

Greg Paperin

Curriculum Vitae

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February 2010

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Education

Doctor of Philosophy (PhD) **May 2006 – Ongoing**
Monash University, Melbourne, Australia

- Research areas/interests: Complex Systems, Network Theory, Biology, Artificial Life, Biology, Software Systems Engineering.
- Over a dozen publications in international journals and conferences (see page 2).
- Expected completion: May 2010.

Master of Computer Science **Sep 2000 – Jun 2004**
UCL, University College London, UK

- 1st Class Honours MSci Degree (combined degree: Bachelor + Master).
- Prize for outstanding student performance and several other prizes.
- Thesis topic: "Schema-Valid Insertion of XPath-Specified Node Sets into DOM Trees".

Abitur **Aug 1995 – Jun 1999**
Gymnasium Tonndorf, Hamburg, Germany

- Average mark 1.2 (approx. corresponds to AAAAB in English A-Levels). Best of class.



Various other schools **Sep 1986 – Jun 1995**

Publications

(📄 - journal paper; 📖 - edited volume; 📑 - book chapter; 📄 - full conference paper; 📄 - conference poster)

- 📄 G. Paperin, D. Green, S. Sadedin (2010): "Dual Phase Evolution in Complex Adaptive Systems". In press (Royal Society Journal Interface).
- 📄 G. Paperin, S. Sadedin (2009): "The Dual Phase Evolution Framework for Understanding Evolutionary Dynamics in Complex Adaptive Systems". In: "Proceedings of the 2009 International Conference on Evolutionary Computation (ICEC'09)".
- 📄 G. Paperin, S. Sadedin (2009): "Towards formalising the theory of Dual Phase Evolution". Presented at the 10th European Conference on Artificial Life (ECAL'09).
- 📄 S. Sadedin, G. Paperin (2009): "Implications of the social brain hypothesis for evolving human-like cognition in digital organisms". In "Proceedings of the 10th European Conference on Artificial Life (ECAL'09)". Springer.
- 📖 S. Sadedin, G. Paperin, T. G. Leishman, eds. (2008): "Proceedings of the 12th Asia-Pacific Symposium on Intelligent and Evolutionary Systems (IES'08)". Monash University. ISBN 978-0-646-50671-5.
- 📄 G. Paperin, D. G. Green, T. G. Leishman (2008): "Dual Phase Evolution and Self-Organisation in Networks". In "Proceedings of the 7th International Conference on Simulated Evolution And Learning (SEAL'08)". Springer.
- 📄 G. Paperin, S. Sadedin, D. Green, A. Dorin (2008): "Holey Fitness Landscapes and the Maintenance of Evolutionary Diversity". In "Proceedings of the 11th International Conference on Artificial Life (ALife XI)", MIT Press, Cambridge, MA.
- 📄 G. Paperin (2008): "Using Holey Fitness Landscapes to Counteract Premature Convergence in Evolutionary Algorithms". In "Proceedings of the Graduate Student Workshop at the Genetic and Evolutionary Computation Conference 2008 (GECCO'08)". ACM Publishing.
- 📄 G. Paperin (2008): "Evolving sequence patterns for prediction of sub-cellular locations of eukaryotic proteins". In "Proceedings of the Genetic and Evolutionary Computation Conference 2008 (GECCO'08)". ACM Publishing.
- 📄 G. Paperin, D. G. Green, A. Dorin (2007): "Fitness Landscapes in Individual-Based Simulation Models of Adaptive Radiation". In: "Proceedings of 2007 International Symposium on Computational Models for Life Sciences (CMLS'07)", AIP Conf. Proc., Vol. 952, pp. 268-278.
- 📄 T. G. Leishman, D. G. Green, G. Paperin (2007): "Dual Phase Evolution – a mechanism for self-organisation and optimisation". In: "Asia-Pacific Symposium on Intelligent and Evolutionary Systems 2007 (APSIES'07)".
- 📄 G. Paperin, D. G. Green, S. Sadedin, T. Leishman (2007): "A Dual Phase Evolution model of adaptive radiation in landscapes". In: "Proceedings of the 3rd Australian Conference on Artificial Life (ACAL'07)", Springer LNCS, Vol. 4828/2007, pp. 131-143.
- 📄 G. Paperin, D. G. Green, S. Sadedin, T. G. Leishman (2007): "Complexity in Speciation: Effects of disasters on adaptive radiation in a Dual Phase Evolution model". In: "Proceedings of the 8th Asia-Pacific Complex Systems Conference (Complex'07)".
- 📄 G. Briscoe, S. Sadedin, G. Paperin (2006): "Biology of Applied Digital Ecosystems". In: "Proceedings of Inaugural IEEE International Conference on Digital Ecosystems and Technologies 2007 (DEST'07)".

