

## Appointments

### Otago IS

**Dr Robert Kozma**

Lecturer

Neural networks and hybrid tools of artificial intelligence, connectionist based intelligent information systems, advanced signal processing, time series analysis and forecasting, dynamic systems and chaos engineering, collective behaviour and self organisation in complex systems

## Visitors

### Otago IS

**Professor Takeshi Yamakawa** (Nov – Dec '97)

Kyushu Institute of Technology, Japan

Fuzzy systems and neural networks

**Professor John Hughes** (October '97 – February '98)

University of Technology, Sydney, Australia

Software engineering – methods and education

### Canterbury

**Dr Jorge Cuellar** (March – April)

SIEMENS AG Research Labs, Munich, Germany

Specification and verification of distributed systems

**Professor Marco Marsan** (July – August)

Dipartimento di Elettronica, Politecnico di Torino, Torino, Italy

Petri nets, data communication networks, discrete-event simulation

### Waikato

**Dr Suzanne Bunton** (February – March)

University of Washington, Seattle, USA

Data compression and machine learning

**Professor Vaclav Dvorak** (March – June)

Computer Science & Engineering, Technical University of Brno, Czech Republic

Computer architecture, parallel and distributed computing and reconfigurable systems

**Dr Carl Gutwin** (January – June)

University of Calgary, Calgary, Canada

Digital libraries and computer supported collaborative work

**Dr Rob Holte** (January – May)

Computer Science, University of Ottawa, Canada

Machine learning, digital libraries and heuristic speech

**Abhijit Sen** (July '97 – June '98)

Computer Information Systems, Kwantlen University College, Surrey, Canada

Data communication and software engineering

## Departmental News

### Canterbury

**On the Move:** The main event of the year is that we will finally move into a new building, which we will share with mathematics. This move is scheduled to occur during the Easter vacation and will give us significantly more laboratory and office space. As part of the move we will also see a very welcome upgrade to our computing and other (e.g. AV) facilities.

**Lecturer on the Move:** Unfortunately Michel deChaplain has left us for icier pastures. He has returned to an associate professorship at Concordia University in Montreal. His lecturership has been readvertised and we are in the process of inviting 3 shortlisted candidates for interviews.

In the meantime one of our graduate students, Warwick Irwin, has been employed on a temporary position for teaching parts of a course Michel was involved in.

Wolfgang Kreutzer

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## Lincoln

**New name for Computing at Lincoln:** As a result of the restructuring at Lincoln University, the academic section of the former Centre for Computing and Biometrics is now known as the Applied Computing, Mathematics and Statistics Group, within the Applied Management and Computing Division. The head of the group is Keith Unsworth, and the head of the division is John Lay.

**Applied Computing Enrolments up in 1998:** Enrolments in our first year programming paper are up 80% this year. This is particularly pleasing, given that first year enrolments at Lincoln this year are slightly down. It probably reflects our move from traditional structured programming in Pascal to teaching in Visual Basic. Indeed there are a number of staff enrolments from people wanting to learn how to automate their Microsoft based applications.

A feature of our 200 and 300 level computing classes this semester is the unusually high percentage of women enrolled, ranging from 24% to 45%.

**Asia2000 Grant:** Keith Unsworth has received a grant from Asia2000 to support a six months visit to Lincoln University by Associate Professor Abdul Rahni of the School of Mathematical Sciences, Universiti Sains Malaysia. The work which will be carried during the visit is concerned with the application of shape preserving surfaces to the transport of pollutants in aquifers, and the visualization of such surfaces.

The visit was supposed to start in May 1998, but because of the current Malaysian financial crisis, it has been postponed until 1999.

