-30, 2001 (co-chairman : Ph. Bouillard)

Organizing Committee

- Joint 8th World Congress on Computational Mechanics and 5th ECCOMAS Congress on Numerical Methods in Engineering, Venice, June 30-July 3, 2008
- 3rd European Conference on Computational Mechanics (ECCM): Solids, structures and coupled problems, Lisbon, 5-8 June, 2006

Scientific Committee

- 3rd European Conference on Computational Mechanics (ECCM): Solids, structures and coupled problems, 2006 (Lisbon)
- 7 th Int. Conf. on Computational Plasticity fundamentals and applications, 2003
- 4th ECCOMAS Conference on Numerical Methods in Engineering, 2004 (Jyvaskyla, Finland)
- 3rd ECCOMAS Conference on Numerical Methods in Engineering, 2000 (Barcelona)
- 5th, 6 th and 7 th Congreso de Métodos Numéricos en Ingeniería (Spanish national conference on computational mechanics)

RECENT PUBLICATIONS

- Zlotnik, S. and Díez, P., Hierarchical X-FEM for n-phase flow ($n > 2$), "Computer Methods in Applied Mechanics and Engineering", (in press)
- Parés, N., Díez, P. and Huerta, A., "Exact bounds for linear outputs of the advection-diffusion-reaction equation using flux-free error estimates", SIAM Journal of Scientific Computing (in press)
- Parés, N., Santos, H. and Díez, P., "Guaranteed energy error bounds for the Poisson equation using a flux-free approach: solving the local problems in subdomains" International Journal for Numerical Methods in Engineering (in press)
- Cottreau, R., Díez, P. and Huerta, A., "Strict Error Bounds for Linear Solid Mechanics Problems using a Subdomain-Based Flux-Free Method", Computational Mechanics (in press, DOI 10.1007/s00466-009-0388-1)
- Zlotnik, S. and Díez, P., "Assembling sparse matrices in MATLAB", Communications in Numerical Methods in Engineering (in press)

Steffens, L. and Díez, P., "A simple strategy to assess the error in the numerical wave number of the Finite Element solution of the Helmholtz equation", Computer Methods in Applied Mechanics and Engineering, **198** (15-16) 1389-1400 (2009)

Zlotnik, S., Afonso, J.C., Díez, P. and Fernández, M., "Small-scale gravitational instabilities under the oceans: implications for the evolution of oceanic lithosphere and its expression in geophysical observables", Philosophical Magazine **88** (28-29) 3197-3217 (2008)

Vidal, Y., Parés, N., Díez, P. and Huerta, A., "Bounds for quantities of interest and adaptivity in the Element Free Galerkin method", International Journal for Numerical Methods in Engineering, **76** (11) 1389-1400 (2008)

Zlotnik, S., Fernández, M., Díez, P. and Vergés, J., "Modelling gravitational instabilities: slab break-off and Raleigh-Taylor diapirism", Pure and Applied Geophysics, **165** (8) 1491-1510 (2008)

Parés, N., Díez, P. and Huerta, A., "Bounds of functional outputs for parabolic problems. Part I: Exact bounds of the Discontinuous Galerkin time discretization", Computer Methods in Applied Mechanics and Engineering, **197** 1641-1660 (2008)

Parés, N., Díez, P. and Huerta, A., "Bounds of functional outputs for parabolic problems. Part II: Bounds of the exact solution", Computer Methods in Applied Mechanics and Engineering, **197** 1661-1679 (2008)

Zlotnik, S., Díez, P., Fernández, M. and Vergés, J., "Numerical Modelling of Tectonic Plates Subduction using X-FEM", Computer Methods in Applied Mechanics and Engineering, **196** 4283-4293 (2007)

Díez, P., Ródenas, J.J. and Zienkiewicz, O.C., "Equilibrated Patch Recovery error estimates: simple and accurate upper bounds of the error", International Journal for Numerical Methods in Engineering, **69** 2075-2098 (2007)

Díez, P. and Calderón, G., "Remeshing criteria and proper error representations for goal oriented h-adaptivity", Computer Methods in Applied Mechanics and Engineering, **196** 719-733 (2007)

Díez, P. and Calderón, G., "Goal-oriented error estimation for transient parabolic problems", Computational Mechanics, **39** 631-646 (2007)

Parés, N., Díez, P. and Huerta, A., "Subdomain-based flux-free a posteriori error estimators", Computer Methods in Applied Mechanics and Engineering, **195** 297-323 (2006)

Wiberg, N.E. and Díez, P., "Preface" [to the Special Issue in Adaptive Modeling and Simulation], Computer Methods in Applied Mechanics and Engineering, **195** 205-206 (2006)