

# Anton van den Hengel

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Position	Director, Australian Centre for Visual Technologies, <a href="http://www.acvt.com.au">www.acvt.com.au</a> Director, PunchCard Visual Technologies Pty Ltd, <a href="http://www.punchcard.com.au">www.punchcard.com.au</a> Associate Professor, School of Computer Science, <a href="http://www.cs.adelaide.edu.au">www.cs.adelaide.edu.au</a> Adelaide University Adelaide South Australia 5005
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Personal Information	Nationality: Australian, Dutch Date of Birth: 12 July 1970 Place of Birth: Ede, Netherlands
Education	Ph. D. in Computer Science 1995 – 2000 Adelaide University Robust Estimation of Structure from Motion in the Uncalibrated Case Masters Degree in Computer Science 1993 – 1994 Adelaide University Thesis: Enhancing a Direct Method of Determining Shape from Shading. Bachelor of Laws 1989 - 1993 Adelaide University Bachelor of Mathematical Science 1988 - 1991 Adelaide University Major: Computer Science
Journal Articles	<b>Middleware for Distributed Video Surveillance</b> , Henry Detmold, Anton van den Hengel, Anthony Dick, Katrina Falkner, David Munro, Ron Morrison, <i>IEEE Distributed Systems Online</i> , vol. 9, no. 2, 2008, art. no. 0802-o2001. <b>VideoTrace: Rapid interactive scene modelling from video</b> , A. van den Hengel, A. Dick, T. Thormählen, B. Ward, and P. H. S. Torr, <i>ACM Transactions on Graphics</i> , 26(3), Article No. 86, July 2007. <b>Fast global kernel density mode seeking: Applications to localisation and tracking</b> , C. Shen, M.J. Brooks, A. van den Hengel, <i>IEEE Transactions in Image Processing</i> , 16(5), pp. 1457-1469, May 2007. <b>FNS, CFNS and HEIV: A Unifying Approach</b> , W. Chojnacki, M.J. Brooks, A. van den Hengel, D. Gawley, <i>Journal Mathematical Imaging and Vision</i> , 23, 2, 2005, pp 175-183. <b>A new constrained parameter estimator: experiments in fundamental matrix computation</b> , W. Chojnacki, M. J. Brooks, A. van den Hengel, D. Gawley, <i>Image and Vision Computing</i> , Volume 22, Issue 2, pp 85-91, February 2004. <b>From FNS to HEIV: a link between two vision parameter estimation methods</b> , Wojciech Chojnacki, Michael J. Brooks, Anton van den Hengel, D.

Gawley, *IEEE Trans. Pattern Analysis Machine Intelligence*, 26, 2, pp. 264-268, February. 2004.

**Revisiting Hartley's normalised eight-point algorithm**, Wojciech Chojnacki, Michael J. Brooks, Anton van den Hengel, D. Gawley, *IEEE Trans. Pattern Analysis Machine Intelligence* 25, 9, pp 1172-1177, September 2003.

**Rationalising the renormalisation method of Kanatani**, W. Chojnacki, M. J. Brooks, A. van den Hengel, *Journal Mathematical Imaging and Vision*, 14, 1, 2001, pp. 21-38.

**On the fitting of surfaces to data with covariances**, W. Chojnacki, M. J. Brooks, A. van den Hengel, D. Gawley, *IEEE Trans. Pattern Analysis Machine Intelligence*, 22, 11, November 2000, pp. 1294-1303.

**Fundamental matrix from optical flow: optimal computation and reliability evaluation**, K. Kanatani, Y. Shimizu, N. Ohta, M.J. Brooks, W. Chojnacki, A. van den Hengel, *Journal of Electronic Imaging*, 9, 2, April 2000, pp. 194-202.

Book  
Chapters

**Constrained Generalised Principal Component Analysis**, W. Chojnacki, A. van den Hengel, M. Brooks, Computer Graphics and Vision Theory and Applications I, Springer-Verlag Press (to appear).

Refereed  
Conference  
Papers

**Thriff: Local 3D Structure Recognition**, Alex Flint, Anthony Dick, Anton van den Hengel, Digital Image Computing: Techniques and Applications, Adelaide, Australia, December 2007.

**Interactive 3D Model Completion**, A. van den Hengel, A. Dick, T. Thormaehlen, B. Ward, P.H.S. Torr, Digital Image Computing: Techniques and Applications, Adelaide, Australia, December 2007.

