

ROB SAUNDERS

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Curriculum Vitae

Areas of Interest: Computational Curiosity, Embodied Creative Agency, Robotic Arts

Profile

Rob Saunders was awarded a Doctor of Philosophy by the University of Sydney for his work on *Curious Design Agents and Artificial Creativity*. His research used artificial intelligence techniques to develop computational models of curiosity and explore the role of novelty-seeking behaviour in creative design processes.

Rob's work experience includes creative research collaborations with artists and designers, working on a number of cutting-edge projects. He has also worked within academia as a researcher and lecturer at Architecture, Computer Science, and New Media departments in universities across London, Brighton and Sydney.

Professional Experience [Selection]

Senior Lecturer, *University of Sydney*, **2010 - ongoing**

Lecturer, *Sydney University, Sydney*, **2006–2009**

Visiting Lecturer, *City University, London*, **2005–2006**

Consultant, *Flightmaps Ltd, London*, **2004, 2005–2006**

Research Fellow, *Westminster University, London*, **2004–2006**

Consultant, *Thomson & Craighead, London*, **2005**

Consultant, *Washington University, Seattle*, **2005**

Visiting Lecturer, *Sussex University, Brighton*, **2005**

Consultant, *Westminster University, London*, **2003–2004**

Consultant, *Tribal DDB, London*, **2002–2003**

Research Assistant, *Sydney University, Sydney*, **1997–2001**

Graduate Engineer, *CRL Ltd, London*, **1993, 1994, 1995–1996**

Education

PhD (Architecture), *University of Sydney*, 1997–2002

Graduate Certificate (Higher Education), *University of Sydney*, 2007

BSc (Computer Science & Artificial Intelligence), *University of Edinburgh*, 1991–1995

Publications [Selection]

Book Chapters

d'Inverno, M., Howells, P., Montagna, S., Roeder, I., and Saunders, R.: (2009) **Agent-Based Modelling of Stem Cells**, chapter in *Multi-Agent Systems and Simulation*, Taylor and Francis Group.

Saunders, R.: (2007) **Towards a computational model of creative societies using curious design agents**, chapter in *Engineering Societies in the Agents World VII*, Vol. 4457 of LNAI, Springer.

Saunders, R.: (2006) **Case Study—Programming for design: Rob Saunders**, chapter in *Dewdney, A. and Ride, P. The New Media Handbook*, Routledge, New York.

d'Inverno, M. and Saunders, R.: (2005) **Agent-based modelling of stem cell organisation in a niche**, chapter in *Engineering Self-Organising Systems*, Vol. 3464 of LNAI, Springer.

Rosenman, M. A. and Saunders, R.: (2003) **Hierarchical co-evolution for non-routine design**, in N. E. Mastorakis, C. Manikopoulos, G. E. Antoniou, V. M. Mladenov and I. F. Gonos (eds.), *Recent Advances in Intelligent Systems and Signal Processing*, WSEAS Press.

Refereed Journals

Gemeinboeck, P., Traenkle, M., Dement, L., PRINZGAU/podgorschek, Saunders, R., (forthcoming) **On Track: A slippery Mechanic-Robotic Performance**, Leonardo, MIT Press.

d'Inverno, M., Jones, D., Roeder, I., Howells, P., and Saunders, R.: (forthcoming) **From Macro to Micro: Stochastic to Agent-Based Modelling**, Transactions in Computational Systems Biology, Springer.

Saunders, R. and Gero, J. S.: (2004) **Situated design simulations using curious agents**, AIEDAM 18/2, Special Issue, May 2004.

Rosenman, M. and Saunders, R.: (2003) **Self-regulatory hierarchical coevolution**, AIEDAM 17/4.

Refereed Conferences

Saunders, R., Gemeinboeck, P., Lombard, A., Bourke, D., Kocaballi, B. (forthcoming): **Curious Whispers: An Embodied Artificial Creative System**, Proceedings of First International Conference of Computational Creativity, 7–9 January 2010, Lisbon, Portugal

Saunders, R. and Grace, K.: (2009) **Extending Context Free to Teach Interactive Evolutionary Design Systems**, EvoMUSART 2009, 15–17 April 2009, Tubingen, Germany.

Saunders, R.: (2009) **Supporting Creativity Using Curious Agents**, Computational Creativity Support workshop, CHI 2009, 4 April, 2009, Boston, MA.

Merrick, K., Maher, M-L., and Saunders, R.: (2008) **Achieving Adaptable Behaviour in Intelligent Rooms using Curious Supervised Learning Agents**, CAADRIA 2008, Beyond Computer Aided Design, 9–12 April 2008, Chiang Mai, Thailand.

Saunders, R., and Grace, K.: (2008) **Towards a computational model of creative cultures**, AAAI Spring Symposium on Creative Intelligent Systems, 26–28 March 2008, Stanford University.

Maher, M. L., Saunders, R., and Merrick, K.: (2007) **From Passive to Proactive Design Elements: Incorporating curious agents into components of building design**, CAAD Futures 2007, University of Sydney, Australia, 11–13 July, 2007.

Gemeinboeck P., Dong, A., Saunders, R.: (2007) **Permeable and Elastic Terrains**. Imaging the City workshop, CHI 2007, San Jose, California, USA, 28 April – 3 May, 2007.

Saunders, R., Maher, M. L., and Merrick, K.: (2007) **Learning models for a curious place**, CAADRIA 2007, Southeast University, Nanjing, China, 19–22 April 2007.

Saunders, R., Merrick, K., and Maher, M. L.: (2007) **Curious Places: Curious, Proactive, Adaptive Built Environments**, Proceedings of AISB'07 Symposium on Agent Societies for Ambient Intelligence, Newcastle, UK, 2–5 April 2007.

Saunders, R. and Gero, J. S.: (2002) **Curious agents and situated design evaluations**, in J. S. Gero and F. Brazier (eds.), Agents in Design 2002, Key Centre of Design Computing and Cognition, University of Sydney, Australia, pp. 133–149.

Saunders, R. and Gero, J. S.: (2002) **How to study artificial creativity**, in T. Hewett and T. Kavanagh (eds.), Creativity and Cognition 2002, ACM Press, New York, NY, pp. 80–87.

Saunders, R. and Gero J. S.: (2001) **The Digital Clockwork Muse: A computational model of aesthetic evolution**, in G. Wiggins (ed.), Proceedings of the AISB'01 Symposium on AI and Creativity in Arts and Science, SSAISB, pp. 12–21.

Collaboration with Artists

Urban Fiction (Technical Consultant) with *Petra Gemeinboeck*. Exhibited at The Tin Sheds Gallery, Sydney, August 2007–September 2007.

Difference Engine (Technical Consultant) with *James Coupe* and *Jaun Pampin*. Commissioned by Low-Fi. Exhibited at The Stills Gallery, Edinburgh, August 2005 – October 2005.

Staining Space (Technical Consultant) with *Jane Prophet*, *Mark d'Inverno* and *Neil Theise*. Commissioned as part of the WONDREFUL exhibition. Exhibited at Arnolfini at L Shed, Bristol; Magna, Rotherham; Cornerhouse Gallery, Manchester.

9PIN++ (Technical Consultant) with *James Coupe*, *Hedley Roberts* and *James Wallbank*. Commissioned by SCAN (Southern Arts Collaborative Network).