Curriculum Vitae

Name:	Martin Strauss
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Birth:	19th July, 1983; Köln, Germany
Citizenship:	Australian (naturalised 26th January 1988)

Professional Interests

Software quality and usability: in particular, post-desktop interaction styles such as haptics, non-speech audio, and embodied agents.

Education

2006 – 2007 **Master of Science** The University of Saarland and Max Planck Institute for Computer Science

Awarded International Max Planck Research School Scholarship. Masters thesis: "Realtime generation of multimodal affective sports commentary for embodied agents". Graduated with honours.

2004 – 2005 **Taste of Research Summer Scholarship** The University of New South Wales and National ICT Australia

I investigated the technologies and applications of the field of affective computing (the use of emotions in AI and interface design). I produced a preliminary ontology of affective computing concepts, for use in a hypothetical agent or affective application. The results of my work were presented at a poster session at UNSW, and in a report titled "The Logics of Emotion: a survey of the field of Affective Computing"(see Publications below, *[2]*)

2001 – 2005 **Bachelor of Engineering (Software), Diploma of Music (Practical)** The University of Melbourne

Graduated 2005 with first class Honours.

- Ormond Scholar, Ormond College, 2001, 2003 – 2005
- Choral Scholar, Ormond College, 2001 – 2005
- MacFarland Scholar, Ormond College, 2005
- McCaughey Scholar, Ormond College, 2004
- Music Scholar, Ormond College, 2002
- Centenary Scholar, Ormond College, 2001

1999 – 2000 **Melbourne University Program for High Achieving Students** The University of Melbourne

First year Music Performance, Piano, 1999 (first class Honours); and First Year Mathematics, 2000 (second class Honours, division A)

1999 – 2000 **International Baccalaureate** Geelong Grammar School

Score of 44 out of possible 45 with perfect subject scores in 5 of 6 subjects, as well as perfect scores for the Extended Essay and Theory of Knowledge.

Title of Extended Essay: "An investigation into matrix encryption for the purpose of enciphering text messages"(see Publications below, *[1]*)

1994 – 2000 **Geelong Grammar School**

- Academic Scholarship, 1994 – 2000
- Music Scholarship, 1995 – 2000

1989 – 1993 **The Geelong College**

Other Training

December 2004

The Australian Logic Summer School

As part of my National ICT Australia Summer Scholarship, I attended the Australian Logic Summer School at the Australian National University's Research School of Information Sciences and Engineering. There, I participated in lectures, workshops and seminars on the mathematical and philosophical foundations of logic, and a wide variety of applications of logic in computing, including theorem proving, constraint programming, artificial intelligence and knowledge representation and reasoning.

February 2002

SecureCON

I attended the inaugural University of Melbourne Local IT Experts Security Convention, and participated in seminars and workshops on topics such as securing webservers, using intrusion detection systems, using network traffic monitors, writing a information security policy and managing a security compromise.

April 2000 Australian Business Week

I was one of 66 Victorian students awarded a scholarship to participate in the Australian Business Week. This is a one-week intensive residential program aimed at developing the entrepreneurial and small business culture of young Australians. During this program, I also participated in a Team Skills Development workshop.

Publications

[1] Martin Strauss, *An investigation into matrix encryption for the purpose of enciphering text messages.* International Baccalaureate Extended Essay, Geelong Grammar School, November 2000.

[2] Martin Strauss, *The Logics of Emotion: a survey of the field of Affective Computing.* University of NSW Taste Of Research Summer Scholarship report, February 2005.

Employment

2007 – **Software Engineer, Google Inc.** Freigutstrasse 12, CH-8002 Zürich, Switzerland

I work as a software engineer in the iGoogle group at Google. We aim to improve the user experience at the Google home page, and investigate and develop new ways of interacting with Google products.

2006 – 2007 **Research Assistant, Deutsche Forschungszentrum für Künstliche Intelligenz** Stuhlsatzenhausweg 3 (Gebäude D3 2) D-66123 Saarbrücken, Germany

I worked as a research assistant (wissenschaftliche Hilfskraft) at the German research center for AI (DFKI) in the VirtualHuman group, developing software tools for creating, deploying and evaluating the embodied agents ("Virtual Human") developed by the group.

2006 **Software Engineer, Defence Science and Technology Organisation** 506 Lorimer St, Fishermans Bend VIC 3207, Australia

From January until March I worked as a graduate software engineer in the Air Operations Simulations Center in the Defence Science and Technology Organisation. The Air Operations Simulations Center operates a facility in which cutting-edge technology is used to produce a realistic flying environment for human-in-the-loop simulation experiments. The facility conducts research into aerospace operations requirements and equipment suitability for Australian Defence aerospace operations.

