

*The*

# **Curriculum Vitae**

*of*

**Paul Steven D'Urso**

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**NAME:** Paul Steven D'Urso

**COMMUNICATIONS:** Email: paul@pauldurso.com

**QUALIFICATIONS:** MB., BS. (Hons) The University of Queensland 1988.  
Ph.D. (Surgery) The University of Queensland 1998.  
F.R.A.C.S. (Neurosurgery) 1999.

## **PROFESSIONAL EXPERIENCE**

**1989** Intern, Gold Coast Hospital. Southport, Australia.

**1990** House Surgeon, Gold Coast Hospital. Southport, Australia.

**1991-92** Surgical Registrar,  
Princess Alexandra Hospital. Brisbane, Australia.

**1993-95** Private General Practice,  
Highland Park Medical Centre. Nerang, Australia.

**1996-97** Neurosurgical Advanced Trainee,  
Princess Alexandra and Mater Children's Hospitals. Brisbane, Australia.

**1998** Neurosurgical Advanced Trainee,  
Royal Brisbane Hospital and Royal Children's Hospital. Brisbane, Australia.

**1996-1998** Clinical Lecturer in the Department of Surgery of The University of Queensland.  
Brisbane, Australia.

**1999** Neurosurgical Advanced Trainee,  
Auckland Hospital and Starship Children's Hospital. Auckland, New Zealand.

**2000** Neurosurgical Fellow, Cambridge University Academic Neurosurgery Unit,  
Addenbrooke's Hospital, Cambridge, United Kingdom.

**2001-2005** Consultant Neurosurgeon, The Alfred Hospital, Melbourne, Australia.

**2001-** Honorary Consultant Neurosurgeon, Peninsula Health, Frankston, Australia.

**2001-** Senior Lecturer, Department of Neurosurgery, Monash University, Melbourne,  
Australia.

**2001-** Neurosurgeon, Epworth & Knox Private Hospitals.

## **EXAMS & WORKSHOPS**

- 1990** Part 1 FRACS (First sitting, June).
- 1996** RACS Emergency Management of Severe Trauma, Brisbane, Australia.
- 1999** Part 2 FRACS Neurosurgery (First sitting, May).
- 2000** Temporal bone workshop, Auckland, New Zealand.
- 2000** RCS Approaches to the Cervical Spine, London, UK.
- 2000** Midas Rex Certificate. London, UK.
- 2000** Advanced Resuscitation Certificate. Cambridge, UK.
- 2003** Risk Management Master Class. Melbourne.
- 2003** Minimal Access Spinal Technology Workshop. Brisbane.
- 2005** Minimally Invasive Fusion Workshop. Bangkok. Thailand
- 2008** Hydrflex Nucleus Arthroplasty Workshop. Sydney.
- 2009** Convener, Stryker Minimally Invasive Spinal Fusion Workshop. Sydney
- 2010** Instructor, Stryker 7<sup>th</sup> Asia Pacific Spine Symposium, Brisbane.
- 2010** Kyphoplasty Workshop. Sydney.

## **REGISTRATIONS**

- 1988-2001** Queensland Medical Board
- 1988-** Australian Medical Association
- 2001-** Medical Practitioners Board of Victoria
- 1998-** Neurosurgical Society of Australasia
- 2000-** Fellow of the Royal Australasian College of Surgeons
- 2000-2001** General Medical Council of the United Kingdom
- 2000** Asian Surgical Association
- 1999-** Medical Council of New Zealand
- 2002-** Australasian Spine Society
- 2001-** Victorian Neuroscience Centre at Epworth

**2002-** Monash Institute for Neurological Diseases

## **RESEARCH WORK**

- 1991** “Non-palpable Breast Lesions -The PAH Experience 1986-1991.”
- 1992-1996** “Stereolithographic biomodelling.” Ph.D. Thesis. The University of Queensland.
- 1996-1997** “Cerebrovascular biomodelling and biomodel guided stereotaxis.” Princess Alexandra Hospital, Brisbane.
- 1995-2000** Co-ordinator of the Intelligent Manufacturing Systems International Biomodelling Trial. Queensland Manufacturing Institute, Brisbane.
- 1998** “Outcomes from severe head injury.” Royal Brisbane Hospital, Brisbane.
- 1999-2005** “Biomodelling & Implant Manufacturing.” Queensland Manufacturing Institute, Brisbane.
- 2001-2005** “Biomodel Stereotaxy.” The Alfred Hospital Melbourne.
- 2002-** “Decompressive craniectomy.” The Alfred Hospital, Melbourne.
- 2002-2003** “Cerebrovascular flow phantoms.” The Queensland Manufacturing Institute, Brisbane.
- 2002-2005** “DICOM based 3D visualization software” The Alfred Hospital, Melbourne.
- 2002-2005** “Genetics of familial cerebral aneurysms” The Alfred Hospital, Melbourne. (NIH funded International Multicentre Trial).
- 2003-2005** “Multimodality monitoring of severely head injured patients” The Alfred Hospital Melbourne.
- 2003-2005** “AVM Treatment Decision model” Combined project between Liverpool, Royal North Shore and Alfred Hospitals.
- 2003-2005** “Hospital Based Biomodelling” Combined project between Anatomics Pty Ltd, Objet Inc, Arrk Silhouette Pty Ltd, Alfred Hospital.
- 2004-** “Dynamic Lumbar Stabilisation” Victorian Neuroscience Centre, Epworth Hospital.
- 2005-2006** “Anatomics Software Development” Australian Centre for Healthcare Innovation.
- 2006-2008** “Artificial Disc Replacement” Victorian Neuroscience Centre, Epworth Hospital.