**A Shape Hierarchy for 3D Modelling from Video**, A. van den Hengel, A. Dick, T. Thormaehlen, B. Ward, P. H. S. Torr, 5th International Conference on Computer Graphics and Interactive Techniques in Australasia and Southeast Asia (GRAPHITE'07), December, 2007

**RATSAC: a method for adaptive accelerated robust estimation, and its application to video synchronisation**, D.W. Pooley, M.J. Brooks, A. van den Hengel, Digital Image Computing: Techniques and Applications, Adelaide, Australia, December 2007.

**An adaptive Bayesian technique for tracking multiple objects**, P. Kumar, M.J. Brooks, A. van den Hengel, Int. Conf. Patt. Recog. and Mach. Intell. (ICPRMI '07), Kolkata, India, December 2007.

**Finding Camera Overlap in Large Surveillance Networks**, Anton van den Hengel, Anthony Dick, Henry Detmold, Alex Cichowski and Rhys Hill, 8th Asian Conference on Computer Vision, Tokyo, Japan, November 2007.

**Preparing for Post-catastrophe Video Processing**, A. van den Hengel, H. Detmold, A. Dick & R. Hill, RNSA Security Technology Conference, Melbourne, Australia, September 2007.

**Topology estimation for thousand-camera surveillance networks**, Henry Detmold, Anton van den Hengel, Anthony Dick, Alex Cichowski, Rhys Hill, Ekim Kocadag, Katrina Falkner and David S. Munro, First ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC-07), Vienna, Austria, September 2007.

**Determining the Translational Speed of a Camera from Time-Varying Optical Flow**, Anton van den Hengel, Wojciech Chojnacki, and Michael J. Brooks, 1st International Workshop on Complex Motion, Gunzburg, Germany,

Springer-Verlag LNCS 3417, pp. 190-197, 2007.

**Middleware for Video Surveillance Networks**, Henry Detmold, Anthony Dick, Katrina Falkner, David Munro, Anton van den Hengel, Ron Morrison, *Middleware for Sensor networks (MidSens2006)*, November, 2006, Melbourne, Australia.

**Activity Topology Estimation for Large Networks of Cameras**, Anton van den Hengel, Anthony Dick, Rhys Hill, *IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS 2006)*, November, 2006, Sydney, Australia.

**Scalable Surveillance Software Architecture**, Henry Detmold, Anthony Dick, Katrina Falkner, David S. Munro, Anton van den Hengel, Ron Morrison, *IEEE International Conference on Advanced Video and Signal Based Surveillance (AVSS 2006)*, November, 2006, Sydney, Australia.

**Rapid Interactive Modelling from Video with Graph Cuts**, Anton van den Hengel, Anthony Dick, Thorsten Thormählen, Ben Ward, and Philip H. S. Torr, *Eurographics 2006*, September 2006, Vienna, Austria.

**Building Models of Regular Scenes from Structure-and-Motion**, Anton van den Hengel, Anthony Dick, Thorsten Thormählen, Ben Ward, Philip H. S. Torr, *The Seventeenth British Machine Vision Conference (BMVC 2006)*, September 2006, Edinburgh, United Kingdom.

**Hierarchical model fitting to 2D and 3D data**, A. van den Hengel, A. Dick, T. Thormaehlen, B. Ward, P. H. S. Torr, *Third International Conference on Computer Graphics, Imaging and Visualisation*, IEEE Computer Society Press, July 2006, Sydney, Australia.

**Fitting multiple models to multiple images with minimal user interaction**, A. van den Hengel, A. Dick, T. Thormaehlen, P. H. S. Torr, B. Ward, *International Workshop on the Representation and Use of Prior Knowledge in Vision (WRUPKV) held in association with ECCV'06*, May 2006, Graz, Austria. Also selected for publication in LNCS.

**Constrained Generalised Principal Component Analysis**, W. Chojnacki, A. van den Hengel, M. Brooks, *Proceedings of International Conference on Computer Vision Theory and Applications*, February 2006, Setúbal, Portugal.

**Computing Surface-based Photo-Consistency on Graphics Hardware**, J Bastian, A. van den Hengel, *Proceedings of Digital Image Computing: Techniques and Applications*, December 2005, Cairns, Australia.

