



Computer Science Association of New Zealand  
<http://www.cs.waikato.ac.nz/csanz>

# Newsletter

April 2009  
 Number 14

## NZCSRSC 2009

The **Seventh New Zealand Computer Science Research Student Conference** was held at the University of Auckland from 6-9 April 2009. It is a truly unique and significant event, being the only dedicated ICT student conference in New Zealand. Moreover, NZCSRSC is organised and run entirely by postgraduate students.

The aim of the NZCSRSC is to establish and reinforce a nationwide community of ICT research students. It provides an opportunity for students to establish contacts and share their research with graduates from across New Zealand, and members of the wider community.

This year's NZCSRSC, like past years, was an action packed week! We opened the conference with a Powhiri where we heard an incredibly moving and sincere speech from **Ian Witten** from the University of Waikato, and enthusiastic welcoming words from the University of Auckland's Acting Dean of Science, **Alan Lee** and Computer Science Head of Department at the University of Auckland, **Robert Amor**.

Following the official welcome we moved to the Fale Pacifica for the Endace Opening Dinner. Here we were treated to a truly unique performance from the Auckland Playback Theatre who took real stories about the lives of postgraduate students from the audience and replayed them, in a somewhat embellished version. Very entertaining!

During the week we had the chance to hear about the cutting edge of research in Computer Science here in NZ with 25 student presentations and 14 student posters. Congratulations to **Matthew Jervis** for winning the best poster award on *Augmented Document Trays* and **Lech Szymanski** for the best presentation on *Building a Support Vector Machine using a Neural Network*.

We also heard fascinating and inspiring talks from keynote speakers. **Alan Blackwell** from the University of Cambridge spoke about *Interdisciplinary Design Research for Interactive Technology*, **J.P. Lewis** from Weta Digital explained *Why academic research matters to Weta Digital* and **Poul Nielsen** from the Auckland Bioengineering Institute and Department of Engineering Science here at the University of Auckland presented *The Physiome Project: a framework for understanding ourselves through computational modelling*.

In keeping with NZCSRSC tradition we ran a range of workshops aimed at building skills in research and beyond. And as in previous years the workshops were a great success, with topics ranging from staple favourites such as the publication game and thesis writing, to discussions about industry, research careers, presentation skills and time management. Also, during lunch on Wednesday we held discussion groups where each table discussed interesting topics in Computer Science ranging from advances in specialised fields to ethics and the wider community.

Contents	Page
NZCSRSC Conference	1
News from:	
Victoria	2-3
Canterbury	3-4
Waikato	4-6
Lincoln	6-7
Otago	7
Auckland	8
AUT	8-9
Massey	9

Of course NZCSRSC '09 would not be complete without the Orion Health Social Night! On Tuesday night we were whisked away for a pleasant dinner cruise around Auckland harbour including a team quiz onboard. It was a night to relax, enjoy the beautiful views and indulge in the wonderful company!

On Wednesday night we held an industry dinner. This was a mix and mingle event where companies prepared stalls with information, and students were invited to visit each stall and chat with industry representatives about their experiences in the ICT industry.

What NZCSRSC would be complete without a little live music? Thanks to **Ian Witten** and **Hong Yul Yang** for providing us with some tunes during the closing lunch on Thursday. To complete Auckland's four seasons in one week, the conference closed with a spectacular hail storm. What a week!!

We would like to thank all those who helped in the organisation and running of this conference including local contacts, volunteers, authors, keynotes, workshop presenters and the departments around the country who encouraged and supported their students to participate in NZCSRSC '09. We would like to extend a special thank you to our leading sponsors, BuildIT, Orion Health, Endace and the University of Auckland.

In terms of meeting the conference goals, I can confidently say that the NZCSRSC has had a significant impact on strengthening the ICT research student community in NZ. What does this mean in practical terms? It means that we, as students, feel connected to a group of people who can understand and identify with our experience as research students. For many of us, this was a chance to meet with old friends again, as well as meeting new people this year. We are learning more and more about the ICT research that is done in this country. NZCSRSC is about getting us out from behind



Computer Science Association of New Zealand  
<http://www.cs.waikato.ac.nz/csanz>

# Newsletter

April 2009  
Number 14

those computer screens and putting us face to face with the cutting edge of Computer Science research in NZ and the research students who are behind it all. Our hope is that it may continue for many years to come, and we simply can't wait to see what the next NZCSRSC has in store for us!