2008- “Minimally Invasive Fusion” Victorian Neuroscience Centre, Epworth Hospital.

## PUBLICATIONS

1. D'URSO P.S., TOMLINSON F.H., EARWAKER W.J., BARKER T.M., ATKINSON R.L., WEIDMANN M.J., REDMOND M., HALL B., M'KIRDY B., LOOSE S., WAKELEY G.D., REIK A.T., EFFENEY D.J. Stereolithographic (SLA) Biomodelling in Cranioplastic Implant Surgery. Proceedings of the International Conference on Recent Advances in Neurotraumatology. Gold Coast, Australia. September 25-28. (1994) Pages 153-6.
2. ARVIER J.F., BARKER T.M., YAU Y.Y., D'URSO P.S., ATKINSON R.L., MCDERMANT G.R. Maxillofacial Biomodelling. British Journal of Oral and Maxillofacial Surgery. (1994) 32, 276-83.
3. LIGHTMAN A.J., VANASSCHE B., D'URSO P.S., YAMADA S. Applications of Rapid Prototyping to Surgical Planning - A Survey of Global Activities. Proceedings of the 6th International Conference on Rapid Prototyping. June 4-7, Dayton. Ohio, U.S.A. (1995) Pages 16-21.
4. D'URSO P.S. SLA Biomodelling speeds patients to recovery. The Edge, 3D Systems Magazine. (1995), 4:4, 6-7.
5. FINKLE E. Surgery moves into the third dimension. Lancet 348 Dec 21/28 (1997) Page 1726.
6. D'URSO P.S. Case Studies 3.3.5-3.3.7. Rapid Prototyping Technology: a unique approach to the diagnosis and planning of medical procedures. Society of Manufacturing Engineers. Dearborn, Michigan, USA. (1997) Pages 78-86.
7. D'URSO P.S. Stereolithographic Biomodelling in Surgery. The University of Queensland PhD Thesis . April 1998.
8. D'URSO P.S., THOMPSON R.G. Fetal biomodelling. Australian & New Zealand Journal of Obstetrics & Gynaecology (1998) 38:205-7.
9. D'URSO P.S., ATKINSON R.L., LANIGAN M.W., EARWAKER W.J., BRUCE I.J., HOLMES A., BARKER T.M., EFFENEY D.J., THOMPSON R.G. Stereolithographic (SL) biomodelling in craniofacial surgery. British Journal of Plastic Surgery. (1998) 51:7 522-530.
10. D'URSO P.S., ATKINSON R.L., WEIDMANN M.J., REDMOND M.J., HALL B.I., EARWAKER W.J.S., THOMPSON R.G., EFFENEY D.J. Biomodelling of skull base tumours. The Journal of Clinical Neuroscience. (1999) 6:1 31-35.
11. D'URSO P.S., BARKER T.M., ARVIER J.F., EARWAKER W.J., BRUCE I.J., ATKINSON R.L., LANIGAN M.W., EFFENEY D.J. Stereolithographic (SL) biomodelling

in cranio-maxillofacial surgery: a prospective trial. *The Journal of Cranio-maxillofacial Surgery* (1999) Feb;27 (1):30-7.

12. D'URSO P.S., HALL B.I., ATKINSON R.L., WEIDMANN M.J., REDMOND M.J. Biomodel guided stereotaxy. *Neurosurgery*. (1999) 44(5):1084-1093.
13. D'URSO P.S., ASKIN G., EARWAKER W.J.S., MERRY G., THOMPSON R.G., BARKER T.M., EFFENEY D.J. Spinal Biomodelling. *Spine*. (1999) 24(12):1247-1251
14. POULSEN M., LINDSAY C., SULLIVAN T., D'URSO P.S. Stereolithographic modelling as an aid to orbital brachytherapy. *The International Journal of Radiation Oncology, Biology and Physics*. (1999) June 1;44(3):731-5
15. D'URSO P.S., THOMPSON R.G., ATKINSON R.L., WEIDMANN M.J., REDMOND M.J., HALL B.I., JEAUVONS S.J., BENSON M.D., EARWAKER W.J S. Cerebrovascular biomodelling. *Surgical Neurology*. (1999) 52(5): 490-500.
16. D'URSO P.S., EARWAKER W.J., BARKER T.M., REDMOND M.J. THOMPSON R.G., EFFENEY D.J., TOMLINSON F.H. Custom cranioplasty using stereolithography and acrylic. *British Journal of Plastic Surgery* (2000) 53(3): 200-04.
17. D'URSO P.S., THOMPSON R.G., EARWAKER W.J. Stereolithographic (SL) biomodelling in palaeontology: a technical note. *Rapid Prototyping Journal* 2000 6(3): 212-215
18. D'URSO P.S., BARKER T.M., ARVIER J.F., EARWAKER W.J., BRUCE I.J., ATKINSON R.L, LANIGAN M.W., EFFENEY D.J. Stereolithographic (SL) biomodelling in cranio-maxillofacial surgery: a prospective trial. *Current Opinion in Otolaryngology & Head & Neck Surgery*. 9(4):B55-B71, August 2001.
19. D'URSO P.S. Review: Infections in neurological surgery diagnosis and management. *British Journal of Neurosurgery*, 2001; 15(2): 200.
20. D'URSO P.S., REDMOND M.J. A method for the resection of cranial tumours and skull reconstruction. *British Journal of Neurosurgery*, 2000; 14(6): 555-559.
21. Nowak R. Short Cut: Separating co-joined twins could be made safer and quicker. *New Scientist*, 2000; Nov 11, 2264:6.
22. PHAM D.T., DIMOV S.S. *Rapid Manufacturing - The technologies and applications of rapid prototyping and rapid tooling*. (Pages 100-1) Springer-Verlag. London, UK. 2000.
23. GEORGIUS P., YU X.K., ROSENFELD J.V., D'URSO P.S. Healing of brain abscess by secondary intention. *Journal of Neurosurgery*, 2003; 99: 1091-93.
24. D'URSO P.S., WILLIAMSON O.D., THOMPSON R.G. Biomodelling as an aid to spinal instrumentation. *Spine*, Dec 15;30(24):2841-5

