

Professor Mark R. Shortis – Brief Curriculum Vitae

Current Appointment Professor of Measurement Science
School of Mathematical and Geospatial Sciences, and
Associate Dean (Program Quality) ,
College of Science, Engineering and Health,
RMIT University, GPO Box 2476, Melbourne 3001, Australia.

Contact Information Tel: +61 3 9925 9628 Mobile: +61 41 160 5989
Email: mark.shorts@rmit.edu.au

Previous Appointments

- Dean (Academic Development), College of Science, Engineering and Health, RMIT University (2006-2007)
- Professor of Measurement Science and Associate Dean (Teaching and Learning), Faculty of Engineering, RMIT University (2003-2005)
- Assistant Dean (Computing and Multimedia), Faculty of Engineering, University of Melbourne, Victoria 3010, Australia. (1998 - 2003)
- Lecturer, Senior Lecturer and Associate Professor, Department of Geomatics, University of Melbourne. (1984 - 1997)

Biographical Sketch

Mark Shortis completed Bachelor and Masters degrees in surveying at the University of Melbourne, then his doctorate at City University in London. He returned to the University of Melbourne as a Research Fellow in 1981. In 1984 he was appointed as a lecturer in the Department of Surveying, teaching in the areas of optical metrology, geodesy and computer programming, and was promoted to Senior Lecturer and then Associate Professor. He is very active in research in optical 3D metrology at close range, for example collaborative research with:

- NASA Langley Research Center on the structural dynamics of aerospace models and membrane surfaces (including a one year sabbatical 1988-1989),
- University College London on camera calibration and optical 3D measurement accuracy (including a 6 month sabbatical from January 1996),
- Imetric SA (Switzerland) on camera calibration modelling and stability for robotic control systems (including a 6 month sabbatical from July 1996),
- Boeing/Rockwell Australia on validation of assembly jigs,
- University of Western Australia and the Australian Fisheries Management Authority on underwater assessment of marine habitat and aquaculture populations,
- DLR in Germany, PSA in Spain and the Australian National University on the characterisation of solar concentrators for energy generation,
- CSIRO Marine and Atmospheric Research on deep water benthic surveys, and
- the School of Aerospace, Mechanical and Manufacturing at RMIT University on the dynamic sensitivity of micro air vehicles to turbulence.

Since 1994 he has been actively involved in multimedia courseware development projects and the management of University development programs. During 1998-2003 he was Assistant Dean (Computing and Multimedia) and responsible for online courseware development, as well as staff and facilities in undergraduate computer laboratories provided for 3000 engineering students. In 2003 he was appointed as Associate Dean (Teaching and Learning) and Professor of Measurement Science in the Faculty of Engineering at RMIT University, responsible for the management of all academic programs and student administration. During 2006-2007 he was Dean (Academic Development), the academic manager of all degree programs in the College of Science, Engineering and Health, responsible for online courseware development and maintaining educational quality of more than 500 programs and 21,000 students.

Research and Publications

- Participant in or leader of 6 Australian Research Council Grants with a total value of A\$1.3m.
- Participant in 4 Australian Fisheries Management Authority and Fisheries Research and Development Corporation Grants with total value of A\$510,000.
- Leader of or participant in 9 teaching and learning development grants with total value of A\$590,000.
- More than 180 publications: 60 invited or refereed papers, editor of 4 conference proceedings.
- Technical Program Director for the International Society for Photogrammetry and Remote Sensing 2012 Congress, joint Chair of SPIE Videometrics, Technical Program Director for several conferences and meetings in Australia, and reviewer for five journals.

Leadership and Professional Activities

- Chair and Member of the Victorian State selection committee for Fulbright Scholarships (2006-2010).
- Chair, Working Group VI/2, International Society of Photogrammetry and Remote Sensing [ISPRS] (2000-2008).
- Founding Committee Member, Spatial Sciences Institute, Victorian Division (2004-2006).
- Editor, TransTasman Surveyor (1999-2004).
- President-elect, President and Past-President, Institution of Surveyors, Victoria (2001-2003).
- Director, Remote Sensing and Photogrammetry Association of Australasia Ltd (1995-2003).
- Secretary of Commission 5 of ISPRS (1992-1996).
- Chairman, Australian Photogrammetric and Remote Sensing Society (1993-1994).
- Co-secretary of Commission 6 of the International Federation of Surveyors (1992-1994).

Awards and Prizes

- 1988-1989 National Research Council of U.S.A. Senior Research Associateship Award.
- 1991 R. D. Steele Prize, Australian Surveyor.
- 1996 ISPRS Commission V Prize, XVIII ISPRS Congress, Vienna, Austria.
- 2004 Best Paper Award from the American Society of Mechanical Engineers for the ISEC Conference.
- 2008 Thornton-Smith Gold Medal, Spatial Sciences Institute.
- 2010 elected as a Fellow of the Royal Institute of Chartered Surveyors.

Invited Presentations

- 1986 Applications of close range photogrammetry to structural monitoring and industrial measurement. *CSIRO Symposium on Dimensional Measurement in Precision and Heavy Engineering*, Sydney, Australia.
- 1989 Industrial photogrammetry at the NASA Langley Research Center. *Symposium on Surveillance and Monitoring Surveys*, University of Melbourne, Australia.
- 1991 Calibration tests of industrial and scientific CCD cameras. *First Australian Photogrammetric Conference*, Sydney, Australia.
- 1994 Industrial inspection using a still video camera. *Resource Technology '94*, Melbourne, Australia.
- 1995 Multi-sensor system self-calibration. *Videometrics IV*, SPIE Photonics East, Philadelphia PA, USA.
- 2002 Enhanced teaching and learning in spatial science courses. *International Society for Photogrammetry and Remote Sensing*, Commission 6 Inter-Congress Symposium, Sao Paulo, Brazil.
- 2007 A review of the status and trends in underwater videometric measurement. *Videometrics IX*, SPIE-IS&T Electronic Imaging, San Jose CA, USA.
- 2008 Computer aided teaching in photogrammetry and remote sensing – a status review. *International Society for Photogrammetry and Remote Sensing*, Commission 6, 21st Congress, Beijing, China.