NZCSRSC 2013

It is our great pleasure to host the 11th New Zealand Computer Science Research Student Conference (NZCSRSC 2013) at the Uni of Waikato from 15–19 April, 2013. Since its inception in 1992, there have been 10 conferences, which were held at Waikato, Canterbury, Auckland, Victoria, Massey, and most recently, Otago.

Over the years, the NSCSRSC has won a reputation for helping New Zealand PhD and research students build networks within New Zealand, and for fostering a supportive environment within which students can develop their research and presentation skills. Previous conferences have been praised for their high quality presentations, and it is this high standard that this year's committee is working hard to maintain.

The first call for papers has been sent to all Unis in New Zealand. Submissions will be accepted for full papers (not exceeding eight pages) and short papers with poster (not exceeding four pages). Papers are to be submitted in the ACM format, and topics include all fields of research in computer science and software engineering. Further details can be found on the conference website, www.2013.nzcsrsc.ac.nz.

We are still looking for student representatives for Auckland Uni, Massey Uni, and Victoria Uni at Wellington. The role of student representative is not an onerous one. Its duties include helping to promote the NZCSRSC to fellow students, and forwarding any questions that potential attendees may have about the conference to the organizing committee. If you are interested in taking on this role, please contact **Craig Taube-Schock**, cschock@waikato.ac.nz.

We very much look forward to seeing you at next year's conference!

Craig Taube-Schock
On behalf of the NZCSRSC 2013 organizing committee.
Website: www.2013.nzcsrsc.ac.nz.

Victoria

News

Faculty of Engineering Gains Full Industry Accreditation
Victoria Uni's four-year Bachelor of Engineering (BE) programme has achieved full accreditation from the Institution of Professional Engineers New Zealand (IPENZ). The promotion from provisional to full accreditation marks the next stage in the development of Victoria's engineering programme, which launched in 2007. IPENZ commended several aspects of Victoria's engineering programme including its facilities and laboratories, the accessibility of staff, the level of pastoral care provided to students, and the confidence and positivity of graduates with respect to the programme.

IPENZ Seminar on Assistive Technologies
On the 5 Sep the School of Engineering and Computer Science with IPENZ, hosted a public seminar on the development of technologies for the rehabilitation of people affected by stroke. Research work into assistive robotics and human machine interaction, was explained by an internationally renowned guest speaker. **Marcus King,** a leading research engineer on the use of information technologies during rehabilitation following brain injury or disease, is NZ Innovator of the Year 2011 and has received engineering excellence awards for his work in this field.

High Value Manufacturing and Services Research Fund Success
School of ECS senior lecturer **Robin Dykstra** and his VUW colleagues **Petrik Galvosas** (SCPS) and **Paul Teal** (ECS) were awarded a grant from the Ministry of Business, Innovation and Employment's science investment round, the High Value Manufacturing and Services Research Fund. The grant will be used to support research in the field of Nuclear Magnetic Resonance (NMR). This research will also be a collaboration with Massey Uni, NZ high-tech export company Magritek Ltd, and RWTH Aachen Uni in Germany.

Engineering Masters Student Abigail Arulandu won the Asia-Pacific final of the Institution of Engineering Technology Present Around the World event and is gearing up for the world finals in London. She will also represent Victoria at the Australasian final of the Three Minute Thesis speech competition. Abby's research is in the area of stroke rehabilitation technology.

Scholarships

Victoria PhD / Doctoral Scholarships
- **Amr Ayoub**
- **Ryan Chard**
- **Hamidreza Gavgani**
- **Muhammad Ghifary**
- **Chandan Pawaskar**
- **Ibrahim Rahman**
- **Alexei Sedunov**

Appointments

Taehyun Rhee joined the Faculty of Engineering as a senior lecturer in May 2012. His main research interests are solving problems related to computer graphics, computer animation, computer vision, and medical imaging.

Resignation of Achim Gädke. Achim first joined the Faculty of Engineering as a Post Doctoral Research Fellow in June 2009, and worked as an MRI Programmer / Engineer from Jun 2011 – Sep 2012.