25. D'URSO P.S. *Biomodelling. Advanced Manufacturing for Medical Applications*. Wiley, ISBN: 0-470-01688-4, London. 2005.
26. THOMPSON R.G., D'URSO P.S. *Software for Biomodelling. Advanced Manufacturing for Medical Applications*. Wiley, ISBN: 0-470-01688-4, London. 2005.
27. LING A.J., D'URSO P.S., MADAN A. Simultaneous microsurgical and endovascular management of multiple cerebral aneurysms in acute subarachnoid haemorrhage. *Journal of Clinical Neuroscience*, 2006 August 13(7): 784-788
28. D'URSO P.S. *Real Virtuality: Beyond the Image. Virtual Modelling and Rapid Manufacturing, Advanced Research in Virtual and Rapid Prototyping*, 2005, P.J. Bártolo et al. ISBN 0-415-39062-1, Published by Taylor & Francis The Netherlands - A.A.Balkema Publishers, Leiden, The Netherlands.
29. THORPE L.P.J., IZATT M.T., THOMPSON R.G., D'URSO P.S., ADAM C.A. EARWAKER J.W.S., LABROM R.D. ASKIN G.N. The use of physical Biomodeling in complex spinal surgery. *European Spine Journal* (2007)16:1507-1518.
30. COOPER D.J., ROSENFELD J.V., MURRAY L., WOLFE R., PONSFORD J., DAVIES A., PELLEGRINO V., MALHAM G., D'URSO P.S., KOSSMANN T. Early decompressive craniectomy for patients with severe traumatic brain injury and refractory intracranial hypertension – a pilot randomized trial. *Journal of Critical Care*. (2008) 23,387-393.
31. LIM A., D'URSO P.S. Single level bilateral facet joint hypertrophy causing thoracic canal stenosis. *Journal of Clinical Neuroscience*. (2009) 16:10, 1363-1364.

## **INTELLECTUAL PROPERTY**

1. D'URSO P.S. Stereolithographic modelling process. Australian Patent 684 546; US Patent 5 741 215. September 1993.
2. D'URSO P.S. Surgical procedures. Australian Patent 675 179; US Patent 5 752 962. November 1993.
3. D'URSO P.S. Constructive modelling of articles. US Patent 6 112 109 September 1994.
4. D'URSO P.S. Improvements in stereotaxic frames. Provisional Patent PN2776. May 1995.
5. D'URSO P.S. Robotic surgery. Provisional Patent PN3281. May 1995.
6. D'URSO P.S. Modelling of biological morphology. Provisional Patent PO8888. September 1997.
7. D'URSO P.S. Multimodal anatomical modelling. Provisional Patent PO8889. September 1997.
8. D'URSO P.S. Stereolithographic Anatomical Modelling Process. European Patent 0722588 September 1993.

9. D'URSO P.S. BioBuild. Software Copyright 2002-06.
10. [WWW.ANATOMICS.COM](http://WWW.ANATOMICS.COM). Website Copyright 1996-
11. [WWW.PAULDURSO.COM](http://WWW.PAULDURSO.COM) Website Copyright 2004-
12. D'URSO P.S. Anatomics, SLA BioModel, BioBuild, BioPart, BioModelling. Trademarks 1995.
13. D'URSO P.S. Juxtaspinal Universal Motion Prosthesis, Provisional Patent. May 2007.
14. D'URSO P.S. AnatomicsRx. Software Copyright 2006-
15. D'URSO P.S. AnatomicsPro. Software Copyright 2006-
16. D'URSO P.S. AnatomicsGo. Software Copyright 2007-
17. D'URSO P.S. Juxta-spinal Universal Motion Prosthesis. Provisional Patent 2007902498. June 2007.

#### **CONFERENCE ABSTRACTS & INVITED LECTURES**

1. D'URSO P.S., BARKER T.M., EFFENEY D.J., ATKINSON R.L., LANIGAN M., ARVIER J., EARWAKER W.J.S., WEIDMANN M.J., FROST N., LOOSE S., WAKELY G. Stereolithographic (SLA) Biomodelling in Surgery, Preliminary Results at Eighteen months. Proc of the Surgical Research Society of Australasia Annual Scientific Meeting. Brisbane, Australia. Page 24, 21st-23rd July, 1993.
2. D'URSO P.S., LANIGAN M., ATKINSON R.L., BARKER T.M., EARWAKER W.J.S., EFFENEY D.J. Stereolithographic (SLA) Biomodelling in Craniofacial Surgery. Proc of the 7th International Congress on Cleft Palate and Related Craniofacial Deformities. Gold Coast, Australia. Page 119, 31 Oct-5 Nov, 1993.
3. EARWAKER W.J.S., BARKER T.M., LISLE D.A., D'URSO P.S. Accuracy of Stereolithographic Models in Human Anatomy. RACR 44th Annual Scientific Meeting, Sydney. 1993.
4. D'URSO P.S., BARKER T.M., EARWAKER W.J.S., ARVIER J., LANIGAN M., ATKINSON R.L., TOMLINSON F.H., LOOSE S., DONERLY W., WILSON A., WEIDMANN M.J., REDMOND M., HALL B.I., YAU Y.Y., ASKIN G., MASON S., MERRY G., KELLY G., FROST N., WAKELEY G.D., RIEK A.T., M'KIRDY B.H., STEWART J., EFFENEY D.J. The Australian SLA Modelling Project. Proc of the 2nd International Workshop on Rapid Prototyping in Medicine. Zurich, Switzerland. Page 8, 7-8 April, 1994.
5. D'URSO P.S., LANIGAN M., ATKINSON R.L., BARKER T.M., EARWAKER W.J., EFFENEY D.J., WEIDMANN M.J., REDMOND M., TOMLINSON F.H.