## Rachel Blagojevic

On behalf of the NZCSRSC '09 organising committee  
More info: <https://nzcsrsc09.auckland.ac.nz/>

..... and what a great conference it was. The New Zealand computer science community owes a huge debt to **Rachel Blagojevic, Carl Schultz, and the entire organising team** from the University of Auckland for organizing such a spectacular event. It was just great to see such a large group of young and active NZ Computer Science researchers come together for work — and play. Many attendees slept in the beautiful campus Marae, making it a cultural as well as an educational experience. We all know the hard work that goes into conferences behind the scenes, and this one went off without a single hitch. On behalf of all attendees, I would like to say that it was a privilege to have had the opportunity to participate in NZCSRSC 2009, and I pass on from all of us a great big thank-you to the team who organized it. Those of you who didn't come -- you don't know what you're missing!

There was overwhelming support at the conference for running NZCSRSC every year, and the University of Victoria is hoping to host it in 2010. However, this will be contingent on the generosity of CoDs throughout the country, because the BuildIT funds that were used to subsidize this year's and last year's conference have expired.

*Ian H. Witten*

## Mailing list for Research Students

In order to continue the spirit of the NZCSRSC conferences, **Andreas Löf** has created a mailing list that provides an open forum for NZ Computer Science Research Students to exchange news, happenings, ideas and advice. It's open to all students in NZ universities with research interests in Computer Science and related fields, as well as academic staff. This is a multi-university cooperative venture: thanks to **Andreas Löf** and **Andrea Schweer** (both from UoW), **Carl Shultz** (UoA) and **Craig Anslow** (UVic); and the technical support group the TSG team at Waikato for hosting assistance. Read about the list and subscribe at <https://list.scms.waikato.ac.nz/mailman/listinfo/nzcsrsc>

## Victoria

### News

#### Google Summer of Code

Victoria University security researchers are excited to be

involved in Google Summer of Code (GSoc) this year. **Peter Komisarczuk** and **Ian Welch** currently lead the New Zealand Chapter of the Honeynet Project which has been selected as a GSoc mentoring organisation and two of the projects are focused around work from Victoria University.

#### Finding a Passive Way to Measure Foetal Heartbeats

**Paul Teal** has recently featured in the Dominion for his research on developing a less invasive way of monitoring foetal heart beats. Paul says his aim is to find a more passive method of determining the heart beat of infants in the womb than the active method currently used by physicians and midwives.

#### ECS Professor awarded 'Most Influential Paper'

Hot on the heels of most influential paper award from ASWEC98 earlier this year, **James Noble** was awarded another Most Influential Paper award, this time from the ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications.

#### BuildIT Postdoctoral Fellowships

**Mengjie Zhang** was awarded a BuildIT Postdoctoral Fellowship award. This is one of the three awards in the 2009 round in New Zealand. This award will allow him to seek a postdoctoral fellow in the next six months working in the area of Genetic Programming for two years.

## Scholarships and Awards

Victoria PhD Scholarships (students, November 2008 round):

**Ayat, Mohammad**  
**Mirza, Hidayath**  
**Setayeshbarhaghi, Mahdi**  
**Walbran, Andrew**

Victoria Doctoral Assistantships (students, November 2008 round)

**Chandra, Rohitash**  
**Masood, Asim**  
**Muschevici, Radu**

BuildIT PhD Scholarships (students, November 2008 round)

**Hoda, Rashina**  
**Tabilog, Allan**

Telstra Clear PhD Scholarships (2009 round)

**Li, Paley Guangping**

Marsden Fund PhD Scholarships/Studentships

**Ahmed Aziz**—*Ownership and Immutability*  
**Urvesh Bhowan**—*Genetic Programming*

IEEE Computational Intelligence Society Travel Scholarships  
**Urvesh Bhowan** was awarded an IEEE CEC 2009 Travel



Computer Science Association of New Zealand  
<http://www.cs.waikato.ac.nz/csanz>

# Newsletter

April 2009  
Number 14

Scholarships by the IEEE Computational Intelligence Society. IEEE Congress on Evolutionary Computation (CEC) is an “A” grade conference ranked by CORE.

