

Stephen John Hardy

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Current position

Reader

Education

ONC, Mechanical Engineering (1969)
BSc 1st Class Honours Degree, Mechanical Engineering (1973)
PhD (1982)
Certificate in Education, F & HE (1986)

Research interests

The application of the finite element method to design/stress analysis problems, in particular for non-linear problems involving plasticity, fatigue and creep
Shape and profile in steel production
Composite action between steel lintels and masonry walls.
The modelling of polycrystalline ceramic materials, including internal structure modelling
The development of finite element-based optimisation methods to study the effects of material and geometric optimisation on the static and dynamic behaviour of composite structural components.

Career

1966-74	International Combustion Ltd., Derby - Apprentice 1966-71, Graduate Apprentice 1971-73, Design Engineer 1973-74
1969-73	Trent Polytechnic, Nottingham - Undergraduate Student
1973-75	Trent Polytechnic, Nottingham - Part Time Lecturer
1974-79	Rolls-Royce & Associates Ltd., Derby - Technical Engineer 1974-77, Section Leader 1977-79
1979-82	University of Nottingham - Research Assistant
1982-83	Rolls-Royce & Associates Ltd., Derby - Stress Engineer
1983-86	Derbyshire College of Higher Education - Lecturer
1986-date	University of Wales Swansea - Lecturer 1986-94, Senior Lecturer 1994-2002, Reader 2002 – date

Honors and awards

CEng (1978)
Fellow of the Institution of Mechanical Engineers (1992)
Fellow of the Institution of Engineering Designers (1987)

Professional activities

Subject Specialist Reviewer (Engineering) – Quality Assurance Agency
Institutional Reviewer – Quality Assurance Agency
External Examiner, PhD, University of Bristol
External Examiner, MSc and PhD, University of Manchester
External Examiner, PhD, University of Nottingham
External Examiner, MPhil, Swansea Institute of Higher Education
External Examiner, BEng, University of Derby (1993-1997)
Membership Panel of the Institution of Mechanical Engineers
M.Sc. Project Supervisor, Open University
Referee for the Journal of Strain Analysis
Referee for the Journal of Engineering Manufacture
Referee for the International Journal of Mechanical Engineering Science

Referee for the International Journal of Fatigue
Referee for the Journal of Applied Mechanics
Referee for the International Journal for Engineering Applications of Artificial Intelligence
Member of South Wales Branch Committee of the IMechE
Principal Industrial Mentor, Monitored Professional Development Scheme (IMechE)
Engineering Council "Neighbourhood Engineer"
Book Reviewer for Int. J. of Computer-Aided Eng. and Software
Invited Lecturer, Iran University of Science and Technology
Invited Lecturer, Technical University of Lublin, Poland

Refereed papers and chapters in books

43 Journal Papers, 1 Book, 41 Conference Papers, 23 Official Reports

Summary of journal publications

Journal	Number of papers
Journal of Strain Analysis	20
International Journal of Fatigue	3
Journal of Ironmaking and Steelmaking	7
Other indexed journals	11
Other papers in refereed journals	2

Selected publications (max. 5)

Gowhari-Anaraki, A R, **Hardy, S J** and Adibi-Asl R, 'Stress concentration factor and minimum hub length predictions for hollow tubes with internal and external flanges subjected to axial loading', *J. Strain Analysis*, **39**(6), pp 685-705, (2004).

Gowhari-Anaraki, A R, **Hardy, S J** and Adibi-Asl R, 'Mixed-mode fatigue crack propagation in thin T-sections under plane stress', *J. Strain Analysis*, **38**(6), pp 557-575, (2003).

Hardy, S J, Gowhari-Anaraki, A R and Pipelzadeh, M K, 'Upper and lower bound limit and shakedown loads for hollow tubes with axisymmetric internal projections under axial loading'. *J. Strain Analysis*, **36**(6), pp 595-604, (2001).

Hardy, S J, Gowhari-Anaraki, A R and Pipelzadeh, M K, 'Upper and lower bound limit and shakedown loads for hollow tubes with axisymmetric internal projections under axial loading'. *J. Strain Analysis*, **36**(6), pp 595-604, (2001).

Morris, J W, **Hardy, S J**, Lees, A W and Thomas, J T, 'Cycle behaviour concerning the response of material subject to tension levelling', *Int. J. Fatigue*, **22**, pp 93-100, (2000).

Other relevant information

Dean of the Faculty of Engineering