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## MESSAGE FROM THE PRESIDENT

Hello and welcome to SoIT's news.

Can I start this edition by congratulating all those alumni who recently attended their graduation ceremony, and welcome you to the alumni community on behalf of the USITAA executive. To keep up with the latest happenings in the School of IT, you can join our Facebook and LinkedIn groups online. We look forward to seeing you at future events.

At this time of the year it is also great to reflect on the vast array of talent participating in life at the university, and to offer our congratulations to all those people who have won prizes and scholarships.

There is currently a vacancy on the USITAA executive. We'd love to hear from anyone who would like to get involved in running the association and organising events that will appeal to other alumni. Send any expressions of interest to [sit.alumni@sydney.edu.au](mailto:sit.alumni@sydney.edu.au).

Mark Webb,  
President, USITAA

# ALBERT ZOMAYA HONOURED

The School of IT is celebrating the success of Professor Albert Zomaya who this year is the recipient of two IEEE awards for his commitment to developing resource allocation algorithms and protocols for parallel and distributed computing.

"I feel honoured and very privileged to receive these awards," says Professor Zomaya. "These are prestigious, highly sought after recognitions, and researchers in my field consider them important career milestones. What makes these awards very special is that they have never been awarded to the same person in the same year."

Professor Zomaya received the IEEE Technical Committee on Scalable Computing (TCSC) Medal of Excellence in Scalable Computing in

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Matt Tomsett, Associate Director at KPMG (left), with KPMG Prize for Management of IT Projects & Systems recipient Ricardo Marcon

## 2011 PRIZES & SCHOLARSHIPS PRESENTATION CEREMONY

Student achievement was celebrated on 19 May at the 2011 Prizes and Scholarships Presentation Ceremony.

This year, postgraduate coursework scholarships were included in the ceremony: the School of IT Postgraduate Coursework Half-fee Scholarships were awarded to **Lee Tumbo Kyonze** (MITM) and **Wen Xu** (MIT). The Postgraduate Coursework Entry Scholarships were awarded to **Boban Bojkovski**, **Zehao Li** and **Karen Mansukhani**.

The following prizes were presented:

The Allan Bromley Prize - **Dominick Ng**

The Professor John Rosenberg Prize for Excellence in Computer Science - **Samantha Davis**

The Ian Jackson Memorial Prize - **David Rizzuto**

GS Caird Scholarship in Computer Science - **Peter Ward**

The Accenture Prize - **Matthew Chang**, **Karen Estella**, **Harry Georgouloupoulos**,

**Matthew Hoy**, **Paul Lui** and **Garry Zhong**

Google Prize for Excellence in Computer Science - **Stephen Merity**

The CISCO Prize for Computer Science & the Microsoft Research Asia (MRA) Prize for Multimedia Technologies - **Alexander Legg**

MRA Prize for Senior Software Development Projects - **Jalal Albasri**, **James Alexander**, **Rima Bou-Abdou**, **Owen Miller**, **Andrew Naoum** and **Jeremy Steele**

MRA Scholarship in IT - **Donna Xu**  
HEDLOC Prize in Information Systems - **Paul Lui**

HEDLOC Undergraduate Prize for Algorithms - **Andrew Luong** and **Alexander Sharp**

KPMG Prize for Management of IT Projects & Systems - **Ricardo Marcon**

In addition, the following scholarships were awarded at the Faculty of Engineering and IT presentation ceremony on 31 May:

CSIRO ICT Centre IT Undergraduate Entrance Scholarship - **Ashwin Ramesh** (BIT/BCom) and **Bingquan Wang** (BIT/BCom)

CSIRO ICT Centre IT Undergraduate Scholarship - **Sasha Bermeister** (BIT) and **Fergus Macpherson** (BCST Adv)  
Tata Consultancy Services Undergraduate Scholarship - **Zhaokuan Zhang**

Many thanks to all our sponsors and their representatives: Davin Gibb (CISCO), Greg Darke (Google Australia), Matt Tomsett (KPMG), Dr Alex Selinsky (CSIRO ICT Centre), Bruno Pisano and Katharine Anderson (HEDLOC), and Helene Bauermeister (Tata Consultancy Services).

## NEWS BYTES

### BEST PAPER AWARD

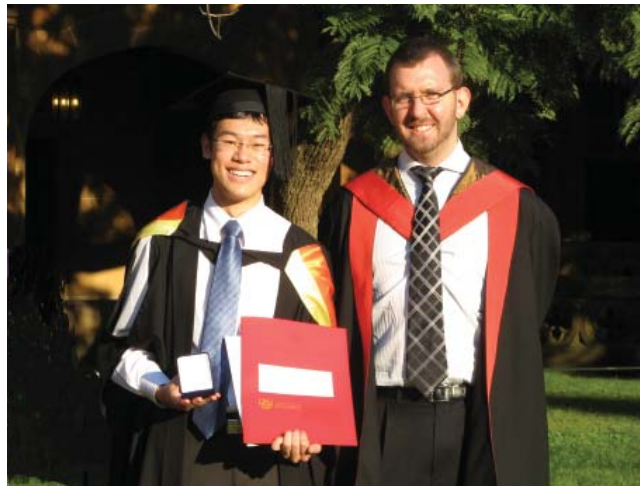
A paper by Honours student Rommel Ceguerra, alumnus Dr Joseph Lizier and staff member Professor Albert Zomaya has received the Best Paper Award at this year's IEEE Symposium on Artificial Life (IEEE ALife). The paper, "Information storage and transfer in the synchronization process in locally-connected networks" resulted from Rommel's thesis work, which in turn drew on work developed in Dr Lizier's doctoral project.