Seminars

Muhammad Adeel Mahmood, Victoria Uni of Wellington
Event Reliability in Wireless Sensor Networks

Xiadong Li, RMIT Uni, Melbourne, Australia
An Introduction to Particle Swarm Optimization

Evan Ireland, Sybase
Materialized Views for Mobile Databases

Bob Allen, Visiting Professorial Fellow, Victoria Uni of Wellington
Model-Orientated Scientific Research Methods

Foh Chuan Heng, Nanyang Technological Uni (NTU), Singapore
Data Traffic Management in Data Center Networks

Steven Guan, **Xi'an Jiaotong,** Liverpool Uni, Suzhou, China
Modelling and Design of Self-Modifying Protocols for Autonomic Communications

Shahida Jabeen, Victoria Uni of Wellington
Improving Contextual Relatedness for Scaffolding NLP Applications by Using External Knowledge Sources

Jawad Mirza, Victoria Uni of Wellington
Codebook Design for Limited Feedback MIMO Systems

Christian Rolf, Lund Uni, Sweden
Parallelism in Constraint Programming

Ferry Hendrikx, Victoria Uni of Wellington
OpenRep: A Distributed Reputation System Architecture

Marco Servetto, Victoria Uni of Wellington
Strong Exception-Safety for Checked and Unchecked Exceptions

Siva Dorairaj, Victoria Uni of Wellington
The Theory of One-Team: Agile Software Development with Distributed Teams

Praveen Choppala, Victoria Uni of Wellington
Bayesian Multiple Target Tracking

Marcus King, Industrial Research Ltd.
IPENZ Networking and Information Evening

David Streader, Uni of Waikato
Putting Semantics and Interpretations First

Marco Servetto, Victoria Uni of Wellington
DEEPFJIG Modular Composition of Nested Classes

Ranald Clouston, Australian National Uni, Canberra, Australia
Reasoning about Computing Syntax

PhD Theses

Urvesh Bhowan—*Genetic Programming for Classification with Unbalanced Data*
Benjamin Palmer—*Anonymously Establishing Digital Provenance in Reseller Chains*
Yun Zhang—Exploiting Latent Information in Recommender Systems

MSc Theses

Ryan Chard—*Reputation Description & Interpretation*

Ashfag Thaufeeg—*Towards a Social Cloud Framework for Collaborative eRearch*
Craig Anderson—*Speech Enhancement Using Multiple Transducers*
Harsha Raja—*Referential Integrity in Cloud NqSQL Databases*

Suzan Hall

AUT

News

The ACM Conference on International Computing Education Research (ICER 2012) was held on 10–11 Sep 2012 at AUT, preceded by a Doctoral consortium that was supported by the Software Engineering research lab and had sixteen attendees. This was the first time this conference has been held in New Zealand, and vice-chancellor **Derek McCormack** welcomed delegates to AUT and Auckland. A keynote address by **Jan Meyer** of Queensland Uni discussed the notion of 'threshold concepts', those difficult hurdles to learning, which once traversed bring about a transformation in students' understanding of a discipline.
More info: SERL www.serl.aut.ac.nz

Sabbatical

Sergei Gulyaev was on research and study leave in the US in Aug and Sep this year. Most of this time he worked at the Maria Mitchel Astronomical Observatory in Nantucket (near Boston, Massachusetts). His research work studied giant atoms in galactic star formation regions. He visited the US National Radio Astronomical Observatory in Socorro, New Mexico, where the array of radio telescopes called Very Large Array (VLA) is located. He met with colleagues and gave a seminar at NRAO. Sergei also visited the SpaceX Headquarters in LA. AUT collaboration with SpaceX includes the use of our 12m radio telescope in Warkworth for tracking SpaceX spacecraft.

Appointments and Departures

Tony Clear has been appointed to the role of Associate Dean Research within the Faculty of Design and Creative Technologies. This is a three year appointment. In this role he will be responsible for the support and development of research across the diverse schools of the Faculty (Art & Design, Communication Studies, Engineering, Computing and Mathematical Sciences).