VUW Vice Chancellor’s Strategic PhD scholarships Topics  
**Dale Carnegie and Peter Andreae**—*Robotic Navigation and Path Planning in a Disaster Environment.*  
**Mark Johnston and Mengjie Zhang**—*Particle Swarm Optimisation for Image Recognition*

## Seminars and Visitors

**Winston Seah**—*Wireless Sensor Networks Powered by Ambient Energy Harvesting.*  
**George Allan**—*Engaging Our Students by Linking Enquiry-Based Learning, Learning Journals and Reflective Thinking.*  
**Peter Komisarczuk, Paul Teal and Kok-Lim Alvin Yau**—*Context-Awareness in Cognitive Radio Networks: Design and Applications.*  
**Partha Chaudhuri**—*Technology Transfer by Design Seminar.*  
**Edmund Lau**—*Reconfigurable Low Complexity Signal Processing Architectures.*  
**Mark Moir**, Project Sun Microsystems Laboratories—*Early Experience with a Commercial Hardware Transactional Memory Implementation.*  
**Susan Eisenbach**, Imperial College London—*Changing the Marks Based Culture of Learning through Peer Assisted.*  
**Yeo Swee Ping**, National University of Singapore—*Enhancing the student learning among engineering undergraduates at the National University of Singapore.*  
**Jan Rabaey**, University of California at Berkeley—*A Brand New Wireless Day.*  
**Saeid Nooshabadi**—*Complex Embedded Electronic Systems.*  
**Loulin Huang**, *Target Tracking Control of a Mobile Robot.*  
**Graham Town**—*Microstructured guided-wave devices for applications in optical communication and sensing.*  
**Alan Coulson**—*Detection and synchronisation of pilot symbol assisted OFDM.*

## Appointments and Departures

**Neil Lesley** departed in February 2009.  
**Nicolas Cameron** started work here in February 2009 with his position as a BuildIT Post Doctoral Fellow.  
**Qiang Fu** was appointed from 20 April 2009 as a Lecturer in Network Engineering.  
**Monique Cano-Damitio** started working here in January 2009 as a Software Engineering Programmer.

## PhD Theses

**Huayang (Jaso) Xie**—*An Analysis of Selection in Genetic Programming*

**Angela Martin**—*The role of customers in eXtreme programming projects*

## Masters Thesis

**Wayne Thomson**—*GA: A general auction framework for Secure Combinatorial Auctions*  
**Radu Muschevici**—*Multiple Dispatch in Practice*  
**Christopher Male**—*Mocha: Type Inference for Java*  
**Benjamin Palmer**—*Verifying Privacy Preserving Combinatorial Auctions*

Peter Andreae

## Canterbury

### News

#### ICPC Programming World Finals

Three third year Canterbury CSSE students, **Joey Scarr**, **Erwin Flores** and **Thomas Steinke** alias “Team JET”, have just returned from competing in the ICPC Programming World finals in Sweden, where they managed to get in the top half (49th-equal place out of 100), which is a great result. It’s been pointed out that they beat Caltech, Purdue, Northwestern and several other universities with strong reputations. Some of the Russian, Chinese and Ivy-league universities were astonishing, but their training programs are also somewhat scary as well!  
The team prepared well, working hard during the prior week on the training camp in Ronneby. It was a gruelling event of course, five hours non-stop programming. Afterwards they were whisked around town for the award ceremony (at the same place that the Nobel prizes are presented).

### Awards

**Andy Cockburn** was awarded the Chris Wallace Award for *Outstanding Research Contribution* in computer science at the ACSW Conference in Wellington.

### Visitors

**Dusan Petkovic**, Rosenheim University of Applied Sciences, Germany.  
**Dr Jose Marzo**, University of Girona, Spain.

### Promotions

**Andy Cockburn** was promoted to Professor  
**R Mukundan** was promoted to Associate Professor.

### Appointment

**Andy Cockburn** was appointed to the Marsden MIS funding panel in January.



Computer Science Association of New Zealand  
<http://www.cs.waikato.ac.nz/csanz>

# Newsletter

April 2009  
Number 14

## Masters Theses

**Cheng-Tse Chu**—*Robust Upper Body Pose Recognition in Unconstrained Environments using Harr-Disparity.*

**Xianglin Deng**—*Security of VoIP: Analysis, Testing and Mitigation of SIP-based DDoS Attacks on VoIP Networks.*

**Mohammed Thaher**—*Efficient Algorithms for the Maximum Convex Sum Problem.*

**Di Zhou**—*A model driven architecture based approach for developing multi-agent systems.*

Gillian Clinton

## Waikato

### News

#### First Global Game Jam Down Under

In January the Computer Science Department hosted a New Zealand site for the first Global Game Jam. 48 hours of Computer Game Programming, pizza eating and carbonated beverage consumption. At the end 13 games from Waikato were uploaded, joining a set of over 300 created by the 1600+ participants worldwide.