### AKF-ECR TRAVEL GRANT

SIT staff member Dr Young Choon Lee has received a prestigious travel grant for Early Career Researchers provided by the Australia-Korea Foundation and managed by the Australian Academy of Science. The grant will enable Dr Lee to spend time with the Distributed Computing Research Lab at Seoul National University to develop new research links.

### NEW STAFF

The School welcomes Dr Joachim Gudmundsson, who has been appointed an ARC Future Fellow. After obtaining his PhD in computational geometry at Lund University in Sweden in 2000, Dr Gudmundsson spent two years at Utrecht University as a STINT research fellow followed by another two years as an NWO research fellow at TU Eindhoven. In 2005 he became a Principal Researcher at NICTA. His research interests include computational geometry, approximation algorithms, spatio-temporal analysis and data structures.



Honours graduate and University Medallist Dominick Ng with his project supervisor Dr James Curran

## GRADUATIONS

Congratulations to everyone who graduated at the ceremonies held in May. Amongst the undergraduate and postgraduate coursework students were three IT PhD graduates, whose contribution to IT research demonstrates the scope of work being undertaken in the school:

**Mohd Afizi Mohd Shukran**, *Swarm Based Optimization Approach for Data Classification*

**Mahendrarajah Piraveenan**, *Topological Analysis of Complex Networks Using Assortativity*

**Yitao Zhang**, *A Multi-Dimensional Approach to Semantic Analysis of Clinical Case Studies*

A special mention also goes to some of our Honours graduates.

Dominick Ng was the recipient of the University Medal, which caps a distinguished undergraduate career: in 2008 he won both the G S Caird Scholarship in Computer Science and the Cisco Prize for Computer Science. This was followed in 2009 by the award of the Google Australia Prize for Excellence in Computer Science and in 2010 the Allan Bromley Prize for attaining the highest Honours thesis mark.

Another First Class Honours graduate, Teang Hou Yi, won the 2009 Cisco Prize for Computer Science. Audrey Mei Yi Quah was also awarded First Class Honours and was the recipient in 2009 of the HEDLOC Prize in Information Systems.

The School is grateful for the continuing support of our prize and scholarship sponsors in helping our students achieve their dreams.

We wish all our graduates every success in the future!



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## NEW FACULTY ALUMNI OFFICER

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The School of IT welcomes the appointment of Karen Worsfold as the Faculty Alumni Officer.

This new position will allow the university and the faculty to significantly improve our ability to reach and support our many valued alumni. Planned activities include reunions, professional development events, enhanced communication with alumni and building our existing database of alumni contacts.

We are always keen to hear about the achievements of our graduates and catch up on details of what you've been doing with your degree. Please share your story with us. We also welcome any feedback or ideas that you may have regarding our Alumni program and activities; please contact me on +61 9036 9760 or [karen.worsfold@sydney.edu.au](mailto:karen.worsfold@sydney.edu.au).

In order to ensure that you hear about all events, benefits and services that are available to alumni of the University of Sydney, please update your contact details on the website [www.sydney.edu.au/alumni](http://www.sydney.edu.au/alumni). If you know the whereabouts of previous classmates and fellow alumni who may not be receiving information from us, or who have recently moved address, please let us know, or encourage them to update their details.

### ENGINEERING AND IT ALUMNI OF THE YEAR AWARDS FOR 2011 ARE NOW OPEN

Our Alumni are the guardians of the history and culture of our faculty and the university. Since its early beginnings in 1883, our faculty has graduated thousands of students and as each student leaves, they take a piece of this history and culture with them as they become world class researchers, industry leaders, and innovators in Australia and overseas. It is for this reason that Engineering Sydney proudly hosts the Alumni of the Year Award for 2011.

Do you know a former student who has made outstanding contributions and achievements in their field of expertise or in the community? If you do, please nominate them for Alumni of the Year via our website at [sydney.edu.au/engineering/it/alumni/](http://sydney.edu.au/engineering/it/alumni/).

If you wish to submit a nomination in writing please contact Keiran Passmore for a nomination form by phoning 9351 5768 or by email at [keiran.passmore@sydney.edu.au](mailto:keiran.passmore@sydney.edu.au). Nominations close on 14 October 2011.