Stereolithographic (SLA) Modelling in craniofacial and cranioplastic surgery. Proc of the Royal Australasian College of Surgeons Annual Scientific Congress. Hobart, Australia. Page 389, 1-6 May, 1994.

6. D'URSO P.S., TOMLINSON F.H., EARWAKER W.J., BARKER T.M., ATKINSON R.L., WEIDMANN M.J., REDMOND M., HALL B., M'KIRDY B., LOOSE S., WAKELEY G.D., REIK A.T., EFFENEY D.J. ASKIN G., RYAN W., MERRY G., Stereolithographic (SLA) Biomodelling in Neurosurgery. Proc of the International Conference on Recent Advances in Neurotraumatology. Gold Coast, Australia. Page 225, 25-28 September, 1994.
7. EARWAKER W.J.S., D'URSO P.S., BARKER T.M., LOOSE S. Evolving Techniques in 3D Biomodelling. The Role of Imaging. Victorian RACR Scientific Meeting, Melbourne. 1994.
8. D'URSO P.S., EARWAKER W.J., BARKER T.M., ATKINSON R.L., LANIGAN M., ARVIERJ.F., EFFENEY. D.J. Stereolithographic (SLA) Biomodelling in Head & Neck Surgery. Proc of 10th Biennial Congress Asian Surgical Association. Bali, Indonesia. Page 2, 12-16th March, 1995.
9. D'URSO P.S., LANIGAN M., ATKINSON R.L., BARKER T., EARWAKER W.J., EFFENEY D.J., WEIDMANN M.J., REDMOND M., TOMLINSON F.H. Stereolithographic (SLA) Biomodelling in Craniofacial and Cranioplastic Surgery. Proc of the 10th Biennial Congress Asian Surgical Association. Bali, Indonesia. Page 2, 12-16th March, 1995.
10. D'URSO P.S., EARWAKER W.J., BARKER T.M., ATKINSON R.L., LANIGAN M., ARVIER J.F., EFFENEY D.J. Stereolithographic (SLA) Biomodelling in Surgery. Proc of the 10th Biennial Congress Asian Surgical Association. Bali, Indonesia. Page 2, 12-16th March, 1995.
11. D'URSO, P.S. Stereolithographic Biomodelling. The First Asia/Pacific Conference on Rapid Product Development. Brisbane, Australia. Page 24, Sept 11-13, 1995.
12. D'URSO P.S., BARKER T.M., EARWAKER W.J.S., ARVIER J., LANIGAN M., ATKINSON R.L., TOMLINSON F.H., LOOSE S., WEIDMANN M.J., REDMOND M., HALL B.I., ASKIN G., MASON S., MERRY G., KELLY G., WAKELEY G.D., RIEK A.T., M'KIRDY B.H., EFFENEY D.J. The Australian Biomodelling Project (1995) Proc of the 3rd International Workshop Rapid Prototyping in Medicine. Erlangen, Germany. Page 47, Oct 19-21, 1995.
13. D'URSO, P.S. Model Guided Stereotactic Surgery (1995) Proc of the 3rd International Workshop Rapid Prototyping in Medicine Oct 19-21 Erlangen, Germany. Page 80. 1995.
14. D'URSO, P.S. Stereolithographic Biomodelling in Skull Based Tumour Surgery. Proc of the 3rd Asian-Oceanic International Congress on Skull Base Surgery. Seoul, Korea. Page 58, Nov 2-3, 1995.