More info: [www.globalgamejam.org](http://www.globalgamejam.org)

#### NGN Resiliency Project

The WAND group have signed a contract for involvement in Stage 3 of the NGN Resiliency Project with Harmonic Aotearoa Ltd (previously Medialab). Other partners in the project are Massey University, Canterbury University and Telecom NZ. It is funded by Telecom NZ and FRST. The project is to develop methods and software tools to assist NGN (all-IP telecommunications) operators design and dimension their networks with good understanding of the resulting service performance and resiliency impacts.

#### Top award for Waikato alumnus

Waikato and Canterbury alumnus, Google's **Craig Nevill-Manning** has been awarded a top prize for expat Kiwis. Dr Nevill-Manning, who completed his PhD in computer science at Waikato University, won the ICT award recently at the 2009 World Class NZ Awards. The awards, established in 2001, aim to recognise successful New Zealanders who help enhance the nation's reputation internationally by being "world class". They are the brainchild of Trade and Enterprise New Zealand and Kea – the Kiwi Expats Association.

#### Waikato student gets snap-happy

Computer graphic design honours graduate **Ngaire Ackerley** is just out of university but already she has a stunning portfolio of photos from central Europe – thanks to a university student exchange programme. She won a place on

the EU-NZ Leonardo exchange pilot programme for interactive design students. The three-year scheme links the University of Waikato, Wanganui School of Design and the University of Canterbury with four leading European design and engineering institutions in Austria, Slovenia and the UK. Ngaire spent four and a half months at the Upper Austria University of Applied Sciences in Hagenburg, and then a further two weeks in the Slovenian capital, Ljubljana, completing her honours thesis on narratives and still photography.

#### Greenstone Workshop in Pohnpei, Micronesia

**Ian Witten** has just returned from giving a workshop on the Greenstone Digital Library Software in Pohnpei, Micronesia. He has given workshops before in faraway places, but this was an extraordinary experience. Pohnpei is a capital city that he'd never heard of before (have you)? It's little more than a pixel on Google Maps, and on the way from Hawaii his plane landed on atolls uncharted by Google. Organized by the Pacific Resources for Education and Learning, each of the 18 carefully-selected participants received a laptop to take home with them. They came from Palau, Yap, Chuuk, Guam, Pohnpei, Kosrae, Majuro, and Pago Pago. The hospitality was wonderful, laughter rang throughout the workshop — and the students were extremely dedicated, working into coffee and lunch breaks in a manner unheard of in laid-back tropical islands. In five days they learned a lot.

### Awards and Prizes

#### Mellon Award for Technology Collaboration (MATC)

Awarded to the Greenstone Digital Library Project for continuing to lead the collaborative development of open source software tools for creating digital libraries.

**David Bainbridge** and his co-researchers won a best paper award for their research at the annual International Conference on Asia-Pacific Digital Libraries (ICADL), in Bali, December.

**Bernhard Pfahringer** came second in the PAKDD 2009 Data Mining Competition.

More info: <http://sede.neurotech.com.br/PAKDD2009>

#### MacDiarmid Awards

**Judy Bowen** and **David Milne** were placed in the second round of the MacDiarmid awards this year.

#### BuildIT PhD Travel Scholarship

**Anna Huang**—*Clustering document using a Wikipedia-based concept representation.* Pacific-Asia Conference on Knowledge Discovery and Data Mining, Bangkok, Thailand. April.



Computer Science Association of New Zealand  
<http://www.cs.waikato.ac.nz/csanz>

# Newsletter

April 2009  
Number 14

## BuildIT Two-year Research Fellow Grant

**Steve Reeves**—Grant to employ a recently completed PhD student on a two-year post-doc fellowship.

## Emerging Researchers Workshop

**Judy Bowen, David Streader** and **Matthew Luckie** were among the 14 nationwide participants in the Emerging Researcher's Workshop funded by BuildIT and held during the NZCZRSC conference in Auckland.