**Fast global kernel density mode seeking: applications to localisation and tracking**, C. Shen, M. J. Brooks, A. van den Hengel, *IEEE International Conference on Computer Vision (ICCV'05)*, Beijing, China, Oct. 2005.

**Visual tracking via efficient kernel discriminant subspace learning**, C. Shen, M. J. Brooks, A. van den Hengel, *International Conference on Image Processing (ICIP'05)*, Genoa, Italy, IEEE Computer Society Press, Sept. 2005.

**Augmented particle filtering for efficient visual tracking**, C. Shen, A. van den Hengel, M. J. Brooks, *International Conference on Image Processing (ICIP'05)*, Genoa, Italy, IEEE Computer Society Press, Sept. 2005.

**Towards intelligent networked video surveillance for the detection of suspicious behaviours**, M.J. Brooks, A. van den Hengel, A.R. Dick, *Science, Engineering and Technology Summit on Counter-Terrorism Technology, Safeguarding Australia 2005*, Canberra, July 2005.

**Experiences with Simulated Robot Soccer as a Teaching Tool**. Rhys Hill,

Anton van den Hengel, Third International Conference on Information Technology and Applications, July 2005, Sydney, Australia IEEE Computer Society, pp 387-390.

**Enhanced importance sampling: unscented auxiliary particle filtering for visual tracking**, C. Shen, A. van den Hengel, A.R. Dick and M. J. Brooks, *Proc. Australian Joint Conference on Artificial Intelligence*, Cairns, Dec. 2004, Lecture Notes in Artificial Intelligence, 3339, Springer Verlag, pp.180-191.

**2D articulated tracking with dynamic Bayesian networks**, C. Shen, A. van den Hengel, A. Dick, and M.J. Brooks, *International Conference on Computer and Information Technology (CIT 2004)*, IEEE Computer Society Press, Wuhan, China, September 2004.

**FNS, CFNS and HEIV: extending three vision parameter estimation methods**, W. Chojnacki, M. J. Brooks, A. van den Hengel, D. Gawley, *International Conference on Digital Image Computing: Techniques and Applications (DICTA 2003)*, Sydney, Dec. 2003, pp.449-458.

**Computing Image-Based Reprojection Error on Graphics Hardware**, J Bastian, A. van den Hengel, Proceedings of *Digital Image Computing: Techniques and Applications*, December 2003, Sydney, Australia, pp 663-672.

**Probabilistic Multiple Cue Integration for Particle Filter Based Tracking**, Chunhua Shen, Anton van den Hengel, and Anthony Dick, Proceedings of *Digital Image Computing: Techniques and Applications*, December 2003, Sydney, Australia, pp 399-408.

**Incorporating constraints into the design of locally identifiable calibration patterns**, Anton van den Hengel, Rhys Hill, Michael J. Brooks, *International Conference on Image Processing*, September 2003, CD Proceedings: I: 817-820.

**A voting scheme for estimating the synchrony of moving-camera videos**, D. W. Pooley, M. J. Brooks, A. J. van den Hengel, W. Chojnacki, *International Conference on Image Processing*, September 2003, CD Proceedings: I: 413-416.

**A statistical rationalisation of Hartley's normalised eight-point algorithm**, W. Chojnacki, M. J. Brooks, A. van den Hengel, D. Gawley, *International Conference on Image Analysis and Processing*, Mantova, Sept. 2003, pp. 152-157.

**FNS and HEIV: relating two vision parameter estimation frameworks**, W. Chojnacki, M. J. Brooks, A. van den Hengel, D. Gawley, *International Conference on Image Analysis and Processing*, Mantova, Sept. 2003, pp. 152-157.

**A new constrained parameter estimator: experiments in fundamental matrix computation**, A. van den Hengel, W. Chojnacki, M. J. Brooks, D. Gawley, In *Proceedings of the 13th British Machine Vision Conference*, September 2002, volume 2, pp 468-476.

**A new approach to constrained parameter estimation applicable to some computer vision problems**, W. Chojnacki, M. J. Brooks, D. Gawley, A. van den Hengel, In D. Suter, editor, *Statistical Methods in Video Processing Workshop* held in conjunction with ECCV'02, Copenhagen, Denmark, June 1-2, 2002.