Elizabeth Post

## Massey

**Reorganisation at Massey... or goodbye Computer Science:** Things have been changed at Massey University, perhaps things needed changing but the rationale for the changes and the result are somewhat bizarre. The reorganisation started with a rationalisation of the faculty structure within the University. In this, the University organisational structure was changed from about 10 faculties (there were some not quite faculties that lost their existence as well) to 4 colleges. Computer Science was one of four departments in the Faculty of Mathematics and Information Sciences (FIMS) and now we are in the College of Sciences (well we don't really exist, but I'll come to that later), along with the natural sciences, Technology, Ag/Hort and the Vet Faculty. Of the new Colleges, Science has decided to reorganise into larger "Business units". In fact this reorganisation has nothing to do with teaching programs but is allegedly along research lines, with departments disappearing and Institutes rising out of their combined ashes. Mind you, how you separate research from teaching and how resource allocation will be managed is anybody's guess. Well now lets

come to the ex Department of Computer Science, which along with one other department from the former FIMS faculty, Statistics, has formed, with a few non-FIMS people from Production Technology, the Institute of Information Sciences and Technology. Some of you may ask where is the department of Information Sciences in all of this, well they jumped ship, not wanting to be reorganised, and ended up in the Business College. Well that is not quite true either, because if you look at the Albany campus the split was rather different. There we have all ex-departments from the former FIMS faculty joining into one Institute, called the Institute of mathematical and Information Sciences.

Well I hope this has not confused you too much, but don't worry there are still a lot of confused people at Massey University. The point of this short piece is really this: RIP Computer Science at Massey!

Chris Jesshope

## Auckland

**Comings and goings:** Our student enrolments are up by approximately 3% on last year. Three of our staff are taking voluntary retirements: Prof Bob Doran, Dr Alan Creak and Dr Michael Lennon. All will be sorely missed, and fortunately none are planning to sever all ties. Bob Doran will be moving to a half-time Senior Tutor position as from 1 May 1998. We are currently advertising for an Associate Professor, with a closing date of 30 June 1998.

**Change to Java:** The department completed a major change this year, with Java replacing Pascal as the main programming language for teaching. This process began in 1996 with the introduction of Java at stages 3 and 4, followed by its introduction at stage 2 in 1997. This staged approach was taken to ensure that more senior students became familiar with Java before we introduced it at earlier levels—many senior students provide support in demonstrating, marking and tutoring.

The change to Java is a major one, due mainly to its object-oriented nature, but also to the large set of packaged classes that are standard with Java. This has a big impact on the way in which programming is taught, especially at stage one, and also has flow-on effects on the stage two papers. The change has led to much rethinking of how to teach programming, with some staff having had to come to terms with classes, event-handling, applets, and the Web. Adequate tools and textbooks have also been a problem, but are now improving.

Rick Mugridge, Clark Thomborson

## The Audiograph Lecture Recorder

The Audiograph project is an international joint venture between Surrey University in the UK and Massey University in New Zealand. The aim of this project is

to provide easy-to-use and high quality software to support distance and web-based teaching.

This collaboration has just released the first professional version of the Audiograph lecture recorder (a prototype version has been available for over a year).

The Audiograph lecture recorder is an authoring tool which can be used to record formal lectures, tutorials, training material or other presentations for publication on the worldwide web. The recorded lectures are encoded as a file which includes presentation graphics, (e.g. powerpoint slides) graphical annotation and synchronised audio and which can be played from within Netscape using the Audiograph Player plugin.

The key to the success of the Audiograph principle is that it is easy to use and requires little or no knowledge of html to produce professional multimedia results. Anyone who has given a presentation using an overhead projector will feel at home with the audiograph and will quickly be able to prepare audio-graphic material for publishing on the web. The reason for this is that it provides a close simulation of the classical lecture presentation environment.

This release of the Audiograph package is a stable beta release and can be downloaded for free from our Audiograph web site. It includes the recorder, which is a Macintosh application, and Netscape plugins for both Macintosh and PC platforms, so that playback is platform independent. In order to use the package seriously you will need a pen input device as drawing with a mouse is not ideal. But then these devices can be obtained for as little as \$100 US.

The prototype lecture recorder has been used to prepare lecturer-less lectures for courses and tutorials at Surrey University, Massey University and the Open University and a number of other universities are currently evaluating the software.

For download and more information, including demonstrations and documentation, please visit our web site at <http://fims-www.massey.ac.nz/~audiogph>.