Nurul Sarkar was promoted to the status of Associate Professor. At the same time, **Alastair Nisbett** and **Katharina Parry** joined the School of Computing & Mathematical Sciences as a fixed term lecturers.

We welcome:
Anne Philpott to the role of Academic Advisor in the School

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Stephen Thorpe to the role of Deputy Head of School
Parma Nand as Programme Leader for the Bachelor of Computer information Science programme
Frances Billot joined the School of Computing & Mathematical Sciences as School Registrar
Greg Knowles joined the School of Computing & Mathematical Sciences as Technical Resources Manager

We farewell **Petteri Kaskenpalo, Guanghua (Andy) Lian** and **Gwyn Claxton** from the permanent academic staff.

Seminars

Martin Huschenbett, Technische Uni Ilmenau
Tree-Automatic Linear Orderings
Muhammad Asif Naeem, AUT
A Lightweight Stream-based Join with Limited Resource Consumption
Alexander Meduna, Brno Uni of Technology
Deep Pushdown Automata
Tim McNamara and **Benjamin Roberts**, New Zealand eScience Infrastructure
The What, Why and How To of the New Zealand eScience Infrastructure
Dharmendra Sharma from Uni of Canberra, Australia
ICT and the New Knowledge Society
Farida Kachapova, AUT
Consistency proof for an intuitionistic theory with types
Xijin Tang, Chinese Academy of Sciences
How to get a rough image from community opinions?
Ankit Chaudhary, Birla Institute of Technology & Science
Vision based Robotics and Virtual Hand
Sergiy Klymchuk, AUT
Enhancing Students' Understanding of Calculus
Quan Bai, AUT
Provenance and provenance-based trust evaluation

Visitors

From China Jiliang Uni, China: **Jessica Wang Xiiu Min, Xiu-Hui Wang, Xianting Zeng**, **Li Jun, Zhanyi Xu** and **Lin Xiang**
Martin Huschenbett, Technische Uni, Ilmenau, Germany
Alexander Meduna, Brno Uni of Technology, Czech Republic
Dharmendra Sharma from Uni of Canberra, Australia
Xijin Tang, Chinese Academy of Sciences, China
Ankit Chaudhary, Birla Institute of Technology & Science, India

PhD Theses

Thamilini Arunachalam—*A computational theory of language*
Ye (Gary) Chen—*High-Speed Algorithms for Batch and Active Mode Network Intrusion Detection using Machine Learning Techniques*

Alan Litchfield—*The semantics of work in a work system: A pragmatic philosophy of information systems*
Tian Min (Maggie) Ma—*Local and Personalised Modelling for Renal Medical Decision Support Systems*
Haza Nuzly Abdull Hamed—*Novel integrated methods of evolving spiking neural network and particle swarm optimisation*
Waseem Ahmad—*Natural Immune Systems for Developing Novel Machine Learning Algorithms*
Parma Nand—*Resolving Co-reference Anaphora Using Semantic Constraints*

Saide Lo

Canterbury

News

The department held a very successful internal conference on 23-24 Aug, organised by and for postgraduate students.

Computer Science in Schools update
We are nearing the end of the second year of CS achievement standards being phased in to high schools. In Dec there will be two (identical) PD workshops for teachers, sponsored by Google and run at Canterbury and Victoria. Academics from CS departments are invited to attend and contribute.
More info: (http://cosc.canterbury.ac.nz/cs4hs/)

In addition, Google have sponsored a project at Canterbury to author a free online textbook to support the new topics in NCEA. Next year is the final year of phasing in the new standards, with the introduction of achievement standards for year 13 students. The first cohort of new students will reach universities in 2014, and departments will need to plan for this.
For more information please contact Tim Bell (tim.bell@canterbury.ac.nz).

Appointments and departures

Matthias Galster has been appointed as a lecturer and will join the department at the start of 2013. He comes from the Software Engineering and Architecture (SEARCH) group at the Uni of Groningen, The Netherlands.
Paul McKeown has been appointed as a senior tutor.
Alex Forster has been appointed as an administrator.
Steven Sykes has been appointed as an assistant systems manager.
Ray Hunt has retired after a long career in the department.

