

Alex H. Barbat

Department of Strength of Materials and Structural Analysis
in Engineering
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Current position

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

Education

Civil engineer, Technical University of Iasi, Romania, June 1970.
Doctor in Civil Engineering, Technical University of Iasi, Romania, May 1978.
Ingeniero de Caminos, Canales y Puertos, Universidad Politécnica de Cataluña, Barcelona, Spain,
March 1986.

Research Interests

Analysis and design of structures subjected to seismic actions
Active and passive control of structures under dynamic loads
Seismic vulnerability and risk of structures
Seismic behaviour of historical structures

Career

Universidad Politécnica de Cataluña, Barcelona, Spain, Professor (Catedrático de Universidad), since 1999.
Universidad Politécnica de Cataluña, Barcelona, Spain, Associate Professor (Profesor Titular), 1996-1999.
Universidad Politécnica de Cataluña, Barcelona, Spain, Research Professor, 1986-1996.
Universidad Politécnica de Cataluña, Barcelona, Spain, Researcher, 1980--1985.
Technical University of Iasi, Romania, Associate Professor, September 1974-August 1979.
Technical University of Iasi, Romania, Assistant Professor, September 1970-August 1973.

Professional activities

International Center for Numerical Methods in Engineering, CIMNE, Barcelona, Spain, Researcher, since 1987.
ESPES, S.A., Barcelona, Spain, Earthquake Engineering Consultant, January 1982- December 1985.
D.P.I., S.A., Barcelona, Spain, Earthquake Engineering Consultant, May 1980-December 1981.
INDUS, S.A., Barcelona, Spain, Earthquake Engineering Consultant, October, 1979-April 1980.

Summary of journal publications

Journal	Impact factor	Number of papers
International Journal for Numerical Methods in Engineering	1,691	2
International Journal of Solids and Structures	1,327	2
Other indexed journals		10
Other papers in refereed journals		20

Selected publications (max. 5)

A. H. Barbat and J. Miquel Canet, Structural Response Computations in Earthquake Engineering, Pineridge, Swansea, U.K., 1989. (ISBN 0-906674-55-7)

J. Rodellar, A. H. Barbat and J. M. Martín Sánchez, "Predictive control of structures", Journal of Engineering Mechanics, ASCE, New York, U.S.A., 113(6), 1987, 797-812.

A. H. Barbat, S. Oller, E. Oñate y A. Hanganu, "Viscous damage model for Timoshenko beam structures", International Journal of Solids and Structures, New York, 34(30), 1997, 3953-3976.

C. Molins, P. Roca and A. H. Barbat, "Flexibility-based linear dynamic analysis of complex structures with curved-3D members", Earthquake Engineering and Structural Dynamics, New York, 27(7), 1998, 731-747.

A. D. Hanganu, E. Oñate and A. H. Barbat, "A finite element methodology for local/global damage evaluation in civil engineering structures", Computers and Structures, 80, 2002, 1667-1687.

Other relevant information

- 12 directed PhD Theses.
- co-editor of *Revista Internacional de Ingeniería de Estructuras*, Quito, Ecuador, since 1996.
- co-editor of *Revista Internacional de Desastres Naturales, Accidentes e Infraestructura Civil*, Quito, Puerto Rico, since 2001.
- editor of the monograph series *Monografías de Ingeniería Sísmica*, Centro Internacional de Métodos Numéricos en Ingeniería (CIMNE), Barcelona, desde 1993.
- he collaborated in 32 research project, among which 21 national projects and 11 of the European Commission.
- Member of
 - Asociación Española de Ingeniería Sísmica (AEIS)*, since 1982. President since 2004.
 - Sociedad Española de Métodos Numéricos en Ingeniería (SEMNI)*, since 1988.
 - International Association for Computational Mechanics (IACM)*, since 1988.
 - Earthquake Engineering Research Institute (EERI)*, California, USA, since 1989.
 - European Community of Computational Methods in Applied Sciences (ECCOMAS)*, since 1993.
 - Colegio de Ingenieros de Caminos Canales y Puertos*, España, since 2000.
 - Asociación Científico-Técnica del Hormigón Estructural (ACHE)*, España, since 2000.