## Seminars and Visitors

**Murray Pearson**, Chief Technology Officer, Rural Link, Hamilton. April.

*Tuhoe Online: Bringing Broadband to the Tuhoe Rohe.*

**David Bainbridge**, University of Waikato, April.

*Treasure Houses of the Future.*

**Mark Utting**, University of Waikato, March. *JStar: A Declarative Language for a Parallel World.*

**Aran Lunzer**, Meme Media Laboratory, Hokkaido University, Japan. February.

*Subjunctive Interface support for exploring alternative scenarios.*

**Stefan Rueger**, Knowledge Media Institute, The Open University, December 2008-February 2009.

*More than a thousand words.*

**Michael A Potter**, U.S. Naval Research Laboratory, Washington DC. February.

*Exerting Human Control over Decentralized Robot Swarms.*

**Charles Elkan**, Department of Computer Science and Engineering at University of California, San Diego. December.

*Learning Classifiers from Only Positive and Unlabeled Data Speaker.*

**Stephen Atherton**, Apple. November.

*iTunes U Seminar.*

**Sanghamitra Bandyopadhyay**, Indian Statistical Institute, Kolkata, India. November.

*Bioinformatic algorithms: Overview and current research directions.*

**Paul Fenwick**, PERL Training Australia. November.

*The Art of Klingon programming.*

**Jacinta Richardson**, PERL Training Australia. November. *On Speaking.*

## Other Visitors

**Viv Nastase**, EML Research gGmbH, Heidelberg, Germany. 2 April-18 May.

*Ontology Development with Wikipedia Miner.*

**Alanna Fitzgerald**, Concordia University, Canada. February. *Utilizing lexical data from a Web-derived corpus to expand productive collocation knowledge.*

**John Brine**, University of Aizu, Japan. February. *Language teaching with FLAX.*

## Promotions

Our Dean for the School of Computing and Mathematical Science, **Geoff Holmes**, has been promoted to the status of Professor.

## Appointment and Departure

After many years at UOW, in December **Murray Pearson** left his position as Senior Lecturer to become Chief Technology Officer, Rural Link, Hamilton, a company setup to commercialise the technologies developed as part of the CRCnet project, University of Waikato. Murray was one of the founding members of the WAND Group and was involved in many aspects of their research, including being part of the original team that developed the DAG measurement cards, which in turn became Endace Measurement Systems. Murray was the P.I. for the five-year FRST funded CRCnet Project.

## Internships

**Annika Hinze** has taken up a six month visiting professorship at Berlin's prestigious Humboldt University researching in the field of context-aware systems and teaching advanced classes in the Department of Computer Science.

## Research and Study Leave

**Dave Nichols**, US and UK, December–July.

Dave spent the initial period of his study leave at three universities in the United States focussing on research in Digital Libraries, particularly how Greenstone can better align itself with the field of library and information science. Currently, he is visiting ICLIC, University College, London, U.K. working on qualitative investigations of Digital Library use, creation and maintenance.

**Tony McGregor**, Amsterdam. January–July.

Tony is visiting RIPE NCC, the European Internet Registry and working on a project studying the feasibility of very large scale active measurement. The goal is to be able to support a system within the order of 100,000 probes measuring the Internet's structure, behaviour and performance. More info: <http://www.ripe.net>

**Te Taka Keegan**, California, December–July

Te Taka, a prominent Māori Language Activist in New Zealand, is visiting California through Google's Visiting Faculty Program to investigate the potential impact of Google's translation tools on minority languages. For the Māori language, and for many other indigenous languages now facing extinction, Google research and development in this area is not simply about bridging the communication gap - it's about survival.



Computer Science Association of New Zealand  
<http://www.cs.waikato.ac.nz/csanz>

# Newsletter

April 2009  
Number 14

**Ian Witten**, July–December.

Ian spent July–September at the University of Siena in Italy and September–December at the European Media Lab Research in Heidelberg, Germany, working on a new edition of the book *How to Build a Digital Library*. Several of his PhD students visited EMLR for one or two months to work with them on various Wikipedia mining projects.