Visitors

Lena Wosinska (KTH, Sweden) and **Dipak Ghosal** (UC Davis) have been visiting on Erskine fellowships.

Awards

Tim Bell received the Uni of Canterbury innovation medal for his work on the Computer Science Unplugged project.
Muhammad Asad Arfeen, a PhD student, has been awarded a Student Travel Grant by the Program Committee of the 2012 Australasian Telecommunication Networks and Applications Conference, for presenting a paper entitled *Towards a Combined Traffic Modeling Framework for Access and Core Networks* at ATNAC 2012, in Brisbane, Australia.
Neville Churcher was invited to the 2012 Google North America Faculty Summit in July.
Krys Pawlikowski received a grant from NAFOSTED (The National Foundation for Science & Technology Development of Vietnam) for giving a tutorial on quantitative stochastic simulation during ICCE 2012 in Hue, Vietnam.

PhD Theses

Sagaya Amalathas—*Towards a Framework for Embedded ITSs*

MSc Theses

Alexander Chernoglazov—*Improving Visualisation of Large Multi-Variate Datasets*
Geoffrey Clark—*Improving the Energy Efficiency and Transmission Reliability of Battery-Powered Sensor Nodes at the Edges of a Mains-Powered Wireless Network*
Ben McDonald—*Automating the layout of images for large, shared displays*
Giles Westerfield—*Intelligent Augmented Reality for Assembly and Maintenance*
Brenda Zheng—*Vision-based Feature Recognition and Obstacle Detection for Drive Assistance in Indoor Environments*
Huaqing Chen—*Analysis and processing of HRCT images of the lung for Automatic segmentation and nodule detection*
Jacky Tay—*Algorithms for Tissue Image Analysis using Multifractal Techniques*

Tim Bell

Waikato

News

Kathryn Hempstalk, ex UoW PhD student, won the category of "Emerging Scientist" for her work with the cow camera at the recent Kudos Awards.
More info: (http://www.thekudos.org.nz/)

Scholarships

Katrina (Katie) de Lange who is currently completing her BCMS(Hons), has been awarded a Woolf Fisher Scholarship. She is a Hillary Scholar, three-time UoW Summer Research Scholarship holder, and recipient of numerous other awards. This award will fund Katie's doctoral studies in biomedical informatics at the Uni of Cambridge.

Grants

Richard Nelson received MSI funding to develop and extend Wand's Active Measurement Project (AMP) software: *Comprehensive monitoring of NZ's digital infrastructure*

Awards

Chin-En (Keith) Soo from Computer Graphic Design won a 2012 Faculty Teaching Excellence Awards.

BCMS(Hons) student **Korii Scrivener** has been awarded a 2012 Te Raranga Matauranga Award by Waikato Graduate Women's Charitable Trust.

Annika Hinze has been awarded a place in the 2012 NZ Women in Leadership programme.

The IEEE Communications Letters Editorial Board has thanked **Tony McGregor** for his exemplary reviews for the journal. He has received a certificate of appreciation for his service.

Seminars

Aniket Mahanti, Uni of Auckland. Oct.
Content Sharing Dynamics in the Global File Hosting Landscape
Daniel Cunliffe, Uni of Glamorgan Wales. Sep.
FaceBook and the Welsh Language – 3 brief Views
Michael Witbrock, Vice President Research at Cycorp. Sep.
Opportunities in Good, Old-Fashioned, AI.
Dave Nichols, UoW. Aug.
Metrics for Openness
Anthony Blake, PhD, UoW. Jun.
Computing the fast Fourier transform on SIMD microprocessors
Marcelo Teixeira, Uni of Santa Catarina, Brazil. Jun.
Using Distinguishers in the Local Modular Control of Discrete Event Systems
Craig Shock, PhD, UoW. Jun.
Patterns of change: Can modifiable software have high coupling?
Jens Dietrich, School of Engineering and Advanced Technology (SEAT), Massey, Palmerston North. May.
Dynamic Component Compostion – Vision vs Reality
Paul Monigatti, UoW. May.
Improved grid integration of intermittent electricity generation using electric vehicles for storage: A simulation study.
Luis Torgo, Dep of Computer Science, Uni of Porto, Portugal. May
Modeling Deviations from Expected Behaviour