15. DORSCH N., YOUNG N., KINGSTON R., D'URSO P., Evaluation of spiral CT in basal lesions. Proc of the 3rd Asian-Oceanic International Congress on Skull Base Surgery. Seoul, Korea. Page 64, Nov 2-3, 1995.
16. D'URSO P.S. Model Guided Stereotactic Surgery. Proc of the 9th Asian-Australasian Congress of Neurological Surgery Taipei, Taiwan. Page 26, Nov 5-10, 1995.
17. D'URSO P.S. Stereolithographic (SLA) Biomodelling: Neurosurgical Applications. Proc of the 9th Asian-Australasian Congress of Neurological Surgery Taipei, Taiwan. Page 27, Nov 5-10, 1995. (*Invited paper*).
18. D'URSO P.S. The 3-D Image and Stereolithographic (SL) Biomodelling. Proc of the 9th Asian-Australasian Congress of Neurological Surgery Taipei, Taiwan. Page 27, Nov 5-10, 1995.
19. WELLS P., SKERRET D., ANDERSON M., D'URSO P.S. Stereolithography from tomographic scanning of extinct animals. Proc of the 3rd Conference on Digital Imaging, Computer Techniques and Applications. Brisbane, Australia. Page 10, Dec 6th-8th, 1995.
20. D'URSO P.S., ATKINSON R.L., WEIDMANN M.J., REDMOND M., HALL B. Stereolithographic Biomodelling in Skull Base Surgery. Proc. of the Royal Australasian College of Surgeons Annual Scientific Congress. Melbourne, Australia. Page 620, May 5th-10th, 1996.
21. D'URSO P.S. Stereolithographic Biomodelling in Head & Neck Surgery. Proc. of the Royal Australasian College of Surgeons Annual Scientific Congress. Melbourne, Australia. Page 597, May 5th-10th, 1996.
22. D'URSO, P.S. Neurosurgical Biomodelling: The Clinical Utility of Real Virtuality. Proc of the Neurosurgical Society of Australasia. Cairns, Australia. Page 49, Sept 18th-21th, 1996.
23. EARWAKER W.J.S., D'URSO P.S., REDMOND M.J., ATKINSON R.L., LOOSE S. Cranioplastic Biomodelling RACR 47th Annual Scientific Meeting, Perth, Australia. 1996.
24. THOMPSON R.G., D'URSO P.S., REDMOND M.J., ATKINSON R.L. LOOSE S. Stereolithographic biomodelling and teleradiology. The inaugural Gold Coast MRI and CT conference, Gold Coast, Australia. May 9th-11th, 1996.
25. D'URSO, P.S., EARWAKER W.J.S., ASKIN G., MERRY G., BARKER T.M., EFFENEY D.J. Spinal Biomodelling. Proc of the Spine Society of Australia Scientific Meeting. Gold Coast, Australia. May 9th-11th. 1997.
26. D'URSO P.S., ATKINSON R.L., HALL B.I., REDMOND M.J. Biomodel guided stereotaxy. 1st International Conference on Computer Integrated Surgery. Linz, Austria. September 1-5. *Computer Guided Surgery* 2(5), 1997.
27. D'URSO P. S., EARWAKER W.J.S., ATKINSON R.L., WEIDMANN M.J., REDMOND M.J., HALL B.I., THOMPSON R.G. Neurosurgical Biomodelling. 1st International

Conference on Computer Integrated Surgery Linz, Austria. September 1-5. *Computer Guided Surgery* 2(5), 1997.

28. D'URSO P.S., THOMPSON R.G., ATKINSON R.L., WEIDMANN M.J., REDMOND M.J., HALL B.I., JEAVONS S.J., BENSON M.D., EARWAKER W.J.S. Cerebrovascular biomodelling. Proc of the Neurosurgical Society of Australasia. Darwin, Australia. Page 20, September 17-20,1997.
29. D'URSO P.S. Neurosurgical Biomodelling. Cambridge University Academic Neurosurgery Unit, Cambridge, United Kingdom. September 8. 1997 (*Invited Lecture*).
30. D'URSO, B.I. HALL, R.L. ATKINSON, M.J. WEIDAMNN, M.J. REDMOND. Biomodel guided stereotaxy. Proc of the Neurosurgical Society of Australasia. Darwin, Australia. Page 39, September 17-20, 1997.
31. D'URSO P.S., THOMPSON R.G., JONES G.C., LOOSE S., BARKER T.M., ARVIER J.F., EARWAKER W.J., BRUCE I.J., EFFENEY D.J., ATKINSON R.L., WEIDMANN M.J., REDMOND M.J., HALL B.I., LANIGAN M., TOMLINSON F.H. The Australian Biomodelling Project 1991-1997. 4th International Workshop on Rapid Prototyping in Medicine. Erlangen, Germany. October 16-18. *Computer Guided Surgery* 2(5), 1997.
32. EARWAKER W.J.S., D'URSO P.S., ASKIN G.N., DICKINSON I.C., THOMPSON R.G. The utility of biomodelling in orthopaedics. International Skeletal Society 24th A.S.M. Santa Fe, USA. 1997.
33. EARWAKER W.J.S., D'URSO P.S., ASKIN G.N., DICKINSON I.C., THOMPSON R.G. Orthopaedic biomodelling. International Skeletal Society 25th A.S.M. Dublin, Ireland. 1998.
34. D'URSO P.S. Stereolithographic biomodelling in head & neck surgery. RACS Qld Meeting Gold Coast, Australia. 7-10 August, 1998.
35. D'URSO P.S., ATKINSON R.L., LANIGAN M.W., EARWAKER W.J., BRUCE I.J., HOLMES A., BARKER T.M., EFFENEY D.J., THOMPSON R.G. Stereolithographic (SL) biomodelling in craniofacial surgery. 26th International Society of Paediatric Neurosurgery ASM. Melbourne, Australia. 13-19 September, 1998.
36. THOMPSON R.G., D'URSO P.S. Paediatric biomodelling: solid imaging in children. 6th Australian Paediatric Imaging Conference, Brisbane, Australia. September 26-27,1998.
37. D'URSO, B.I. HALL, R.L. ATKINSON, M.J. WEIDAMNN, M.J. REDMOND. Biomodel guided stereotaxy. 12<sup>th</sup> Biennial Meeting of the Asian Surgical Association. Brisbane, Australia. March 7-10, 1999. (*Invited Paper*).
38. D'URSO P.S., EARWAKER W.J.S., ASKIN G., MERRY G. Spinal Biomodelling. 12<sup>th</sup> Biennial Meeting of the Asian Surgical Association. Brisbane, Australia. March 7-10, 1999.