## PhD Theses

**Judy Bowen**—*Formal models and refinement for graphical user interface design*

**Grant Anderson**—*Relational data mining using stochastic discrimination*

## Lincoln

### News

#### Restructuring

Lincoln University and AgResearch, the largest of the CRIs, are currently in a consultative process to explore the possibility of merging in July 2009. The intention is to create the southern hemisphere's first truly world-class, land-based University, supporting research, education and extension. This follows closely on from a restructuring within the University late last year. The Applied Computing Group has now become the Department of Applied Computing with **Keith Unsworth** as its new HOD.

#### IVCNZ08

**Keith Unsworth** and **Alan McKinnon** were on the organising committee for the Image and Vision Computing NZ International Conference held at Lincoln University 26–28 November, 2008. The conference was attended by approximately 120 delegates from NZ, Australia and a range of other countries including Japan, France and Australia. This was a significant increase in attendance compared to the 2007 conference. The main organiser, and conference chair, was **Kenji Irie**. Kenji is an employee at Lincoln Ventures and is also a PhD student in the Department of Applied Computing, with **Alan McKinnon** and **Keith Unsworth** part of his supervisory team.

#### Teaching Innovations

Lectures for all our undergraduate courses are now recorded using Camtasia software. They are made available to students via course pages on the Lincoln Learning Management System. Building on her experience of recorded lectures, **Clare Churcher** taught the course COMP102 (Computer Programming) during the November Summer School totally without face-face lectures. Instead students had access to lecture material and demonstrations recorded in Semester One 2008. This was an outstanding success with very positive responses from the student evaluations, a higher than normal

attendance at lab classes and a better than usual student success rate.

**Shirley Gibbs** and **Kerry Wood** are part of a small team investigating whether voice recognition software can be used to produce text annotations for the Camatasia recorded lectures. We expect this to be a particularly useful resource for both ESOL students and hearing impaired students.

#### Imagine Cup

We are delighted that Team Think comprising third year Software and IT students **Mike Trengrove**, **Graham Smart** and **Asa Wong** has won the national finals of the Imagine Cup and will be representing New Zealand in Cairo in July.

#### Visitors

**Sandy Barker**, a Lecturer in Management at the University of South Australia, visited for two weeks in March. Sandy's research area is measuring the impacts of end user application development. She is completing a PhD supervised by **Theresa McLennan**.

**Roy Davies**, from the Auckland 3D modelling company NextSpace visited in February to have further discussions regarding a possible project on visual urban modelling for planning purposes in collaboration with Landscape Architecture, NextSpace, a local Council and the Applied Computing Department.

#### Teacher Fellowship

**Kerry Wood**, a Resource Teacher of the Deaf, is spending six months in our department. She has a NZ Science, Mathematics and Technology, Appointed Teacher Fellowship, funded by the government and administered by the Royal Society, to study end user computing and web design. The project is supervised by **Shirley Gibbs** and **Theresa McLennan**. Kerry is normally based in Timaru and services South and Mid Canterbury for the Van Asch Deaf Education Centre. A side effect of Kerry's fellowship is that Lincoln University's Inclusive Education team have been benefitting from Kerry's special expertise. She has been advising on effective teaching and equipment for hearing impaired students. Kerry is also researching the application of voice recognition software in deaf education at secondary level.

#### Research and Study Leave

**Alan McKinnon** is on study leave at the University of Leeds where he is hosted by **Ken Brodrie** in the Visualisation Group. The main focus of his work is the development of tools for the visualisation of risk where a model (in this case of magnesium dynamics in dairy cattle) is being used for decision-making.



Computer Science Association of New Zealand  
<http://www.cs.waikato.ac.nz/csanz>

# Newsletter

April 2009  
Number 14

**Stuart Charters** was nominated for and attended the BuildIT Emerging Researcher Career Development Workshop. He was also awarded a travel grant from BuildIT to attend the Australian Software Engineering Conference, where he presented a paper.

## Appointments

**Paul Ronaldson** has joined us as a Research Assistant working on our KAREN Institutional Capability Build Project. Paul will be with us until the end of the year.

**Stuart Charters** has joined the Advisory Board of the newly established Advanced Video Collaboration Centre, based at the University of Canterbury.

