

Sonia Fernandez-Mendez

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Current position

Assistant professor at the Applied Mathematics department, Universitat Politècnica de Catalunya

Education

Mathematics, Facultat de Matemàtiques i Estadística, Universitat Politècnica de Catalunya (1996)
PhD Universitat Politècnica de Catalunya (2001)

Research interests

Computational methods in applied sciences and engineering
Mesh-free methods
Coupling of Finite Elements with mesh-free methods

Career

Assistant professor, Universitat Politècnica de Catalunya, since September 2004
Lecturer, Universitat Politècnica de Catalunya, 1996-2004

Honors and awards

Universitat Politècnica de Catalunya PhD thesis award 2001-02.

Summary of journal publications

Journal	Impact factor	Number of papers
International Journal for Numerical Methods in Engineering	1.691	3
Computer Methods in Applied Mechanics and Engineering	1.252	2
Numerische Mathematik	1.206	1
Other indexed journals		2
Other papers in refereed journals		2

Selected publications (max. 5)

Huerta A, Fernández-Méndez S, "Enrichment and coupling of the finite element and meshless methods", International Journal for Numerical methods in Engineering, 2000 (24 times cited)

Huerta, A., Belytscko, T. Fernández-Méndez, S. and Rabczuk, T., "Meshfree methods", Encyclopedya of Computational Mechanics, Volume 1, Chapter 10, Wiley, 2004.

Huerta A, Fernandez-Mendez S, "Locking in the incompressible limit for the element-free Galerkin method", International journal for numerical methods in engineering 51, 2001 (5 times cited)

Huerta A, Fernandez-Mendez S, Diez P, "Enrichment of finite element interpolations using meshless methods". ESAIM-Mathematical modelling and numerical analysis-modelisation mathématique et analyse numérique, 2002 (3 times cited)

Fernandez-Mendez S, Diez P, Huerta A, "Convergence of finite elements enriched with mesh-less methods". Numerische mathematik 96, 2003 (2 times cited)

Other relevant information

Organizer of the 2nd, 3rd and 4th workshop on Numerical Methods in Applied Mechanics and Engineering (workshop of the LaCàN grup)

Organizer of the session "Meshless methods" in the Congreso de Métodos Numéricos en Ingeniería 2005.
21 congress contributions (13 international contributions)
Participation in 12 research projects