Publications (continued)

-  G. Paperin (2006): "Security of Communication and Quantum Technology". In: M. Quigley (ed.), "Encyclopaedia of Information Ethics and Security". Idea Group Publishing, 2007. ISBN 159140987X.
-  G. Paperin (2004): "Schema-Valid Insertion of XPath-Specified Node Sets into DOM Trees by means of a Homomorphous Transformation of PSVI Data Model to a Finite Acyclic DOM Tree Model". Masters Thesis at the Computer Science Department of the University College London.

Previous research experience

Research fellow

Sep 2004 – Nov 2004

UCL, University College London, UK

- Worked on the EGSO-project (European Grid of Solar Observations) as a software engineer.
- EGSO aims to provide a central access point with search and visualisation tools to a large volume of heterogeneous solar observation data.
- Responsibility: design, development and integration of visualisation components for scientific data.

Research fellow

Oct 2003 – Jun 2004

SystemWire Ltd., London, UK

- The company is a spin-off from the Computer Science Department of UCL, commercialising technologies created by the Software Systems Engineering Group.
- I worked for the company within the scope of my MSci dissertation project at the university.
- Responsibility: research, design and implementation of new algorithms for XML-formatted data.

Research assistant

Jun 2002 – Aug 2002

University College London, UK

- In the summer after the 2nd year of my degree I worked as a research assistant at one of the world leading universities.
- Responsibility: participate in research on memory allocation techniques for mobile devices, implementation of new algorithms, analysis of algorithm performance.

Teaching

Research supervisor

Jun 2009 – Oct 2009

Monash University, Melbourne, Australia

- Supervised a 2nd year undergraduate to successfully complete a semester long advanced project.
- Student has designed, developed, evaluated and presented a scientific simulation model.

Tutor / Lab supervisor

Feb 2009 – Jun 2009

Monash University, Melbourne, Australia

Aug 2006 – Jun 2007

- Supervision of tutorials and lab classes, assignments and exam marking, lecturing.
- Subjects: Databases, Java programming, C++ programming, software engineering.

Assistant lecturer

Oct 2004 – Dec 2004

UCL, University College London, UK

- Taught weekly problem classes for 1st year students, covering programming theory, Java & Prolog.
- Classes included supplemental material not be covered by the main lecturer.

Other professional experience

Freelance IT consultant & developer

Feb 2006 – Ongoing

Melbourne, Australia & Hamburg, Germany

- Since 2006 I shifted my concentration from the IT business to academic research.
- However, I continue looking after some of my previous company's clients (see below).
- I also work on new projects (contract or part-time). Services: consulting, software design, programming.
- Areas of expertise include: business process analysis, software design, UML, J2EE, JSP, other Java technologies, C++, .NET, C#, web-based enterprise systems, web marketing, SEO, web design, PHP, XHTML, XML, CSS, MySQL, Apache, and various others.

Open-source contributor

Jun 2002 - Ongoing

Different projects, World-wide

- Lead developer in several open source projects totalling over 1500 downloads per month. E.g.:
- LiveGraph: Real time data analysis framework [<http://www.live-graph.org>].
- JAGA: Java API for Genetic Algorithms [<http://www.jaga.org>].
- Several others [http://www.paperin.org/open_source].

Software development engineer

Aug 2008 – Nov 2008

Microsoft Corporation, Redmond, USA

- During this fixed-term employment I analysed the architectural consequences of applying specific new in-house technologies in the next version of Microsoft's "Essential Business Server" product.
- Worked with various in-house teams to determine the impact of specific proprietary technologies on the overall product architecture.
- Developed prototypes to demonstrate and test the findings.
- Presented the results to senior product management.

Web project manager

Dec 2005 – Mar 2006

Kiwi Repro 68 Interaktive Medien GmbH, Hamburg, Germany

- In addition to working for my own company I worked as a technical project manager and software developer for this large multimedia company on a contract basis.
- Responsibilities: strategic management of in-house technical infrastructure, participation in client projects.

Managing director / Owner

Mar 2005 – Feb 2006

Sol-C Technology Ltd., Hamburg, Germany and London, UK (2 employees)

- The company advised small and middle size businesses on integration of IT systems into business processes. We also advised on internet marketing strategies.
- The company realised IT projects throughout the entire lifecycle from requirement capturing and profitability analysis to implementation and maintenance.
- Largest clients include Optimax UK Ltd. (UK largest eye surgery provider), Foxray AG (a leading German document input and management solutions provider) and many others.