## MSc Theses

**Paul Rutherford**—*Usability of navigation tools in software for browsing genetic sequences.*

**Nuchjira Laungrunghthip**—*Sky detection in images for solar exposure prediction*

Theresa McLennan

## Otago CS

### General News

#### New Building

From early May onwards all staff will be moving from their various scattered locations into the Owheo building in Union St East. The new building will also house all the department's laboratories.

#### 25th Anniversary

The department will be celebrating its 25th anniversary in September 2009. A history of the department will also be produced for the occasion.

#### Student Numbers

The department saw a pleasing 25% rise in student numbers for 2009.

### Research Grants

**Lubica Benuskova** and **Alistair Knott** have been awarded a BuildIT Postdoctoral Fellowship award for salary of a postdoctoral fellow.

**Martin Takac** started to work on the two-year project entitled *The sensorimotor grounding of language: a computational model*, in February.

**Andrew Trotman** successfully led an application for funding from Microsoft Research Asia. The funding is in two parts, a

research component and a curriculum development component. In the research component this project extends the process model in Microsoft Windows to keep dead processes with children alive until all their children have terminated (which is useful for concurrent programming languages). In the curriculum development component of this project, the Windows Operating System Internals Curriculum Resource Kit is being adapted and extended for use as a 400-level course at the University of Otago. Microsoft released the source code of the Windows kernel for research purposes and this project uses it for both research and teaching.

### Global Game Jam

In association with Straylight Studios, we were a host for the Global Game Jam in January. This was a 48-hour themed game building marathon, and all the completed games are made available on the web.

More into: <http://globalgamejam.org/games>

### Seminars

**Stefan Rueger**, Knowledge Media Institute, The Open University, January.

*More than a thousand words.*

**Lisa Blum**, Fraunhofer Institute for Applied Information Technology FIT, St. Augustin, Germany, March.

*Augmented Reality under water.*

**Lubica Benuskova**, Department of Computer Science, March.

*How neurons "learn": insights from computational models.*

**Bernard Chazelle**, Eugene Higgins Professor of Computer Science, Princeton University, March.

*What an iPod, a Flock of Birds, and DNA have in common.*

**Tim Penhey**, Canonical, March.

*Introduction to Python.*

**Tobias Langlotz**, Graz University of Technology, April.  
*Handheld Augmented Reality.*

### Staff News

**Andrew Trotman** has been promoted to Senior Lecturer.

**Anthony Robins** is on sabbatical in 2009.

**Zhiyi Huang** is on sabbatical in the USA from January to July 2009.

### PhD Theses

**Philip McLeod**—*Creating pitch detection tools for music analysis*

Robert Pollock

## Auckland

### News

**Paul Denny** received a University Teaching Excellence Award for Innovation in Teaching, and was nominated to represent the University at the national Tertiary Teaching Excellence Awards.

**Robert Sheehan** was invited to attend Microsoft Research Asia's OS Workshop in Beijing.

**Andre Nies** published a book on *Computability and Randomness*.

**Yu-Cheng Tu** and **Clark Thomborson** appeared in ComputerWorld on 16 February, in an article titled: *Researcher questions government security analysis*.

**John Grundy** won the ITI Techmedia Tool Demo Award for the research demonstration *Likely to have the most impact on industrial practice* at IEEE/ACM ASE 2008.

**Jim Warren** chaired the Health Informatics New Zealand (HINZ) Annual Conference in Rotorua. The conference was opened by the Health Minister, who also unveiled the new mission and leadership of the Health Information Strategy Advisory Committee. Jim was elected the new Chair of HINZ for the two year period to October 2010.

