Prime Minister Gillard opens NICTA’s biggest-ever Techfest

NICTA’s Techfest started with a bang this year with Prime Minister Julia Gillard officially opening the event.

Held at Parliament House Canberra in February, more than 80 of NICTA’s advanced technology projects and demonstrations were on display for the 600-plus people from Government, industry and academia who attended.

In her opening remarks, Prime Minister Gillard spoke of the scale and depth that NICTA has brought to ICT research, training and commercialisation in Australia.

“Last year NICTA had a stellar performance in attracting wealth and creating new jobs, spinning off four new companies and working with major companies such as George Weston Foods, Healthscope and the Commonwealth Bank to improve their productivity and competitiveness.”

“A Deloitte study estimates that NICTA projects will have a combined annual impact of $3 billion a year on the national economy. Innovations conceived through NICTA are part of our everyday lives,” said Prime Minister Gillard.

Other Government officials that attended the event included: Greg Combet, Minister for Climate Change and Energy Efficiency and Minister for Industry and Innovation; Bill Shorten, Minister for Employment and Workplace Relations and Minister for Financial Services and Superannuation; Malcolm Turnbull, Shadow Minister for Communications and Broadband; Warren Truss, Leader of The Nationals; Ian Macfarlane, Shadow Minister for Energy and Resources and John Cobb, Shadow Minister for Agriculture and Food Security.

Research on display included NICTA’s advanced genomic analysis to combat hospital-acquired infection which threatens lives and adds substantial costs to health delivery. NICTA’s Optimisation Research Group demonstrated a flood simulation, 3D visualisation engine, and the optimisation of the evacuation by disaster response teams for a major flooding event in NSW.

Our Software Systems Research Group highlighted their work with the US Defense Advanced Research Projects Agency (DARPA) in developing software to protect critical systems in unmanned vehicles from cyber attack. On display was a quadcopter, which will be used as a research platform for the project.

For the first time in its eight year history, Techfest also featured expert panel sessions on important ICT industry subjects – women in ICT, smart infrastructure and Australia’s ICT skills shortage. Panellists included Senator the Hon. Kate Lundy, Minister for Sport, Multicultural Affairs and Minister Assisting for Industry and Innovation; Suzanne Campbell, CEO, AIIA, and Lachlan Benson, Executive General Manager Industry Relations and Logistics at Sydney Ports Corporation.
We celebrated NICTA’s tenth anniversary with our biggest and best Techfest ever, held at Parliament House in Canberra, with over 600 attendees and opened by the Prime Minister. NICTA was founded in 2003, the result of a competitive bid under the Federal Government’s ‘Backing Australia’s Ability’ initiative. Since then, NICTA has grown into a vital and dynamic contributor to, and leader of, Australia’s digital economy.

We marked this anniversary with a new-look Techfest featuring panel sessions addressing areas of critical economic concern. Professor Stuart Feldman, VP Engineering at Google, Matt Barrie, CEO of Freelancer.com, and Suzanne Campbell, CEO of the AIIA, were joined by student Lucky Katahanas in a lively debate about the future direction of ICT skills development in Australia.

This is an issue of keen interest to NICTA, as we embark on a $2M drive to build advanced skills and capacity for Australian industry. NICTA already plays a vital role in this area, working with university partners to produce highly trained ICT researchers and technologists for Australia. NICTA has graduated 327 PhD students, and currently trains about 20 percent of the total number of PhD students in ICT in Australia each year.

However, we know that the number and quality of ICT graduates in Australia has been in decline over the past decade, yet industry demand for these graduates continues to grow.

The panel discussed this and also the need for Australia to develop transformational skills, matching skills to new industries and businesses, working with industry and other research organisations to make sure we are on the front foot to meet the demands of the digital economy. Simon Kaplan, Director NICTA’s Queensland Laboratory and Director of Skills and Industry Transformation, is leading this strategy for NICTA and recently appeared on Sky Business News to talk about the urgency of this task for Australia.

Early on the morning of Techfest, NICTA hosted a successful panel session involving some of Australia’s leading women in ICT, and attracting over 160 guests. The point of the morning was to highlight the dearth of women in senior ICT roles, managing start-ups and enrolled in ICT-related courses. The topic elicited responses from the panel and audience around women as entrepreneurs and innovators and whether or not women are thinking ‘big enough’. Panellists included independent digital economy and communications professional Sandy Plunkett and OneVentures Managing Partner and NICTA Board Member, Michelle Deaker. It was an inspiring morning.