**A fast MLE-based method for estimating the fundamental matrix**, W. Chojnacki, M. J. Brooks, A. van den Hengel, D. Gawley, *International Conference on Image Processing*, Thessaloniki, Greece, October 2001, pp 189-

192.

**What value covariance information in estimating vision parameters?** M. J. Brooks, W. Chojnacki, D. Gawley, A. van den Hengel, *International Conference on Computer Vision*, Vancouver, July 2001, vol. 1, pp. 302-308.

**Is covariance information useful in estimating vision parameters?** M. J. Brooks, W. Chojnacki, A. van den Hengel, D. Gawley, *SPIE Videometrics*, San Jose, Jan. 2001, pp 195-203.

**A fast MLE-based method for estimating the fundamental matrix,** W. Chojnacki, M. J. Brooks, A. van den Hengel, D. Gawley, *APRS/IEEE Workshop on Stereo Image and Video Processing (WSIVP)*, Dec. 2000, Sydney, Australia, pp. 33-36.

**A simplified treatment of Kanatani's renormalisation method,** W. Chojnacki, M. J. Brooks, A. van den Hengel, *International Conference on Control, Automation, Robotics and Computer Vision (ICARCV 2000)*, Singapore, Dec. 2000, CD Proceedings: paper 196.

**Estimating vision parameters given data with covariances,** W. Chojnacki, M. J. Brooks, A. van den Hengel, D. Gawley, *British Machine Vision Conference*, Bristol, Sept. 2000, pp. 182-191.

**Rationalising the Renormalisation method of Kanatani,** W. Chojnacki, M. J. Brooks, A. van den Hengel, *Second International Symposium on Advanced Concepts for Intelligent Vision Systems (ACIVS'00)*, Baden-Baden (Germany), Aug. 2000, pp. 13-19.

**Incorporating the epipolar constraint into a multiresolution algorithm for stereo image matching,** J. Magarey, A. Dick, M.J. Brooks, G. Newsam, A. van den Hengel, *Applied Informatics '99*, Innsbruck, Austria, Feb. 1999.

**Incorporating optical flow information into a self-calibration procedure for a moving camera,** M.J. Brooks, W. Chojnacki, A. Dick, A. van den Hengel, K. Kanatani, N. Ohta, *SPIE Electronic Imaging '99, Videometrics VI*, San Jose, Jan. 1999, CD Proceedings, Vol 3641, Paper #18.

**Robust determination of structure from motion in the uncalibrated case,** M. J. Brooks, W. Chojnacki, A. van den Hengel, L. Baumela, *Proc. Fifth European Conference on Computer Vision*, June 1998, Freiburg, Germany, Lecture Notes in Computer Science (Vol. 1), 1406, Springer Verlag, pp. 281-295.

**3D reconstruction from optical flow generated by an uncalibrated camera undergoing unknown motion,** M. J. Brooks, W. Chojnacki, A. van den Hengel, L. Baumela, *International Workshop on Image Analysis and Information Fusion*, November 1997, Adelaide, Australia.

**Estimation of structure from motion in the uncalibrated case,** M. J. Brooks, W. Chojnacki, A. van den Hengel, L. Baumela, *IEICE Technical Group Meeting on Pattern Recognition and Media Understanding*, December 18--19, 1997, Niigata, Japan.

**Solving the shape from shading problem on the CM-5,** M. J. Brooks, W. Chojnacki, A. van den Hengel, *Proceedings Computer Architectures and Machine Perception*, IEEE Society Press, September, 1995, Como, Italy, pp. 196-201.

Patents

**Method and System for Generating a 3D Model,** Anton van den Hengel, Anthony Dick, Thorsten Thormählen, Ben Ward, and Philip H. S. Torr, Australian Provisional Patent Application No. 2007202157 and US Provisional Patent

Application No. 60/917361. Filing Date 11th May, 2007.

**Method & System for Generating a 3D Model from Images**, Anton van den Hengel, Anthony Dick, Thorsten Thormählen, Ben Ward, and Philip H. S. Torr, US Provisional Patent Application No. 20070629 32341, Filing date 18 June, 2007

**Network surveillance system**, Anton van den Hengel, Anthony Dick, Michael Brooks, 2006, International PCT Application Number WO2007AU01782 20071120, Publication number WO2008061298. Filing date 20 November 2006, PCT publication date 29 May 2008.

Theses

**Robust estimation of structure from motion in the uncalibrated case**, A. van den Hengel, Ph. D. thesis, Adelaide University, May 2000.