Consultant

Mar 2005 – Aug 2005

Foxray AG, Norderstedt, Germany

- Foxray is a leading German software systems integrator for DMS-solutions specialising on high-volume scanning, inbound document processing, workflows and integration of ERP-systems.
- I worked as a consultant, within the scope of co-operation between Foxray and my own company.
- Responsibilities: sales activities, execution of client consulting projects, supporting technical team within integration projects.

Other professional experience (continued)

Internship at JP Morgan

Jul 2003 – Sep 2003

JP Morgan Chase & Co., London, UK

- I worked in the London European head office of this global financial services firm.
- I completed a 10 weeks summer internship in the Investment Banking Operations Department of the company. My responsibilities included software design and development, as well as research.
- I was introduced into various business areas of the company and gained insight into the corporate perspective of a global business.

Chief technical officer (CTO)

Oct 2002 – Mar 2003

Palatial Leisure Ltd., London, UK

- The company is an overseas based branch of the UK Casino chain Palace Leisure Ltd.
- I lead the internet business branch of the company.
- Responsibilities: strategic development of the business area, on-line marketing, partner relationships, customer relationships.

Software developer

Nov 2000 – Mar 2002

Merchant Internet Ltd., London, UK

- The company is an IT solutions provider concentrating on web-enabled software solutions.
- Responsibilities: software engineering, application development, internet marketing consulting.

Part-time IT developer

Jan 1997 – Aug 2000

Several employers, Hamburg, Germany

- During school-time I had various part-time IT jobs.
- Responsibilities: software development, internet development and marketing, software localisation.

Scholarships and grants

Monash University International Postgraduate Research Scholarship (MIPRS) 2006 – 2010

Ca. 90 000 Australian Dollars (AUD) over 4 years to cover tuition fees.

Monash Faculty of Information Technology Scholarship 2007 – 2010

Monash University Graduate Scholarship (MGS) 2006 – 2009

Ca. 60 000 Australian Dollars (AUD) over 3 years.

Conference travel grants (various) 2008 – 2009

Several grants totalling over 1000 Euro (€). Awarded by conferences including GECCO'08, ALife'09, etc.

Australian Research Council's COSNet: 2 postgraduate student travel grants 2007

Total value: ca. 3500 Australian Dollars (AUD). Awarded by ARC's Complex Systems Research Network.

University College London, Department of Computer Science Award 2003 – 2004

4800 British Pounds (£) over 8 month.

Various awards from funding bodies within the University College London 2002 – 2004

One-off awards and bursaries ranging between 50 and 1000 British Pounds (£).

J & E Frauendorfer-Förderstiftung: Scholarship for academic & social merit 1996 – 1999

400 German Marks (DM) per month.

Prizes and awards

Outstanding graduating student performance **2004**

Prize awarded by the examination board of the UCL Computer Science Department.

Best continuing 3rd year student **2003**

Awarded by the examination board of the UCL Faculty of Engineering Sciences.

Outstanding contribution to the social and intellectual life of the Department **2002 – 2000**

Prize awarded by the examination board of the UCL Computer Science Department.

Several prizes at the British Computer Society Programming Competition **2001 – 2004**

Yearly joined the team of the University College London (UCL) Computer Science Department to the BCS Programming Competition.

- British national final: 3rd place in 2001 (team leader), 5th place in 2003.
- Regional: 1st place in 2001 (team leader), 5th place in 2002, 1st in 2003, 4th in 2004 (team leader).

2nd place prizes at the Barclays Capital University Programming Competition **2001 & 2003**

Led teams to represent the UCL Computer Science Department to the national final of the competition.

Prizes in local and national rounds of the German Federal Competition in Maths **1996 – 1999**

Yearly took part in this school student competition. Several prizes.

Several prizes in the German Mathematics Olympics **1995 – 1999**

Participated yearly. Several first prizes in local rounds. Three times took part in the regional finals.

1st prize in the 1st round of the German Federal Competition in Informatics **1997**

Participated in the "10th Summer Academy of Mathematics" **1997**

The academy is the final round of the International Tournament of Towns in Math.

Social activities and responsibilities

Treasurer of the ICT Life Sciences Forum Students Chapter, Victoria, Australia **2007 – 2008**

3rd year student representative at university **2002 – 2003**

Position shared with 2 fellow students.

2nd year student representative at university **2001 – 2002**

Position shared with a fellow student.

Administrator of the student college library **1997 – 1999**

Took initiative and moved the cataloguing system from cards to a computer based system.

Social activities and responsibilities (continued)

12th-year class representative at college

1997 – 1998

Position shared with a fellow student.

Participated in the organisation of the 10th Summer Academy of Maths

1997

The annual event acts as the final round of the International Tournament of Towns in Maths. I assisted with translations and helped organising a cultural program for international participants.

References

Academic and professional references are available on request