2005 **Tutor, Ormond College** College Crescent, Parkville, VIC 3052, Australia

During the second semester of 2005, I tutored a group of first year students at Ormond College who were taking the subject 'Electrical Circuits'. In their end-of-term feedback, the students wrote that I 'helped [them] to raise questions, express uncertainties and participate fully', and that the tutorials were 'stimulating and thought provoking'.

2004 – 2005 **Software Engineering Project and Advanced Software Engineering Project**

As part of my Software Engineering degree at the University of Melbourne, I participated in two industrial projects. In the first, I was in a team of 5 software engineers who developed a software package for researchers in the Optics group in the School of Physics at Melbourne University. For the second, I was in a team of 15 software engineers who developed a software package for researchers in the Department of Information Systems at Melbourne University. In each project, We conducted all of the activities of the software and project lifecycle, including planning and managing the software process, requirements elicitation, documentation, requirements analysis, specification, design, implementation and testing. As part of both projects, we were required to communicate effectively both with each other and with the client, and undertake a variety of leadership positions during the course of the project. As technical manager and Executive Officer of the first team, my tasks included training the other team members in the tools and software used during the project, supervising team "work sessions", and setting and monitoring weekly team goals and objectives; as quality assurance manager and build manager in the second team, my tasks included setting quality objectives for our product, developing, documenting, monitoring and improving quality processes for our team, and overseeing and managing the tasks and schedule for the final build of our software system.

2001 – 2005 **IT Administrator, Ormond College** College Crescent, Parkville, VIC 3052, Australia

I worked in the IT administration department at Ormond College, first as Assistant IT Administrator in 2001, then as IT Administrator from 2002 onwards. As well as administering a network consisting of several Linux servers, a computer room of 15 Windows NT/2000 workstations, 15 employee Windows workstations and a variable number of student workstations (Windows, Mac and Linux), I participated in the planning and implementation of an LDAP-based authentication and mail routing system, and later in the planning and implementation of a full network hardware upgrade from 10Mbps unswitched to 1Gbps backbone and 100Mbps to the desktop, fully switched, including the extension of the LAN to include a number of terrace houses in the surrounding suburbs owned by Ormond College.

Summer 1999, 2000

Laboratory Assistant, Rohm and Haas Australia Pty. Ltd. Hays Road, Point Henry, Geelong, VIC 3220, Australia

During the 1999/2000 and 2000/2001 summer holidays, I worked for Rohm and Haas Australia Pty Ltd in their Geelong Technical Centre. I assisted industrial chemists with research and technical service projects, working at the cutting edge of paint technology.

Other positions held

2003 **Head of Pleasant Sunday/Wednesday Evening Subcommittee of the Ormond College Students' Club**

As head of the PS/WE subcommittee, I was responsible for organising a series of relaxed social events throughout the academic year for the members of the Ormond College Students' Club. I was required to write and work with a budget for these events, and manage a subcommittee of around 20 members to organise venues, food and beverages, and entertainment.

2003 – 2005 **Senior Chorister, the Choir of Ormond College**

In addition to singing with the Choir of Ormond College, as Senior Chorister I had the responsibility of assisting the Director of the Choir in a variety of ways, including managing the Friends of the Ormond Choir and writing an annual newsletter; organising choir events, a choir contact list, etc; assisting the Director in organising concerts and a biennial overseas concert tour; organising the Choir's rehearsals and occasionally leading the Choir in rehearsals; and conducting the Choir in the Director's absence.

2000 **School Music captain, Geelong Grammar School**

As co-School Music Captain of GGS, I was responsible for assisting the Director of Music in the running of the Music School and musical events, including leadership on the 2000 Choir concert tour of Europe; leadership and organisation of musical groups; MC-ing at various events and functions; and organisation and occasional leadership of rehearsals.

Awards

Geelong Grammar School Awards

- Triple Distinction Prize (1996)

- Distinction Prize (1995, 1997)
- Double Distinction Prize (1998)
- General Academic Excellence Award
- School colours for Public Speaking
- School colours for Music
- School colours for Debating
- School colours for Academic Work
- Distinctions in English (1995, 1996, 1997, 1998), Mathematics (1995, 1996, 1997, 1998, 1999), Science (1995, 1996), Japanese (1995, 1996, 1997, 1998), Music (1995, 1996, 1997), Religious Education (1996), Geography (1996), History (1997, 1998), Physics (1998, 2000), Chemistry (1998), Music Performance (1998), Economics (1999).
- Mackinnon Prize for Mathematics
- Charles Murray Maxwell Prize for Chemistry
- ANZ Bank Prize for Economics
- I M Cook Prize for Music
- Academic Scholarship, 1994 – 2000
- Music Scholarship, 1995 – 2000