Visitors

Ralf Heese, Freie Uni, Berlin.
Daniel Cunliffe, Comp and Math Sciences, Faculty of Advanced Technology, Uni of Glamorgan, Wales. Sep.
Li-Min Chen, Visual Design, National Kaohsiung Normal Uni (Taiwan). Aug-Jan.
Michael Twidale , Grad School of Library and Information Science, Uni of Illinois). Aug.
Stephen Downie, Graduate School for Library Information Science, Illinois Uni, USA. May.
Josh Bailey, Google. May.
Marcelo Teixeira, Uni of Santa Catarina, Brazil. May 2012-Jan 2013.

PhD Theses

Craig Schock—*Patterns of change: can modifiable software have high coupling?*
Anthony Blake—*Computing the fast fourier transform on SIMD microprocessors*

MScTheses

Mohammed Al Mutirui—*Power and energy visualisation in the home*
Saeed Al-Qahtani—*The paperless organization: improved processes and reduction in paper usage through wider use of elecronic documents and tablet computers*
Muteeb Alahmari—*Personal semantic timeframe*
Majed Alrowaily—*Energy monitoring through social networks*
Hassan Alyamani—*CatchIt: Capturing cues of bookmarked moment to feed digital parrot*
John Cocks—*Diacritic restoration and the development of a part-of-speech tagset for the Māori language*
Simon Crosby—*Parallelization of JStar programs on a distributed computer*
Jesse Dean—*Using motion controllers in virtual conferencing*
Feifei Lin—*Analysing reverse engineering techniques for interactive systems*
Bob Tho Duy Pham—*Visualize online collocation dictionary with force-directed graph*
Chao Zhao—*Anonymous mobile service collaboration*

ME Thesis

Papitha Calder—*An interactive user management system for multilingual documents: a case study of the Pei Jones collection*

Lincoln

News

Pat Anthony was Program Chair at the PRICAI 2012, Kuching, Sarawak, Malaysia. She is also co-editor for Springer Lecture Notes in Computer Science, Vol 7458. (http://www.springer.com/computer/ai/book/978-3-642-32694-3)

Shirley Gibbs attended the Inaugural NZ and Australia Women in IT Conference held in Christchurch in Oct and gave an invited presentation "Computer self-efficacy – is there a gender gap in tertiary level introductory computing classes?"

Appointment

Patricia Anthony has been appointed lecturer. Pat arrived from Uni Malaysia Sabah with research interests in Software Agents and Semantic Agents.

Seminars and Events

In Sep the dept hosted a meeting of its Industry Liaison Group. The theme for the meeting was IT in the Land Based Sector – with invitations extended to those specifically involved in the technology side of land based industries. **Walt Abell** spoke of his current special topic in mobile development. The recurring belief among industry is the deficiency of mobile applications to provide non-computer specialist end-users (such as farmers) with practical and simple interfaces for diverse and complex data. **Stuart Charters** is planning teaching in sensors and sensor networks with the application for wireless networks using different sensors, on the land and elsewhere, growing worldwide.

Visitors

In an endeavour to enthuse youth about Computing, the Dept hosted various young people in Sep and Oct as they programmed LEGO Robots in RoboLab and bouncy sprites in Scratch. These Science Fair winners and Maori pupils interested in ICT will hopefully be our future computing and ICT experts.

We recently hosted visitors from rural telco Farmside and the Canterbury Development Corporation to talk about our courses and skill availability and shortfall in industry. Everyone agreed that computing is all pervasive and there is a shortage of both general and specific skills out there.

PhD Thesis

Mohammad Daradkeh—*Information visualisation to support informed decision-making under uncertainty and risk*

Sharon Long

Auckland

News

The Dept has been gifted three scholarships, an internship and OneTick software by **Leonid Frants**, President and Founder

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of OneMarketData. Leonid graduated from the Dept and was an Annual Prize winner in 1983. OneTick is an integrated database for tick capture, retrieval and archiving.

