

Ekkehard Ramm

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Current position

Full professor of Civil Engineering, Universität Stuttgart

Education

Civil Engineering: Universities of Darmstadt & Stuttgart (Dipl.-Ing. 1966)
Ph.D.: Universität Stuttgart (1972)
Habilitation: Universität Stuttgart (1976)

Research interests

Computational methods in applied sciences and structural engineering.
Computational mechanics, finite element technology.
Nonlinear mechanics of thin-walled structures, structural optimization.
Material modelling, multiscale problems, fluid-structure-interaction.

Career

Visiting Professor, University of California, Berkeley, USA, 1989
Chairman, Department of Civil Engineering and Geodesy, Universität Stuttgart, 1987-1988
Full Professor and Head of Institute of Structural Mechanics, Universität Stuttgart, since 1983
Associate Professor, Universität Stuttgart, 1976 – 1982
Research fellow (post-doc., grant of German NSF):
Universität Stuttgart, 1974 – 1976 and University of California, Berkeley, USA, 1972-1973
Research and teaching associate (wiss. Assistent), Universität Stuttgart, 1966-1972

Honors and awards

Honorary Doctorates:

- University of Calgary, Canada: Doctor of Law h.c., 2004
- Technische Universität München: Dr.-Ing. Ehrenhalber, 2004

Member of

- Academy of Science and Literature at Mainz, Germany (since 1997)
- Academia Europaea (since 2000)
- Heidelberg Academy of Science (since 2001)
- acatech (Convent for Technical Sciences within the German Academies of Sciences (since 2003)
- Austrian Academy of Sciences (since 2004)
- Braunschweigische wissenschaftliche Gesellschaft (BWG) (since 2004)

Eric Reissner Medal, Int. Congress of Engineering Sciences, 1995

Computational Mechanics Award of International Association of Computational Mechanics, 2002

Fellow of International Association of Computational Mechanics, 2002

Pioneer's Award: Space Structures Research Center of the University of Surrey, UK, 2002

Professional activities

Editorial boards:

Member of EB of 13 international journals, among them

- International Journal for Numerical Methods in Engineering
- Communications in Numerical Methods in Engineering
- Computer Methods in Applied Mechanics and Engineering
- Computers & Structures
- International Journal for Numerical and Analytical Methods in Geomechanics
- Engineering Structures

Services in scientific community (selection):

- Selection Committees of German Academic Exchange Council (DAAD), 1975 – 1993
- Initiator and Coordinator of Integrated Foreign Study Program with University of Calgary (since 1980)
- Member of Executive Council of Int. Association for Shell and Spatial Structures (IASS) (1993 – 2001)
- Evaluation Committee of Deutsche Forschungsgemeinschaft (DFG) for Collaborate Research Centers (1994 – 1999)
- President of German Association for Computational Mechanics (GACM) (since 2000)
- Member of Managing Board of European Community of Computational Methods in Applied Sciences (ECCOMAS) (since 2000)
- Corresponding Member of Executive Council of International Association for Computational Mechanics (IACM) (since 2001)
- Strategic Committee Future Developments of University of Stuttgart (2003)
- Vicepresident of ECCOMAS (since 2005)

University services (selection):

Member of

- Senate of the University of Stuttgart (1995 – 2000) and several sub-committees (1983 – 1994)
- 21 finding committees for professorships (since 1985)
- Council of the University of Stuttgart (1995-2000)
- Board of Trustees of the University of Stuttgart (2000 – 2003)

Summary of journal publications

Journal & Books	Impact factor	Number of papers
Intern. Journal for Numerical Methods in Engineering	1.691	10
Computer Methods in Applied Mechanics and Engineering	1.252	12
Other papers in refereed journals		76
Papers in refereed books		15

Selected publications (max. 5)

Bathe, K.-J., Ramm, E., Wilson, E.L.: Finite Element Formulations for Large Deformation Dynamic Analyses. *Int. J. Numerical Method in Engineering* 9 (1975) 353-386.

Ramm, E.: Strategies for Tracing Nonlinear Response Near Limit Points. 2nd US-Europe Workshop "Nonlinear Finite Element Analysis in Structural Mechanics" (eds. W. Wunderlich, E. Stein, K.-J. Bathe), Bochum, 1980.

Cirak, F., Ramm, E.: A-posteriori Error Estimation and Adaptivities for Linear Elasticity Using the Reciprocal Theorem. *Computer Methods in Applied Mechanics and Engineering* 156 (1998) 351-362.

Ramm, E., Wall, W.A.: Shell Structures – A Sensitive Interrelation between Physics and Numerics. *Int. J. Numerical Methods in Engineering* 60 (2004) 381-427.

Bischoff, M., Wall, W.A., Bletzinger, K.-U., Ramm, E.: Models and Finite Elements for Thin-walled Structures. In: *Encyclopedia of Computational Mechanics* (eds. E. Stein, R. de Borst, T.J.R. Hughes) Vol. 2: Solids and Structures, pp. 59-137, Wiley, 2004.