**Enhancing a direct method of determining shape from shading**, A. van den Hengel, Masters thesis, Adelaide University, November 1994.

Invited  
Research

**VideoTrace: Simple interactive 3D modelling for all**, Google Tech Talk, The Googleplex, Mountain View, California, April 2008

Presentations

**Simple interactive 3D modelling for all**, Invited Talk, Congress on the Future of Engineering Software, Phoenix, Arizona, April 2008

**VideoTrace: Simple interactive 3D modelling for all**, Engineering School Seminar Series, The University of Iowa, Iowa City, Iowa, April 2008

**Making effective use of large video surveillance networks**, Mass Transport, Mass Gathering and Precinct Security Conference, Melbourne, Australia, November 2007.

**VideoTrace: Rapid interactive scene modelling from video**, Oxford University Robotics Research Group Seminar Series, July 2007.

**VideoTrace: Rapid interactive scene modelling from video**, Oxford-Brookes University Computer Science School Seminar Series, July 2007.

**Interactive 3D modelling from image sets**, ESAT PSI/VISICS Katholieke Universiteit Leuven, Belgium, June 2007

**Technologies for effective monitoring of large surveillance camera networks**, Tenix Investment Board presentation, December, 2006

**Large-scale video surveillance**, Department of the Prime Minister and Cabinet National Security Science and Technology Unit CCTV Research and Industry workshop, November 2006

**Tracking multiple targets through large video surveillance networks**, Australasian Centre for Policing Research CCTV Workshop, October, 2006

**Interactive 3D modelling from image sequences**, University of South Australia Computer Science Seminar Series, September, 2006.

**Technologies for effective monitoring of large surveillance camera networks**, Research Network for a Secure Australia Security Technology Update Series, August, 2006

**Topology estimation for large video surveillance networks**, Research Network for a Secure Australia Counter Terrorism Closed Workshop, July, 2006

**Interactive 3D modelling from image sequences**, Carnegie Mellon University Entertainment Technology Centre, June, 2006

**CGPCA - Constrained Generalised Principal Component Analysis**,

NICTA/RSISE Workshop on Computer Vision, August, 2005.

**A unifying framework for approximated maximum likelihood estimation**, Department of Engineering, University of Cambridge, November, 2004

**Analysing and extending a number of approximated maximum likelihood estimation schemes**, Robotics Research Group Seminar Series, Oxford University, November, 2004

**Extending approximated maximum likelihood estimators for computer vision**, Computer Science Department, University of London, September, 2003

**Extending approximated maximum likelihood estimators for computer vision**, ESAT-PSI/Visics, Katholieke Universiteit Leuven, Belgium, September, 2003

**A new method for constrained estimation in computer vision**, Department of Engineering, University of Cambridge, April, 2002

**Maximum likelihood parameter estimation for a particular class of computer vision problems**, ESAT-PSI/Visics, Katholieke Universiteit Leuven, Belgium, February, 2002

**Recent advances in computer vision**, South Australian Electrical Electronic Engineering branch of the Institute of Engineers Australia, August 2001.

**Generating 3-dimensional models from video imagery**, South Australian IEEE Chapter on Control, Aerospace and Electronics Systems, DSTO Salisbury, July, 1999.

**Generating 3-dimensional models from video imagery**, Adelaide University Computer Science Departmental seminar series, June 1999.

**A statistical approach to estimating the egomotion of an uncalibrated camera from optical flow**, A. van den Hengel and M. J. Brooks, Oxford University, June, 1998.

**Structure and motion from uncalibrated optical flow sequences**, Gunma University, Japan, December, 1997.

Research  
Funding

Interactive 3D modelling from video

2008 - 2010, Sole chief investigator

Funding source: ARC Discovery Program

Value: \$225k

What am I looking at? Recognising objects from image sets,

2008/9, First named chief investigator

Funding source: Google

Value: \$US 50k

A visual technologies laboratory

2007 - 2010, Sole chief investigator

Funding source: PSRF, DSTO, Tenix, Rising Sun Pictures

Value: \$1.54M

Sketching model-based scene reconstructions from video sequences

2007/8, Sole chief investigator

Funding source: Asian Office of Aerospace Research and Development

Value: \$US 50k

Terrain modelling from video

2007, Sole chief investigator  
 Project Partner: DSTO  
 Value: \$50,000

Colour constancy for video surveillance  
 2007, Sole chief investigator  
 Project Partner: DSTO  
 Value: \$100,000