**John Hosking** appeared in the NZ Herald in the education section on 4 November in a story on ICT internships.

### Seminars

**James Skene**, *A Language for Service-Level Agreements for Electronic Services*.

**Tony Gorschek**, *Technology and Knowledge Transfer: How to Enable Industrial Co-production of Research Results*

**Neal Glew**, *Ct and Pillar: Building a Foundation for Many-Core Programming*.

**Daniela Damian**, *Collaborative software development and social networks in action*.

**Walter Bender**, *Understanding and Using the Sugar Interface for Education and Cooperation*.

**Maja Vukovic** *Context Aware Service Composition and Support Ecosystems*.

**Wolfgang Fahl**, *Y Cathedral Bazaar and Bridge are competing software engineering metaphors*.

**Jun Sun**, *Introducing a Process Analysis Toolkit: Model Checking and Fairness*.

**John Hosking**, *Mind the Gaps*.

**Hayden Young**, *Extending Bi-Directional Search to Handle Partial State Descriptions*.

**Hermann Maurer**, *Theory is important but dangerous*.

## PhD Theses

**Scott Uk-Jin Lee**—*Foundations of Semistructured Data*

John Hamer

## AUT

### News

A programming challenge for Year 10 Secondary School students has been hosted at AUT University (in conjunction with Manukau Technical Institute, Auckland City Council, and AUT Women on Campus). Fifteen schools and 40 student (20 teams and their teachers) participated—a lively group of students took over the school staff room and corridors for morning tea, lunch and prize-giving. During the morning the students attended tutorial sessions using the programming language “Alice” taught by **Anne Philpott**, **Jacqui Whalley** and **Yun Sing Koh**. In the afternoon the students were given a programming challenge that was judged. All students went home with a goody bag and a deeper appreciation of what it is like to study computer science at University.

### GIC Workshop

The first Workshop on Global Intercultural Collaboration was held on 27–28 January 2009. This was hosted by Auckland University of Technology Schools of Computing & Mathematical Sciences, Social Science and Languages, with Uppsala University Computing Education Research Group, (UpCERG).

Taking advantage of the presence in New Zealand of international Computer Science Education Researchers with extensive experience in Global Virtual Collaboration, the workshop aimed for an interdisciplinary conversation on the topic of 'culture' in the context of global collaboration.

This successful event has become the catalyst for a future interdisciplinary research into global intercultural collaboration and an outcome of the event is an ACM SIGCE Bulletin special issue of a section of eight papers from the workshop.

### Awards

**Boris Bacic**, **Petteri Kaskenpalo** and **Nurul Sakar** have been awarded an Academic Staff Doctoral Study Award given out by the AUT Vice Chancellor.

### Research & Conference Grants

**Wai Yeap** has been invited to participate in a special workshop on Modelling Spatial Cognition which will be held in Scottsdale, Arizona from 14-16 May. The workshop is organised by **Glenn Gunzelmann** and **Jun Zhang** from the US Air Force Research Laboratory and there are 19





Computer Science Association of New Zealand  
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# Newsletter

April 2009  
Number 14

presenters, two coming from Germany, one from UK, one from New Zealand and from major universities in the States including Harvard, CMU, Pennsylvania State University, Purdue University and others.

**Wai Yeap** and his student, **Zati Hakim**, are invited to take ALBOT, their robot, to Malaysia to participate in an Expo organised by the University of Malaya in Malaysia from 27-29 July.

**Jiling Cao** has been granted a research and study leave from July to December 2009. Among many other activities, he is a member of scientific committee and organized the session "Topology and Abstract Analysis" for the International Conference of Mathematical Sciences (4-10 August, 2009, Istanbul). Jiling is also invited to present a talk at the international conference on Analysis and Applications ICAA2010 (24-26 January, 2010, Muscat).

Recently, the joint Marsden Fund proposal, *Application of Topology to Analysis*, by **Jiling Cao** and **Warren Moors** has entered to the second round of the competition.

## Visitors

**Ander Berglund** from University of Uppsala (Sweden) visited and was invited to talk at the International Global Intellectual Culture workshop on the 27 & 28 January.

## Appointment

**Yun Sing Koh** has been appointed as Permanent Lecturer from February 2009.

*Saide Lo*

## Massey

### News

Our new lecturer in IT, **Kudakwashe Dube**, has finally received some communication from NZ immigration, and hopes to be here for Semester 2.

We have two research projects in the second round of the Marsden Fund this year, **Ruili Wang** has a chance for a fast start on traffic modelling, and **Stephen Marsland** (with **Robert McLachlan** and **Matt Perlmutter**) has a chance for a full project on Euler equations on diffeomorphism groups.

**Stephen Marsland** has had a textbook published. *Machine Learning: An Algorithmic Perspective* was published by CRC Press, part of Taylor and Francis in April this year.

There have been a variety of internal reviews of our various degrees in preparation for the up-coming IPENZ accreditation of the entire School of Engineering and Advanced Technology, which includes our BE in Software Engineering and the BE in Multimedia Systems Engineering that is offered in Wellington.

*Stephen Marsland*