Our third Techfest panel session was devoted to a discussion of smart infrastructure and how it will drive Australia’s productivity well into the future if it is done the right way. Well-attended and engaging, this panel session featured senior transport and logistics executives including Sydney Ports Corporation GM of Industry Relations and Logistics, Lachlan Benson. I also participated in this panel and found the speakers and the audience extremely informative, with great ideas to take us forward.

Please read on for more news about this exciting time at NICTA.

Hugh Durrant-Whyte
NICTA CEO
NICTA is proud to announce the spin-out of Saluda Medical Pty Limited, a medical device company focused on spinal cord stimulation (SCS) for the relief of chronic pain. “We are excited to have achieved this important first step in the company’s development,” said Dr John Parker, Saluda CEO and former Leader of NICTA’s Implant Systems research team.

An early prototype trial version of the technology – which for the first time allows scientists and doctors to measure the neural impulse generated when spinal nerves are stimulated – has been used by 25 patients at Sydney’s Royal North Shore Hospital. Professor Michael Cousins, Director of the Pain Management Institute (PMRI) of The University of Sydney and Sydney’s Royal North Shore Hospital, conducted the surgeries which allowed the patients to ‘test-drive’ the system. Prof. Cousins and NICTA have been collaborating on the basic and clinical research associated with this exciting development for the past three years. With $5M from private investors based in Australia, the company can now start to develop its technology for clinical application.

“This is a wonderful example of the way that public investment in scientific research and entrepreneurship can result in the formation of a young company ready to move into a competitive market and perhaps become Australia’s next major medical device company! Congratulations to NICTA and to Saluda Medical. I look forward to a future where your innovation will be a commercial success and bring hope and relief to the countless Australians who suffer from chronic pain,” said Bill Shorten, Minister for Employment and Workplace Relations.

Pain relief implants are used for patients who suffer from chronic pain, which is often untreatable with standard drug therapies.

Infosys and NICTA team up

As well as being the perfect vehicle to highlight our technology, NICTA’s Techfest also served as the platform to announce our newest collaboration.

NICTA has signed a joint research collaboration agreement with global business consulting and technology services firm, Infosys, to tackle the hard technology problems facing businesses today.

Potential outcomes of the collaboration could see aging technology systems modernised for the cloud while preserving resiliency and privacy. Logistics transport routes could become faster and greener and the ‘agile’ techniques previously used for software development could be adapted to accelerate the definition and solution of business challenges. Optimisation of infrastructure, disaster management and smart grids that take advantage of big data were also part of the agreement.

“Innovation across borders is essential to accelerate the pace of world prosperity,” said Mr. N.R. Narayana Murthy, co-founder and Chairman Emeritus of Infosys, at an announcement made at Techfest.

Mr. Murthy was attending the event as part of his role as a member of NICTA’s International Business Advisory Group (IBAG).

“Co-creation is part of our DNA at Infosys, so we are always on the lookout for the best collaboration partners around the world,” said Mr. Subu Goparaju, Senior Vice President, Infosys Labs and Products R&D. “With NICTA we have found a number of synergies - including shared research focus areas within the Digital Economy, complementary strengths and IP, and excellent partnerships with Australian universities.”

The program is intended to include joint research, PhD student internship and professional exchange programs, as well as commercialisation of relevant intellectual property over the next five years.

“This partnership is a great vote of confidence in NICTA’s research capabilities and ensures it will stay at the cutting edge of technology development in the years ahead. It also demonstrates Australia’s strength as a leading digital economy,” said Senator Stephen Conroy, Minister for Broadband, Communications and the Digital Economy.
NICITA technology in the pipeline

NICITA and Sydney Water have signed an agreement to use NICITA’s smart technology to take the guesswork out of water network maintenance. The collaboration will deliver improved methods of accessing water pipes using technology that forecasts potential breakages in the system.

Australia’s critical water mains break on average 7,000 times each year, due to age, material, soil type and other factors. “NICITA’s technology was trialled in Wollongong and was able to accurately predict breaks in the following year with twice the precision of the existing technology,” said Mr Rob Fitzpatrick, Director, Infrastructure, Transport and Logistics at NICITA.

“All water utilities with buried water pipes are faced with the issue of finding pipes that are at high-risk of failure before they fail and result in significant disruptions to the community. To do this we need accurate models to identify high-risk pipes which can cope with the differences in age, pipe material, environmental conditions and urbanisation,” said Kevin Young, Managing Director of Sydney Water. “We need smart technology to help provide answers. NICITA’s approach is innovative and has the potential to have worldwide impact in pipe condition assessment. We have introduced the approach to our international colleagues, who are keenly watching the outcomes.”