Chris Jesshope

## Events

**SIRC 98—10th Annual Colloquium of the Spatial Information Research Centre**  
Dunedin (Otago IS) 16–19 November '98

Theme: Looking toward the next decade of spatial information research

Paper submission important dates:

Now!!	Register intent to contribute a paper
15 May	Submit abstract 500-1000 words
1 June	Notification of provisional acceptance
1 August	Submit full paper for review
5 September	Notification of final acceptance and/or revision
5 October	Final submission deadline

Poster submission important dates:

1 July	Submit extended abstracts 1000-2000 words
1 August	Notification of acceptance and/or revision
5 October	Final submission deadline

For further information and to register your interest contact:

Dr Peter Firns  
email: [pfirms@infoscience.otago.ac.nz](mailto:pfirms@infoscience.otago.ac.nz)  
or visit: <http://divcom.otago.ac.nz:800/sirc/sirc98/>

**ACSW'99—Australasian Computer Science Week**  
Auckland 18–21 January '99

The last conferences this millennium of the Australasian Computer Science Association will be hosted by the Computer Science Department at the University of Auckland. This is only the second time that these conferences have been held in New Zealand.

ACSW'99 will incorporate the following conferences:

- ACSC'99 – The 21st Australasian Computer Science Conference
- ACAC'99 – The Australasian Computer Architecture Conference
- ADC'99 – The Australian Database Conference
- CATS'99 – The Australasian Theory Symposium

All conferences will have proceedings published by Springer. We are hoping that there will be a wide range of papers selected from New Zealand. More details, including calls for papers for the individual conferences, are available at:

<http://www.tcs.auckland.ac.nz/~acsw99/>

Organizing Chair: Professor Bob Doran  
Computer Science Department  
E-mail Address: [bob@cs.auckland.ac.nz](mailto:bob@cs.auckland.ac.nz)

## Conference Report

**SE:E&P'98—Software Engineering: Education and Practice**

Dunedin (Otago IS) January '98

In January of this year the Information Science department hosted their third biennial conference on aspects of software engineering education and practice. Once again, around 70 delegates from Australasia, Asia, Europe and America gathered to discuss the burning issues in contemporary software engineering, with particularly lively debate on the issues of first programming languages and the use of the Internet for both systems development and software engineering education. The social programme included an entertaining excursion to the wildlife colonies around Dunedin, and an excellent conference dinner. And the weather... brilliantly fine!

Steve MacDonell

## Postgraduate News

### Lincoln

Blair Cassidy was awarded his PhD in February. The title of his thesis is “Simulating the stress-strain properties of woollen yarns”. His supervisor was Dr Don Kulasiri, lecturer in Applied Computing, Mathematics and Statistics at Lincoln University, and associate supervisor Denis Maddever of WRONZ (Wool Research Organisation of New Zealand). This work was funded by a WRONZ research fellowship.

According to all the examiners Blair’s thesis was outstanding and very impressive. His stochastic and discrete approach to a problem traditionally approached by continuum mechanics formulations was groundbreaking. The overseas examiner, a world authority in yarn mechanics and modelling, thought the research was ‘world class’ and was very positive about the thesis. Congratulations to Dr Blair Cassidy for his outstanding achievement!

Elizabeth Post

## Masters Theses

### Otago IS

1998

M. McGuire—*Navigating cyberspace*

1997

M. Bailey—*Developing intelligent information systems*

H. Munro—*Visualisation of near infra-red (NIR) data*

S. Sinclair—*Isolated speech digit recognition systems*

## Canterbury

1998

Stuart Yeates—*Design pattern in garbage collection*

## Waikato

1998

Stephen Hodge—*Visualisation techniques for large tree and graph structures*

1997

Mark Abrahams—*Client-side computing on the Web: case studies in Java*

Wallace Chigona—*The development of a task-specific visualisation tool: TBVS*

Michael Day—*Development of a Calorimetric Alkali Analyser for Kraft pulping*

## PhD Theses

### Lincoln

1998

Blair Cassidy—*Simulating the stress-strain properties of woollen yarns*

## Waikato

1998

Leonard Trigg—*Designing similarity functions*

1997

Tony McGregor—*Block-based distributed file systems*