Georgy Gimel'farb and Robert Amor presented inaugural professorial lectures.

Successes

Ian Watson was invited to be on the Turing Centenary Advisory Committee of The Alan Turing Year
More info: http://www.turingcentenary.eu/

Safurah Abdul Jalil, **Beryl Plimmer and Ian Warren** received a best paper award for "Deconstructing Graphical User Interface for Learning Visual Aesthetics", at ICCSE 2012.

Jim Warren received the Branko Cesnik Award for Best Scientific Paper at the Australian Health Infomatics Conference for "Using the general practice EMR for improving blood pressure medication adherence"
Abstract at http://www.ncbi.nlm.nih.gov/pubmed/22797046.

Ralf Haeusler (PhD student of **Reinhard Klette**) is the winner of the 2012 Akira Nakamura Award for his paper "Analysis of KITTI Data for Stereo Analysis with Stereo Confidence Measures", accepted for the ECCV workshop on Unsolved Problems in Optical Flow and Stereo Estimation.

Jordan Thom and **Henjie Wang** (Part-4 SE students of **Gill Dobbie** and **Yun Sing Koh**) are SPARK $100K Challenge Qualifiers

Andrew Luxton-Reilly, **Paul Denny** and **Ewan Tempero** are recipients of a Learning Enhancement Grant (LEG) for their project "Supporting Interactive Faded Working Examples".

The Computer Science Research Programming Team picked up a Faculty of Science Professional Staff Award in Quality Performance under Systems Development. The team includes **Wannes van der Mark**, **Aniruddh Gandhi**, **Sarah Henderson, Arturo Blas Jaminez**, and **Habib Naderi**.

Remco Bouckaert and **Alexei Drummond** published a paper "Mapping the Origins and Expansion of the Indo-European Language Family" in Science.

Our Dept sponsored the NZOI Olympiad team, two of whom won bronze medals at the annual International Olympiad in Informatics.

Appointments

Robert Amor will take on the role of HoD, starting in Feb 2013.
We welcome **Yun Sing Koh, Aniket Mahanti** and **Pat Langley** to the academic staff, and **Shafiq Alam, Santiago Franco** and **Alexander Gavryushkin** as postdoctoral fellows.

Events and Seminars

Steven Galbraith, Uni of Auckland
The approximate GCD problem and homomorphic encryption
Robert Amor, Uni of Auckland
Kinect to Architecture
Gerald Weber, Uni of Auckland
Form- and Fact-Based Modeling
Andrew Luxton-Reilly, Uni of Auckland
Activities, affordances and attitude --- how student-generated questions assist learning
Shafiq Alam, Uni of Auckland
Swarms, clustering and recommender systems
Robert Sheehan, Uni of Auckland
Making games the easy way?
Ian Warren, Uni of Auckland
Push Notification: An Empirical Study
Georgy Gimel'farb, Uni of Auckland
Magic and the challenge of computer vision (inaugural professorial lecture)
Patrice Delmas, **Georgy Gimel'farb**, and **Radu Nicolescu**, Uni of Auckland
(BP + DP)/2 = CP: Discrete Global Optimisation by Concurrent Propagation
Clark Thomborson, Uni of Auckland
Technology and Privacy Forum: A graphic expression for privacy and identity claims
Richard Hosking, Uni of Auckland
Extending our digital record: Community Data Governance in eScience
Francois Nezan, INSA Rennes
An improved dataflow approach for multicore embedded systems design
Danny Wei, Uni of Auckland
Towards a Quantitative Model for Measuring the Usability of Certain Genres of Video Games
Bakh Khoussainov, Uni of Auckland
On finitely presented expansions of semigroups, groups, and algebras
Craig Sutherland, Uni of Auckland
Adding Annotation Capabilities to an IDE
AProf Sebastian Link, Uni of Auckland
Dependence, Independence, Logic
Michael Witbrock, VP of Research at Cycorp
Opportunities in Good Old-Fashioned AI
the academic staff in the Department of Computer Science
Computer Science Departmental Research Hors D'Oeuvres (3 seminars)
Robert Amor, Uni of Auckland
Interoperability
Robert Amor, Uni of Auckland
$10 million a day: the promise of construction interoperability (inaugural professorial lecture)
David Huang, Uni of Auckland