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# ALBERT ZOMAYA HONOURED

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recognition of his significant and sustained contributions to the scalable computing community through the IEEE Technical Committee on Scalable Computing (TCSC). As part of his recognition, Professor Zomaya presented a keynote speech at last month's IEEE/ACM International Conference on Cluster, Cloud and Grid Computing in Newport Beach, California.

Professor Zomaya was also the recipient of the 2011 Technical Committee on Parallel Processing (TCPP) Outstanding Service Award. The award recognises an individual (or a group of individuals) who have made major professional service contributions to the parallel processing community. Contributions can range from serving a volunteer role in professional meetings and organising journals to developing major events and community resources, and performing international outreach. The award ceremony took place during the 16-20 May IEEE International Parallel and Distributed Processing Symposium (IPDPS) in Anchorage, Alaska.

In 2011, he also became the Editor-in-Chief of IEEE Transactions on Computers, the oldest and one of the most influential journals in computer science in the world, founded over 60 years ago.

Professor Zomaya has been part of the parallel and distributed computing community for more than 20 years and a professor at the School of Information Technologies since 2002.

In 2010 he was awarded the prestigious Australian Research Council Professorial Fellowship for 5 years, which enables him to focus exclusively on driving research in the School of IT. The research is carried out within the University of Sydney Centre for Distributed and High Performance Computing, which was established in 2009 by Professor Zomaya and several of his colleagues.

Distributed computing systems today underpin business, research and development in many fields, such as engineering, finance, life and medical sciences, natural and physical sciences, to name a few. Moreover, high performance computing has been designated as a strength area for the University of Sydney and the Centre enhances and provides more focus for research activities in this field and also provides solutions and leadership in key areas of national importance.

## THE CENTRE FOR DISTRIBUTED AND HIGH PERFORMANCE COMPUTING

Currently, the Centre is a forty member-strong group with a mission to establish a streamlined research, technology exploration and advanced training program. It is a leading centre that undertakes collaborative multi-disciplinary research in support of distributed and high performance computing and related industries to enable advances in information technology and other application domains.

The Centre currently focuses on several themes which build on existing strengths in the School of IT: Algorithmics and Data Mining; Cloud Computing and Green ICT; Internetworking; Service Computing; and Distributed Computing Applications. The different themes are led by accomplished researchers who work on enhancing the educational experience for a diverse set of top-quality graduate and undergraduate students; and advance the knowledge and technologies in the field of Distributed and High Performance Computing and ensure commercial relevance of the research with rapid and effective technology transfer.

## CURRENT RESEARCH

Professor Zomaya's current research focus is on the development of resource allocation methods for green data centres, aimed at reducing the energy consumption of data centre components. Today, ICT stands for about 8% of the world's total energy usage and the numbers are growing rapidly with the proliferation of new services and the continued expansion of ICT in developing areas. A large proportion of the energy usage in this sector comes from high performance computing and data centres and it is of great interest to industry and governments alike to make these centres more energy smart, cost-effective and to be able to reduce their carbon footprint.

"The cloud model is really taking off", says Professor Zomaya. "Not only is it a very natural way for business to roll out new services with reduced CAPEX and risk but the trend is very strong in the consumer segments too, with the explosion of netbooks, tablets and smartphones that use the cloud as a back end platform. There is a fantastic opportunity to make the cloud-based internet green and cost-effective since so much of the problem of space is concentrated to the data centre. We are still at the early stages, but with the progress we have already made it is clear that the potential is huge and we will be able to build much more effective and green computing platforms for the future. It is very exciting."



Some pilot studies of the Med-Graphic Avatar project were presented to the Vice-Chancellor, Dr Michael Spence, during his visit to the BMIT Research Group's Multimedia Lab.

## MED-GRAPHIC AVATAR: A NEW MODEL FOR PERSONAL HEALTH RECORDS

A project proposal by three School of IT researchers was recently announced by the Australian Research Council as one of the successful grant proposals for Linkage projects to commence from July 2011.

An inter-disciplinary project led by the School of Information Technologies' Professor David Feng, Dr Xiu Ying Wang and Dr Tom Cai with Dr Shipeng Li, Dr Wenwu Zhu, Professor Michael Fulham and Associate Professor Stefan Eberl has been awarded a grant of \$386,000 over four years.

The project, Med-Graphic Avatar, is a comprehensive, holistic and customisable model for personal health records.

The Med-Graphic Avatar will open up unprecedented access, intuitive interpretation, smart utilisation, and new

understanding of massive and diverse health data.

Professor Feng, Dr Wang and Dr Cai are members of the School of Information Technologies' Biomedical and Multimedia Information Technology Research Group (BMIT), which was established in 1996.

Directed by Professor Feng, the BMIT Research Group is an internationally-recognised facility which brings together a team of interdisciplinary research experts focused on achieving outcomes which will benefit the healthcare system and multimedia industry. It has collaborative links with Royal Prince Alfred Hospital and other leading hospitals, IBM, Microsoft, and other top institutions in Europe, Asia and the USA.

ENGINEERING &  
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