NICITA’s machine learning capabilities will be used to more accurately identify which pipes are at risk of failure, potentially saving Australia’s water utilities and the community $700M a year in reactive repairs and maintenance. Dr Fang Chen, NICITA’s Technical Lead on the project said, “We have developed a new computer modelling based approach to estimate the likelihood of pipe failure. Our approach could also be applied to other infrastructure failure prediction, such as bridges.”

Communication pays dividends for uni students

If you thought that highly focused individual effort was the best way to achieve outstanding academic results, think again.

An article published in Nature Science Reports (Vaquero, L.M. & Cebrian, M. The rich-club phenomenon in the classroom. Sci. Rep. 3, 1174; DOI:10.1038/srep01174 (2013)) indicates that frequent online social interactions can boost results. All the high performers studied for the article were collaborators - not rugged individualists.

“Elite groups of highly connected individuals formed in the first days of the course,” says Manuel Cebrian, Senior NICITA Researcher and co-author of The Rich-club Phenomenon in the Classroom, which looked at the social interactions between 290 journalism students undergoing a basic computer science course across different classes and years at a Spanish university.

“For the first time, we showed that there is a very strong correspondence between social interaction and exchange of information - a 72 percent correlation,” says Dr Cebrian, “but almost equally interesting is the fact that these high-performing students form ‘rich-clubs’, which shield themselves from low-performing students, despite the significant efforts of these lower-ranking students to join them. The weaker students try hard to engage with the elite group intensively, but can’t. This ends up having a marked correlation with their dropout rates.”

This contribution, co-authored with Luis M. Vaquero who is based at Hewlett-Packard UK Labs, shows a way that we might better identify patterns in the classroom that can trigger early dropout alarms, allowing more time for educators to help the student and, ideally, reduce those rates through appropriate social network interventions. Dr Cebrian’s work is part of a wider research effort at NICITA headed by Prof. Pascal Van Hentenryck, Leader of NICITA’s Optimisation Research Group. “Our goal is to use Computational Social Science techniques to enhance our understanding of how people behave and share information and how this impacts on areas of national significance, such as natural disasters. For instance, this could help us find better plans for relief operations and evacuations which must be based on realistic models of how people behave.”

Manuel Cebrian, Senior NICITA Researcher

NICITA PhD Student Wins Prime Minister’s Postgrad Award

Congratulations to NICITA PhD Student, Zhiyong Sun, who has received the Prime Minister’s Australia Asia Incoming Postgraduate Award.

Zhiyong is part of NICITA’s Control and Signal Processing research group working on the “Distributed Control and Estimation in Networked Environments” (DICE) project. The DICE project works on the broad area of multi-agent systems, comprising coupled networks of drones, sensors or robots cooperatively working towards a collective objective often beyond the capacity of any one agent to achieve. The Prime Minister’s Australia Asia Incoming Postgraduate Award provides financial support for international students to undertake a postgraduate qualification at PhD level in any field of study in Australia, for a maximum of four years. Award holders also have the opportunity to undertake an optional internship in Australia for up to 12 months (minimum of 2 months) at the completion of their study program.
Toby Murray
Mission Critical

For someone who confesses to thinking in high school that maths wasn’t all that relevant to him, Toby Murray has come a long way. It was his desire to solve one of the main questions he has pondered since starting work in ICT, “How do we know that a system is secure?”, that he realised that maths plays a central role in helping him answer this.

But let’s back up a second – who is Toby Murray? Toby grew up in Adelaide where he undertook his undergraduate degree in Computer Science, before working for four years for the Defence Science and Technology Organisation (DSTO) on computer security R&D. It was at DSTO that he realised research was where he wanted to focus his efforts. Against his better instincts, but at his wife’s urging, he applied for a PhD program at the University of Oxford where the focus of his doctoral studies was demonstrating system security using formal verification techniques that is mathematical reasoning.

Keen to continue this work, Toby found his way to NICTA as a researcher in the Software Systems Research Group. “Luckily, NICTA has one of the world’s leading groups in my area of research, formal verification, which made Sydney an easy choice,” says Toby. “Quite simply, I believe that NICTA has the world’s best research group working on formal verification of operating systems. If you want to do cutting-edge work that has tangible results, there is no better place.”

Toby’s current research builds on NICTA-developed seL4, the world’s first formal machine-checked proof of a general-purpose operating system, by proving for the first time that a general-purpose kernel is secure. This forms the foundation for building secure systems with the next steps involving proving that systems built on top of seL4 meet their security and safety requirements.