Autocalibration without decimation  
 2005 - 2007, Sole chief investigator  
 Funding source: ARC Discovery Program  
 Value: \$223k

Video processing for pan-tilt-zoom cameras  
 2004 - 2008, Sole chief investigator  
 Project Partner: Canon Information Systems Research Australia  
 Value: \$480,000

Video processing for human computer interaction  
 2004 - 2005, Sole chief investigator  
 Project Partner: Canon Information Systems Research Australia  
 Value: \$100,000

Reconstructing terrain from video captured by unmanned aerial vehicles  
 2004 - 2006, Sole chief investigator  
 Project Partner: DSTO  
 Value: \$150,000

VisiSim: High resolution visual simulation  
 2000 - 2002, Sole chief investigator  
 Project Partner: Sola Optical Australia  
 Value: \$100,000

On line Student Evaluation of Teaching  
 2000 - 2002, Chief investigator  
 Project Partner: The Advisory Centre for University Education  
 Value: \$50,000

Research  
 Students

Supervised 3 students to completion with 6 ongoing

- *D. Gawley*, Robust maximum likelihood parameter estimation, *2004*
- *C. Shen*, Visual motion analysis by probabilistic reasoning with graphical models, *completed 2005*
- *J. Bastian*, A hardware accelerated space carving algorithm, *completed 2008*
- *D. Pooley*, Synthesising new video streams from multiple sources, *submitted*
- *B. Ward*, Model-based semantic scene interpretation, *ongoing*
- *R. Hill*, Rig removal in movie post-production, *ongoing*
- *S. Nasilowski*, Synthesizing texture and geometry in video sequences, *ongoing*

- *D. Sale*, Rapid interactive scene modelling from video, *ongoing*
- *J. Millard*, Evolving structure and appearance for articulated structures from video, *ongoing*
- *A. Lange*, Texture estimation from video, *ongoing*

Supervised over 40 honours and Masters theses to completion

Current Positions

Associate Professor, School of Computer Science, University of Adelaide  
 Director, The Australian Centre for Visual Technologies  
 Director, PunchCard Visual Technologies Pty Ltd  
 Deputy Chair, Adelaide SIGGRAPH Chapter  
 Area Chair, PSIVT2009, the 3rd Pacific-Rim Symposium on Image and Video Technology  
 Area Chair, International Conference on Digital Image Computing, Techniques and Applications 2009  
 Program Committees: Tenth International Conference on Control, Automation, Robotics and Vision, European Conference on Computer Vision 2008, International Conference on Digital Image Computing, Techniques and Applications 2008, British Machine Vision Conference 2008, Workshop on Embedded Middleware for Smart Camera and Visual Sensor Networks 2008.  
 Steering Committee, Computational Neuroscience Research Cluster.  
 Member, ARC Research Network for a Secure Australia  
 Member, ARC Research Network on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP)

Previous Positions

Head, Video Surveillance & Analysis Program, The Cooperative Research Centre for Sensor Signal and Information Processing, 2003-2006  
 Deputy head, Image Analysis Program, The Cooperative Research Centre for Sensor Signal and Information Processing, 2002-2006  
 Technical committee chair, general, International Conference on Digital Image Computing, Techniques and Applications 2007  
 Chair, International Workshop on Parameter Estimation for Computer Vision Problems 2007  
 Acting Head, Image Analysis program, The Cooperative Research Centre for Sensor Signal and Information processing, during 2003, 4, and 5.  
 Dept. of Further Education, Employment, Science and Technology ICT Industry Research Forum invited representative, 2005  
 SACITT (South Australian Consortium for Information Technology & Telecommunications) Forum "Forging Research & Industry Links for Competitive Advantages" invited representative, 2005  
 Visiting Professor, Katholieke Universiteit Leuven, Belgium, 2004  
 Visiting Professor, Oxford-Brookes University, UK, 2004  
 Co-organiser, First Australia-Japan Advanced Workshop on Computer Vision 2003  
 Visiting Professor, Katholieke Universiteit Leuven, Belgium, 2001  
 University of Adelaide representative assessing education standards for courses offered at Sepang Institute of Technology, 2000