39. ATKINSON RL., D'URSO PS., REDMOND MJ. A new technique for the resection and reconstruction of cranial tumours. RACS ASM Auckland, New Zealand. The Australian & New Zealand Journal of Surgery. Volume 69 Supplement, page A50, May, 1999.
40. D'URSO PS. Biomodelling: Future Directions. PHIDIAS Global Meeting 99. Erlangen, Germany. October 14, 1999. (*Invited paper*).
41. D'URSO P.S., ASKIN G., EARWAKER W.J.S., MERRY G.S., THOMPSON R.G. Spinal Biomodelling. 5th International Workshop on Computer Assisted Surgery and Rapid Prototyping in Medicine. Erlangen, Germany. October 14-16, 1999.
42. THOMPSON RG., D'URSO P.S. Evaluation of 3-D scan file manipulations, interpolations and representations for biomodelling. 5th International Workshop on Computer Assisted Surgery and Rapid Prototyping in Medicine. Erlangen, Germany. October 14-16, 1999.
43. D'URSO PS. Real virtuality, a new paradigm in medical imaging. Guest lecture. The University of Leeds Department of Medical Physics. July 17, 2000. (*Invited paper*).
44. THOMPSON R.G., D'URSO P.S., PEAPPELL A.A. BioModelling - Past, Present and Future. The 2nd Gold Coast Medical Imaging Conference, Gold Coast, Australia August 2-6th 2000.
45. D'URSO PS. Neurosurgical Biomodelling. Society of British Neurological Surgeons Joint Meeting with the Swiss Neurological Society. Winchester, United Kingdom. 30 August – 1 September 2000.
46. THOMPSON R.G., D'URSO P.S., PEAPPELL, A.A. BioModelling as a surgical planning tool for conjoined twins separation. 52nd Annual Conference of the Australian Institute of Radiography, Brisbane, Australia. March 21-26, 2001 (*Invited paper*).
47. THOMPSON R.G., D'URSO P.S., PEAPPELL, A.A. BioModelling: An Overview. Royal Australasian College of Surgeons Annual Plastic and Reconstructive Surgery Instructional Course. Brisbane, Australia. March 25-30, 2001 (*Invited paper*).
48. THOMPSON R.G., D'URSO P.S., PEAPPELL, A.A. BioModelling: Cranio-maxillofacial Applications. The Annual Meeting of the Australian Society of Maxillo-facial Surgeons, Sydney, Australia. August 24-26, 2001 (*Invited paper*).
49. D'URSO P.S. Real virtuality; beyond the image. 4<sup>th</sup> Congress of the International Society for Neurosurgical Technology and Instrument Invention. Cairns, Australia. September 12-15, 2001 (*Invited paper*).
50. D'URSO P.S. How to develop a good idea. 4<sup>th</sup> Congress of the International Society for Neurosurgical Technology and Instrument Invention. Cairns, Australia. September 12-15, 2001 (*Invited paper*).
51. D'URSO P.S., PEAPPELL A.A., THOMPSON R.G. Anatomics biomodel utility assessment. 6<sup>th</sup> International Workshop in Computer assisted Surgery. Nuremburg, Germany. October 11-13 2001.

52. D'URSO P.S., PEAPPELL A.A., THOMPSON R.G. Software for biomodelling. 6<sup>th</sup> International Workshop in Computer assisted Surgery. Nuremburg, Germany. October 11-13 2001.
53. FINDLAY W., TOMLINSON F., WALKER D., D'URSO P. Endoscopic approach to the treatment of colloid cysts. Annual Scientific Meeting of the Neurosurgical Society of Australasia. Broome, Australia. July 8-10 2002.
54. D'URSO P.S., THOMPSON R.G. Anatomics biomodel utility assessment. 8<sup>th</sup> International 3D Modelling Conference. Paris, France. April 23-24 2003. (*Invited paper*).
55. D'URSO P.S., THOMPSON R.G. Software for processing medical image volumes for solid anatomical surgical model production and custom implant design. World Congress on Medical Physics and Biomedical Engineering. Sydney, Australia. 24-29<sup>th</sup> August 2003.
56. D'URSO P.S., WILLIAMSON O. Spinal Biomodelling as an Aid to Instrumentation. Neurosurgical Society of Australasia. Queenstown, New Zealand. 16-19 August 2003.
57. D'URSO P.S., THOMPSON R.G. Real virtuality, beyond the image. Workshop on rapid prototyping and reverse engineering for medical applications. Singapore. 5 December 2003. (*Invited paper*).
58. THOMPSON R.G., D'URSO P.S. Software for biomodelling. Workshop on rapid prototyping and reverse engineering for medical applications. Singapore. 5 December 2003. (*Invited paper*).
59. D'URSO P.S., WILLIAMSON O. Biomodelling as an aid to spinal instrumentation. Australian Spine Society Annual Scientific Meeting. Coolum, Australia. 15 –18 April 2004.
60. D'URSO P.S., GHINEA N., VAN GELDER J., Interactive decision analysis system for AVM: clinical evaluation. Neurosurgical Society of Australasia Annual Scientific Meeting. Newcastle, Australia. 19-22 September 2004.
61. D'URSO P.S. Real Virtuality, Beyond the Image. Advanced Digital Technology in Head and Neck Reconstruction, Future Directions. Banff, Canada. 10-13 March 2005. (*Invited paper*).
62. D'URSO P.S. "Spinal Biomodelling" 2<sup>nd</sup> Asia Pacific Spine Symposium. Bangkok. Thailand. August 22-24 2005. (*Invited Paper*).
63. D'URSO P.S. Real Virtuality: Beyond The Image. Advanced Research in Virtual and Rapid Prototyping. September 28-October 1 2005. Lieria. Portugal. (*Invited paper*).
64. D'URSO P.S. Dynamic Stabilisation: two year experience. Spine Society Annual Scientific Meeting. April 28-30. 2006. Sydney, Australia.
65. D'URSO P.S. Dynamic Stabilisation: two year experience. Journal of Bone and Joint Surgery 2006. Supp III 88B 457-458