Kernel-Tree: Mining Frequent Patterns in a Data Stream based on Forecast Support

Visitors

Georgianne Griffiths (Marie Curie Fellowship), Uni of Exeter, UK – visiting Alexei Drummond

Jean-Francois Nozan, Institute of Electronics and Telecommunications of Rennes – visiting **Patrice Delmas**

Mutsuhiro Terauchi, Hiroshima International Uni – visiting **Reinhard Klette**

Hongmou Zhang, North China Electric Power Uni – visiting **Reinhard Klette**

Jacques Raynaud, **Remy Boet** and **Benjamin Sourd**, Ecole Speciale Militaire de Saint-Cyr – visiting **Patrice Delmas**

Agnar Aamodt, Norwegian Uni of Science and Technology – visiting Ian Watson

Reinhard Koch, Christian-Albrechts-Uni Keil, Germany – visiting Reinhard Klette

Michael Liebert and **Johannes Kaufmann**, Uni of Applied Sciences Augsburg – visiting **Giovanni Russello**

Maximilian Körner, Uni of Applied Sciences Augsburg – visiting **Manoharan**

Amelie Cordier, LIRIS Laboratory, Lyon Uni, France – visiting **Ian Watson**

PhD Theses

> **Andrew Luxton-Reilly**—*The Design and Evaluation of StudySieve, a Tool that supports Student-Generated Free-Response Questions, Answers and Evaluations*
> **Jonathon Teutenberg**—*On the Transformation of Accent*
> **Aniriuddh Gandhi**—*Automata and game theoretic models of computation*
> **Shafiq Alam**—*Clustering, Swarms and Recommender Systems*

Heather Armstrong

Massey
News — Albany Campus

Ken Hawick has been appointed Fellow of the British Computer Society Fellowship. He is already Fellow of the Institute of Physics and of the Royal Meteorological Society.

Ian Bond and his PhD student **Michael Zhao** are continuing to make great headway exploring planets as part of the MOA astrophysical team.

Appointments

In May, **Chris Scogings** took over as the Programme Director for the Bachelor of Information Sciences. The "new look" BInfSc now offers majors in Computer Science, Information Technology and Software Engineering. Chris will also be presenting the paper "An Agent-Based Model of the Battle of Isandlwana" at the Winter Simulation Conference (Berlin, Germany) in Dec 2012.

Andre Barczak has taken over **Chris Scogings'** role as Major Leader for Computer Science at Albany. **Andre Barczak** and **Napoleon Reyes** have also made great headway this year in developing a new software infrastructure for the robot soccer system. This has proved a valuable platform for student projects and this software gives the Computer Vision group a new area for research growth.

Elena Calude has been promoted to Senior Lecturer. Elena has recently published an article on "The complexity of Riemann's Hypothesis" in the Journal for Multiple-Valued Logic and Soft Computing.

Daniel Playne has taken over the directorship of the Centre for Parallel Computing Research and is repositioning CPC to focus on research into parallel computing algorithms, parallel languages and data-parallel computing based on the use of graphical processing units (GPUs). **Martin Johnson** had led CPC to successes in grid computing but Martin is now focussing on energy–efficient parallel computing. Martin and Ken published a peer–reviewed article on this earlier in the year.

Grants

Ken Hawick has received funds for two summer internships this year that will support students developing simulations on mobile tablet computers.

PhD

> **Teo Susnjak**—*Efficient Boosted Ensemble-Based Machine Learning in the Context of Cascaded Frameworks*
> (This thesis has been placed on the Dean's list of exceptional theses)

MSc Thesis

> **Delan Ren**—*An Ant Colony Simulator*

Chris Scogings

Massey
News — Palmerston North Campus

The IT group at the Albany campus will join the School of Engineering and Advanced Technology, which will almost double the number of academics who are involved in research and teaching in the areas of computer science and information technology within the School.

Appointment

Stephen Marsland has been promoted to professor of scientific computing in recognition of his contributions to the international research community and Massey Uni.

