

Abbreviated Curriculum Vitae
Malcolm Campbell Good

Contact:

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Education:

- Bachelor of Engineering (Mechanical), University of Melbourne, 1962
- Master of Engineering Science, University of Melbourne, 1965 (thesis title *The form drag of two-dimensional bluff-plates immersed in turbulent shear flows*)
- Doctor of Philosophy, University of Melbourne, 1975 (thesis title *Driver-vehicle behaviour on low-speed road curves*)

Current position:

- Professor of Mechanical and Manufacturing Engineering, University of Melbourne (1989-)
- Member of Executive Committee and Program Manager—Vehicle Dynamics, Research Centre for Advanced By-wire Technologies (RABiT)

Most recent previous positions:

- Head of Department of Mechanical and Manufacturing Engineering, University of Melbourne (1992-96)
- Director, Unimelb Limited (1990-97)
- Interim Director, Advanced Engineering Centre for Manufacturing (1992-93)
- Senior Principal Research Scientist and Leader, Integrated Manufacture Program, CSIRO Division of Manufacturing Technology
- Director, The Preston Group Pty Limited

Membership of Professional Societies:

- Fellow of Institution of Engineers, Australia
- Member of Society of Automotive Engineers - Australasia
- Member of Society of Automotive Engineers - International
- Member of Institute of Electrical and Electronic Engineers
- Member of Australian Robotics and Automation Association (President, 1994-95)

Significant Technical Committee Membership:

- International Advanced Robotics Programme: Contact person for Australia (1988-1994)
- International Federation of Automatic Control (IFAC): Robotics Technical Committee (RobTeC); Education Committee (EdCom)
- Standards Association of Australia:
 - Committee IT/6: Information Processing Systems for Industrial Automation
 - Subcommittee IT/6/1: Industrial Automation Systems & Integration
 - Subcommittee IT/6/4: Industrial Robots (Chairman)
- Prime Minister's Science Council: member of independent working group on *The Changing Role of Manufacturing Technology* (1992)

Teaching experience:

- Undergraduate courses in Vehicle Dynamics, Dynamics of Machines, Fluid Mechanics, Human Engineering, Control Systems, and Manufacturing Systems
- Postgraduate course in Noise and Vibration

Research interests:

- Research has been in the fields of fluid mechanics, vehicle and machine dynamics, highway geometrics, human factors of automobile and motorcycle control, vehicular impacts with roadside structures, dynamics and control of industrial robots, computer-integrated manufacture and, most recently, by-wire automotive technologies.
- As IM Program Leader in CSIRO, had the responsibility to encourage and support the widespread utilisation of integrated manufacturing in Australian industry, and to collaborate with local industry in the

development and commercialisation of integrating products and processes. Project areas included: flexible manufacturing systems, robotics, assembly automation, microelectronics, machine vision, machine tool control, industrial lasers, computer-aided design, manufacturing information technology, and factory area networks.

- Current research includes force- and vision-controlled robotic manipulation, machine-tool dynamics and control, web-based control of machinery, roll gauging, paper-rewinder optimisation, and vehicle dynamics with particular reference to the development of brake-by-wire technologies.
- Led University of Melbourne involvement in bid for State government infrastructure funding for Research Centre for Advanced By-wire Technologies (RABiT)—a joint venture between Melbourne and Swinburne Universities, Pacifica Group Technologies Pty Ltd and Bishop Technology Group Ltd. Grant of \$4.7m towards \$10.3m project announced in July 2003. Designated as Program Manager for Vehicle Dynamics.

Supervision of Research:

- Ph.D.
 - J.C. Fox: Collisions with Utility Poles (co-supervisor, 1978)
 - A.D. Dorey: Free Control Variables and Automobile Handling (co-supervisor, 1979)
 - G.L. Baxter: Evaluation of Short-Range Roadway Delineation (1983)
 - H. Prem: Motorcycle Rider Skill Assessment (1983)
 - K. Ho-Le: Automatic Finite Element Mesh Generation (associate supervisor, Monash University, 1987)
 - A. Heath: The Mechanics of Dynamic Pavement Loading by Heavy Vehicles (1988)
 - M. Murray: Detection of Defects in Pressure Diecastings by Resonance Testing (associate-supervisor, 1990)
 - P.I. Corke: High-Performance Visual Closed-Loop Robot Control (1994)
 - A. Tharumarajah: Cooperative Production Scheduling (co-supervisor, 1995)
 - U. Perera: Concurrent Design of Product and Process (co-supervisor, 1996)
 - R.G. Juniper: Active Vibration Control of Shipboard Machinery (withdrew, 1997)
 - M.Y. Bian: Active control of building vibrations (co-supervisor, Tongji University, 1997)
 - P. Higgins: Performance Evaluation of Hybrid Automation Systems (1999)
 - C. Leong: Performance modelling in keying systems operations (2000)
 - C-L. Ko: Machine tool dynamics and control (2003)
 - E. Lindsay: Web-based control of automation equipment (2005)
 - C. Line: Robust nonlinear control and estimation strategies for electromechanical brake-by-wire systems (co-supervisor, in progress)
 - C. Fletcher: Design and control of a novel heavy vehicle tanker configuration (co-supervisor, in progress)
- M.Eng.Sc.
 - R.G. Juniper: Ergonomic Aspects of Motorcycle Braking Control (1982)
 - J.W. Clements: Factors Affecting the Noise Environment of the Altona Residential Area Immediately South of the Altona Petrochemical Complex and Compliance with State Environment Protection Policy N1 (1982)
 - J.L. Sullivan: Noise and Vibration Reduction of a Vehicle Road Simulator (1983)
 - C.R. Garvie: High Speed Robotic Manipulation (1993)
 - C.K. Siew: High Bandwidth Robotic Force Control (1994)
 - S.N. Shami: Tailor Welded Blank Technology Applied to Automobile Manufacturing in Australia (1995)
 - S. James: A Single-Wheeled Motorcycle Trailer for Use in Developing Countries (1997)
 - E. Dumitru: In-process gauging during roll grinding (withdrew, 2000)
 - V. Chadha: Design Integration with CORBA and STEP (2004)
 - L.Q. Truong: Dynamic modelling of brake friction (co-supervisor) (withdrew, 2004)
 - O. Emereole: Antilock performance comparison between hydraulic and electromechanical brake systems (2004)
 - S. Oliver: A Simulation Environment for By-Wire Development (in progress)

Publications:

- 2 monographs
- 23 journal articles
- 39 refereed conference papers (see separate list)