The University of Melbourne Awards

- Centenary Scholar, Ormond College, 2001
- Music Scholar, Ormond College, 2002
- McCaughey Scholar, Ormond College, 2004
- MacFarland Scholar, Ormond College, 2005
- Ormond Scholar, Ormond College, 2001, 2003 – 2005
- Choral Scholar, Ormond College, 2001 – 2005

Other Academic Awards

- Winner, Mathematical Association of Victoria Maths Talent Quest (1993)
- Distinction, NAB Languages Certificate (1996)
- Member of winning team, Deakin University Mathematics Competition (1998)
- Special Achievement Award (highest school score), Australian Mathematics Competition (Australian Mathematics Trust) (1999)
- Member of runner-up team (and winners of the Judges' Prize), Melbourne University Mathematics Society puzzle hunt (2004)

Miscellaneous Awards

- Duke of Edinburgh Award, Bronze Medal (1997)

Music Awards

- AMEB Pianoforte Diploma, Associate in Music, Australia (AMusA), October 1994
- Chosen from Australia-wide as one of twenty "outstanding young musicians" for Asia-Australia Culture and Arts Centre tour of People's Republic of China (1996)
- AMEB Flute Diploma, Associate in Music, Australia (AMusA), May 1996
- AMEB Pianoforte Diploma, Licentiate in Music, Australia (LMusA), September 1996
- Selected to participate in the National Academy of Music Piano Master Classes, (1999 – 2004)
- Finalist, Yamaha Australian Youth Piano Championship (1999)
- Winner, Lions Club Scholarship, Dandenong Festival of Music and Art for Youth (2001)
- Winner, Dorothy Glover Piano Scholarship (2001)
- Finalist, Lev Vlassenko International Piano Competition (2001)
- Finalist, Hephzibah Menuhin Memorial Awards (several occasions)
- Winner, Australian Youth Pianoforte Recital, Dandenong Festival of Music and Art for Youth (2002)
- Winner, Gold Medallion for most outstanding Pianist in the festival, Dandenong Festival of Music and Art for Youth (2001, 2002)
- Runner-up, Geelong Advertiser Music Scholarship (2002)
- Winner, Highton Rotary Club annual Star Search (2002)

University Marks

code	subject title	mark	grade
740136	Music Performance 1	89	H1
620120	MUPHAS Mathematics	76	H2A
431102	Digital Electronics and Microprocessors	75	H2A
433141	Computing Fundamentals A	89	H1
436105	Engineering Communications	88	H1
620143	Applied Mathematics	82	H1
431103	Electrical Circuits	68	H3
431201	Engineering Analysis A	74	H2B
433142	Computing Fundamentals B	89	H1
436101	Engineering Mechanics and Materials	72	H2B
740104	Ensemble 1-1	87	H1
740103	Ensemble 1-2	95	H1
740146	Practical Study 1D	90	H1
431202	Engineering Analysis B	62	P
431204	Digital Systems 2: System Design	69	H3
436202	Mechanics 1	63	P
436280	Mechatronics Design and Laboratory	52	P
431221	Fundamentals of Signals and Systems	71	H2B
433252	Software Engineering Principles and Tools	90	H1

code	subject title	mark	grade
436201	Thermofluids 1	74	H2B
436281	Mechatronics Design and Laboratory 2	68	H3
740204	Ensemble 2-1	92	H1
740203	Ensemble 2-2	90	H1
740246	Practical Study 2D	90	H1
433253	Algorithms and Data Structures	69	H3
433254	Software Design	89	H1
433255	Logic and Computation	76	H2A
433353	Networks and Communications	76	H2A
433361	Programming Language Implementation	86	H1
433371	Interactive System Design	87	H1
640142	Physics B	81	H1
740308	Ensemble 3-1	90	H1
740344	Ensemble 3-2	90	H1
740346	Practical Study 3D	82	H1
433330	Theory of Computation	80	H1
433341	Software Engineering Process and Practice	75	H2A
433343	Professional Issues in Computing	82	H1
433303	Artificial Intelligence	83	H1
433342	Software Engineering Methods	77	H2A
740315	Romantic Piano Music	80	H1
433340	Software Engineering Project	88	H1
433441	System Modelling and Analysis	82	H1
433443	Software Project Management	82	H1
433448	Applied Cryptography and Coding	85	H1
433440	Advanced Software Engineering Project A	78	H2A
433471	Logic Programming	73	H2B
740301	Music and Film	90	H1
433444	Advanced Software Engineering Project B	78	H2A
650	Automated Debugging	-	1.0
559	Security	-	2.7
5001	Intelligent Tutoring Systems	-	1.0
5002	Intelligent Environments	-	1.0
5003	Empirical Software Engineering	-	1.7