66. D'URSO P.S. Cerebral aneurysms and sub-arachnoid haemorrhage. Epworth Neuroscience Conference. September 5<sup>th</sup> 2006. Melbourne, Australia. (*Invited paper*).
67. IZATT M.T., THORPE L.P.J., VON ARX O.A., D'URSO P.S., THOMPSON R.G., ADAM C., EARWAKER J.W.S., LABROM R.D., ASKIN G.N. The use of physical biomodels in complex spine surgery. Spine Society Annual Scientific Meeting. April 20-22 2007. Hobart, Australia.
68. D'URSO P.S. Dynamic stabilization. 8<sup>th</sup> Stryker Spine Symposium. June 2-3 2007. Cairns, Australia. (*Invited Paper*)
69. D'URSO P.S. Would I fuse? Medtronic Advances in Spine. August 9-12 2007. Port Douglas Australia. (*Invited Paper*).
70. D'URSO P.S. DIAM Spinal stabilisation system: experience with 500 devices. Spine Arthroplasty Society 8<sup>th</sup> Annual Meeting May 6-9 2008 Miami USA.
71. D'URSO P.S. DIAM Spinal stabilisation system: expanded indications. Spine Arthroplasty Society 8<sup>th</sup> 2009 Annual Meeting May 6-9 2008 Miami USA.
72. D'URSO P.S. Minimally Invasive Spinal Instrumentation. Melbourne Spine Research Group. September 2 2009 Melbourne, Australia. (*Invited Paper*).
73. D'URSO P.S. Minimally Invasive Spinal Instrumentation. Stryker Advanced Minimally Invasive Spinal Surgery Workshop. 4-5 September 2009 Sydney, Australia. (*Invited Paper*).
74. D'URSO P.S. Neck Pain. Epworth Hospital General Practitioner Education Meeting. September 16. 2009 Melbourne, Australia (*Invited Paper*).
75. D'URSO P.S., Malham G., Dohrmann P. Brazenor G. Cervical Arthroplasty: The Epworth Experience. Neurosurgical Society of Australasia Scientific Meeting. September 17-20 2009 Alice Springs, Australia.
76. D'URSO P.S., Malham G., Dohrmann P. Brazenor G. Cervical Arthroplasty: The Epworth Experience. 7<sup>th</sup> Asia Pacific Spine Symposium. July 1-2. Brisbane Australia. (*Invited Paper*)
77. D'URSO P.S. Minimally Invasive Fusion: Navigating the Learning Curve. 7<sup>th</sup> Asia Pacific Spine Symposium. July 1-2. Brisbane Australia. (*Invited Paper*)

#### **SELECTED TELEVISION MEDIA**

1. Beyond 2000, Show 35 Series 10, 1994, Beyond Productions. '*SLA Biomodelling*'.
2. The Today Show, 10/94, Nine Network. '*The use of biomodels in surgery*'.
3. Live It Up, 30/03/95, Ten Network. '*Reconstructive Surgery*'.

4. Tomorrows World, 11/09/96, BBC Television. '*Plastic Babies*'.
5. The Midday Show, 15/08/96, Nine Network. '*The use of biomodels in surgery*'.
6. Brisbane Extra, 10/09/96, Nine Network. '*Fetal Modelling*'.
7. Good Medicine, 26/10/97, Nine Network. '*Biomodelling*'.
8. Good Medicine, 10/11/99, Nine Network. '*Custom cranioplasty*'.
9. Today Tonight, 16/10/00, Seven Network. '*Co-joined twins*'.
10. National Nine & ABC News, 14/04/02 "*Virtual Surgery*".
11. A Current Affair, 02/11/04, Nine Network, "*Keegan's Story*".
12. Sunday Program, 06/03/05, Nine Network, "*Old Hobbits Die Hard*".
13. Catalyst, 26/05/05, ABC Network "*Hobbit*"
14. National Nine News, 04/6/05, Nine Network "*Cerebrovascular Biomodelling*".
15. National Geographic Channel "Explorer" 04/05, National Geographic Television and Film, "*Homo Floresiensis*".
16. BBC Television, 1/9/05 "*Homo Floresiensis*".
17. Discovery Channel, 09/06 "*Medicine Man*" One step Beyond Series 2 Episode 3.

#### **SELECTED PRINT MEDIA**

1. Medical Observer (18/09/92). *Models shape surgery's future.*
2. Courier Mail (10/09/93). *Technology beats a hole in the head.*
3. Medical Imaging and Monitoring (11/94). *Models from CAT to change surgery.*
4. The Australian (31/08/94). *Ronald faces up to a new future.*
5. Business Queensland (07/11/94). *ISDN line speeds implant process*
6. Australian science and technology newsletter (03/95). *Made-to-order body parts ease surgeon's hands.*
7. The Australian (31/10/95). *Operating with 3-D accuracy.*
8. Design News (06/12/95). *Rapid prototyping slashes operating time.*