Visitor

Ines Moosdorf, Freie Uni, Berlin is visiting the CSIT group in Palmerston North. For six months she will work on abnormal behaviour detection in smart environments using formal concept analysis.

PhD Theses

Sook-Ling "Linda" Chua—*Methods for recognising behaviour in smart homes, based on both supervised and unsupervised machine learning techniques*
Yuliya Bozhko—*Improving support for lifelong learning in universities through enhanced e-portfolio systems*

Hans Guesgen

Otago CS

News

Brendan McCane, Steven Mills and PhD student **Nabeel Khan,** with **William Levack** from the Wellington Medical School, made it to the final of Otago Innovation's inaugural APPSTAR competition for innovative mobile applications.

Ali Knott gave a talk for TEDx Auckland on 6 Oct. His topic was "How to teach computers to talk". The talk was about his book, Sensorimotor Cognition and Natural Language Syntax, which is to be published by MIT Press in Nov.
More info: http://mitpress.mit.edu/9780262017763

Under the guidance of **David Eyers**, the Dept is again competing in the South Pacific Programming Contest.

Conferences

The dept will be hosting the *Image and Vision Computing New Zealand* conference from 26-28 Nov.
More info: http://www.cs.otago.ac.nz/ivcnz2012

We will also be hosting the *Australasian Document Computing Symposium* 2012 on 5-6 Dec.
More info: www.cs.otago.ac.nz/research/conferences/adcs-altw-2012

Another event to be hosted at Otago is the *Australasian Language Technology Workshop 2012*, 4-6 Dec.
More info: http://www.alta.asn.au/events/alta2012/

Zhiyi Huang is co-chair of the *2013 International Workshop on Programming Models and Applications for Multicores and Manycores*
More info: http://www.cs.otago.ac.nz/pmam2013/

Appointments

Michael Albert will take over as Head of Dept from **Brendan McCane,** from 1 Jan 2013.

Awards

Anthony Robins won one of the three Uni of Otago teaching excellence awards. All winners received a grant to support student learning and teaching. In Jul **Anthony** also became one of 12 recipients of a national teaching award from the National Centre for Tertiary Teaching Excellence. From the award citation: "**Anthony Robins** has made a significant impact in the field of computer science nationally and internationally, and is considered by his peers to be one of the leading researchers in computer science education. His unique contributions range from his involvement in developing the national curriculum in Digital Technology for secondary schools to groundbreaking research in the development of the Learning Edge Momentum model of student learning that is influencing how programming is taught."

Seminars

Jul
Michael E Wall, Los Alamos National Laboratory
Landscapes in Biology
Yuwei Xu - Dept of Information Science
Optimizing Routing in Multi-hop Wireless Networks using Analytical Capacity Estimation: A Study on Video Streaming
Mark Moir, Oracle
Hardware Transactional Memory: Potential and Progress
Steven Mills, Dept of Computer Science
Global Seamline Networks for Orthomosaics via Local Search
David Eyers, Dept of Computer Science
The Great Firewall of Otago?

Aug
Grant Dick, Dep of Information Science
Evolutionary Search of Finite State Automata Representations for the Tartarus Problem.

Sep
Michael Winikoff, Dept of Information Science
Towards Assuring Adaptive Software
Andrew Trotman, Department of Computer Science
FourARM pain from banging in the IR lab
Tony Savarimuthu, Dept of Information Science
The role of social norms in energy conservation - a simulation-based study
Brendan McCane, Dept of Computer Science
The Linear Space of All Images Smaller than 32x32

Oct
Peter Whigham, Dept of Information Science
The Secret Lives of Cats
Thomas Verbeek and **Geoff Wyvill**, Dept of Computer Science
What is all this noise about?

PhD Thesis

Halizah Basiron—*A Statistical Model of Error Correction for Computed Assisted Language Learning Systems*

MSc Theses

Thomas Harper—*A Comparative Study of Function Approximators Involving Neural Networks*
Jie Fu—*Learning Hierarchical Sparse Filters for Feature Matching*

Robert Pollock