9. The Edge Vol. 4, No. 4 (1995) *SLA Biomodelling speeds patients to recovery.*
10. The Week-End Australian (07/09/96). *Rocks of ages no secret in 3D.*
11. Sunday Times UK (27/10/96). *Sculpted in the womb, the first model of a live baby.*
12. Medical Observer (08/96). *Model finds foetal dangers.*
13. The Australian (26/06/96). *Behold the unborn child, or at least its plastic model.*
14. The Week-End Australian (19/07/97). *Surgeons develop brain map.*
15. The Lancet 348 Dec 21/28 (1997). *Surgery moves into the third dimension.*
16. The Courier Mail. (13/10/2000). *Model operation to separate twins.*
17. Plastics News. (04/12/2000). *Acrylic models provide surgeons dry run.*
18. New Scientist (11/11/2000) *Short Cut – Separating Conjoined Twins could be made safer and quicker.*
19. The Bulletin E-Bulletin. (25/07/2001). *Moving Image.*
20. Rapid Prototyping Report (02/2002). *Medical Rapid Prototyping – BioBuild from Anatomic.*
21. Herald Sun Sunday. (14/04/2002). *World first aids surgery.*
22. Wohlers Report 2002. *Medical Modeling.*
23. Australian Financial Review (27/03/03). *Helping to guide a surgeon's hands.*
24. Sunday Age & The Sun Herald. (23/1/05) *April's Story.*
25. The Melbourne Age (12/05/05) *It's a tassie tiger – no bones about it.*
26. National Geographic Magazine (06/05) *Reanimator.*

## **AWARDS & SCHOLARSHIPS**

- 1985** Mitsui educational foundation award (Selected as one of six students from Australian Universities for sponsored educational-cultural tour of Japan).
- 1988** John Rendle-Short Medal for child health.
- 1991** PAH research & development foundation registrar research grant.

- 1992** 1. PAH research & development foundation registrar research grant.  
2. Baillieu post graduate scholarship.  
3. PAH private practice foundation grant.  
4. Court and Lilley surgical scholarship.  
5. PAH research and development foundation general project grant.
- 1993** 1. Royal Australasian College of Surgeons general project grant.  
2. Baillieu post graduate scholarship.  
3. Sylvia and Charles Viertel charitable foundation research grant.
- 1994** 1. G.F. Finch bequest.  
2. Brain research fund grant.  
3. Friends of the Mater Childrens' Hospital craniofacial clinic charity research grant.
- 1995** Cum Laude Citation for scientific excellence. 3rd Asian Oceanic International Congress on Skull Base Surgery.
- 1996** PAH research & development foundation registrar research grant.
- 1997** 1. PAH research & development foundation registrar research grant.  
2. PAH general project grant.
- 1998** RACR Siemens medical engineering prize.
- 1999** 1. Commonwealth Government START research & development grant.  
2. John Wong Young Investigator Prize, Asian Surgical Association 12<sup>th</sup> Bienial Congress.
- 2001** Young inventors award. 4<sup>th</sup> Congress of the International Society for Neurosurgical Technology and Instrument Invention. Cairns, Australia. September 12-15, 2001
- 2005** Innovation Grant. Australian Centre for Health Care innovation.
- 2006** Industry Grants for Epworth Disc Replacement Group.
- 2007** Industry Grants for Dynamic Stabilisation Research.
- 2008** Neurosurgical Society of Australasia Stryker Research Prize. "Minimally Invasive Fusion".
- 2009** Industry Grant for Minimally Invasive Fusion Research.
- 2010** Industry Grant for Minimally Invasive Fusion Research.

## **TERTIARY EDUCATION**

The University of Queensland MB., BS. (Hons) 1983-1988.

The University of Queensland PhD (Surgery) 1992-1997.

Final Year Medical School 1988. Ranked 2<sup>nd</sup> on grade point average

Harvard Medical School 1987: Clinical clerkship Boston, MA. USA.

## **TUTORSHIPS**

**1985-86** In gross anatomy & embryology, for the Department of Anatomy of The University of Queensland.

**1986-88** In gross anatomy, embryology & pathology, for the Commonwealth Government Aboriginal Assistance Scheme.

**1996-** Neurosurgical tutoring to medical students, junior medical and nursing staff.

**2000** Neuroscience tutor, Newnham College, Cambridge University.

## **REPRESENTATIONS:**

1. Medical students representative on the Faculty Board of Medicine 1986.
2. Medical students representative on the Students Union Council, 1986-88.
3. Director of The University of Queensland Orientation Activities, 1985.
4. Director of Students Union FM radio station, 1986.
5. Convenor of The University of Queensland Medical Society 1985-86.
6. Convenor of The University of Queensland Medical Society Charity Ball 1986-87.
7. President of The University of Queensland Instrumental Society 1985-86.
8. RACS Information Systems Technology Committee 1997-2000.
9. Managing Director of Anatomics Pty Ltd. 1998-
10. Global Excellent Product Exhibition. Australian Representative. Osaka, Japan. October 18-20. 1999.
11. Alfred Hospital trauma mortality and morbidity committee 2001-Alfred Hospital trauma quality assurance committee 2001- 2005
12. Alfred Hospital PACS committee 2001-2005.

13. Course Neurosurgeon, Australian Grand Prix, Melbourne, 2002-2003.
14. Victorian Co-operative Oncology Group, Neuro-oncology Committee. 2003-
15. Health South Rehabilitation Liason Committee 2002-2005
16. Editorial Board of The Journal of Clinical Neuroscience. 2004-
17. Chairman Epworth Spine Technology Group. 2005-
18. Neurosurgical Representative, Epworth Hospital Medical Advisory Committee. 2009-

**SECONDARY EDUCATION:**

- 1977** Thomas Jefferson Junior High School. Eugene Oregon, USA.
- 1978 – 1982** Indooroopilly State High School. Brisbane.
- 1982** School Vice-Captain.
- 1982** Captain A grade Australian Rules football team.
- 1982** A grade cricket team.
- 1982** Captain school athletics team.

**PRIMARY EDUCATION:**

- 1971-1976** Ironside State School. Brisbane.

**INTERESTS:**

Guitar, cycling, cricket, football, wine.



Paul D'Urso