The seL4 technology can be deployed to any industry where safety, security and operation of complex embedded systems are critical, or vulnerable to attack, with the NICTA team recently signing a contract with the US Defense Advanced Research Projects Agency (DARPA), to focus on applying formal verification techniques to build reliable autonomous systems (like drones).

As part of the relationship Toby and his co-researchers will develop new approaches to address the many challenges involved in building high-assurance systems. The aim is to develop a complete, formally proven architecture to protect the control and communication systems of an aerial vehicle from compromise by faults and targeted attacks.

“Defence has long been interested in having systems whose security has been formally verified. Defence systems need to be highly secure, but it is even more important for Defence to know exactly how secure their systems are,” says Toby.

“One way to do this is to use mathematics to prove that a system is secure against certain kinds of attack. Engineers have been using mathematics to reason about the safety of things like bridges for centuries, but it is only recently that we have really been able to do something similar for real-world software,” says Toby.

So as the interview concludes we end where we started – with maths, and with Toby offering this piece of advice, “Follow what you find interesting, but never be too quick to write-off a topic as uninteresting or boring.”

Who would you love to have at a dinner party (dead or alive) and why?

Ben Goldacre, Glenn Greenwald, Jeffrey Sachs and Paul Collier – so we could spend the night literally solving the problems of the world.

If you had to choose between movies, books or music which would you choose and why?

Music – what would we be without the songs we play in our heads as the soundtracks of our lives?

What you love about working in R&D?

Exploring the unknown.

What would be your dream holiday and why?

I would travel back in time to the Arab world around 1100, at the height of Arabic science – on which our current scientific age rests.

Who inspires you and why?

Those who are willing to speak unpopular truths.

What do you consider to be the ultimate scientific discovery?

Counting. It feels like it must have led to everything else.
Mind the Skills Gap
The days of being average are over

Over the past decade the ICT industry has lamented the decline in numbers of quality ICT graduates in Australia. This acute shortage of high-level ICT skills coincides with an increased demand for graduates both domestically and globally.

So how can we as an industry develop the next generation of high-level ICT skills to support emerging, transformational industries that will underpin the future digital economy – areas such as data analytics, functional programming and cyber security?

This question was the focus of the ICT Skills Panel at Techfest 2013. Moderated by NICTA’s Director ICT Skills and Industry Transformation, Professor Simon Kaplan, the Q&A session included a panel of ICT experts: Matt Barrie Freelancer.com; Suzanne Campbell, A/IA; David Harrison, Mammoth Media; Lucky Katabanias, student and Professor Stuart Feldman, VP Engineering Google Labs USA (East Coast) and NICTA ISAG Member.

Matt Barrie, CEO of Freelancer.com said to the 150 attendees “The days of being average are over”. The Panel quickly identified as essential the need to radically rethink both primary and tertiary ICT education to develop a broader, industry-focused curriculum that builds student numbers and addresses rapidly changing skills requirements. The skilling up of teachers, course delivery methods and getting kids enthusiastic about ICT from a young age were also high on the list of priorities.

The panelists also agreed the marketing of ICT requires a major overhaul to highlight to potential students the broad range of opportunities, and flexibility, an ICT career provides.

To finish up the Panel discussed how to increase the ICT talent pool which led into leveraging successful activities such as NICTA’s Queensland based Group X initiative which has achieved an impressive 80 percent increase in tertiary ICT offers since 2007. This has been achieved through industry-led promotion of ICT careers at career events, tech fairs and school visits and supporting targeted initiatives around diversity that emphasise the wider creative elements of the new ICT industry/digital economy.

Prototype app helps students find ICT career path

At Techfest, NICTA took the opportunity to launch a strategy to build skills and capacity in the Australian ICT sector. The strategy focuses on developing transformational skills, increasing the ICT talent pool and ‘rebooting’ tertiary education.

Apart from the ICT skills panel (see story above), NICTA gave Techfest visitors a first peek at a prototype application to help prospective students match their areas of interest with tertiary degrees and TAFE courses. Although the app is still a demonstrator, NICTA plans to develop it so that it becomes a web delivered service with a deep breadth of relevant and fresh content.

“There are two big challenges facing the ICT industry from the skills perspective. First, we have the problem that young people don’t realise just how much they can help transform the world through ICT, and how diverse and exciting ICT industry careers are,” says Professor Simon Kaplan, Director, Skills and Industry Transformation at NICTA. “Second there is a bewildering maze of training options to get into the industry, including TAFE, universities and private providers, and then a mix of formal and informal mechanisms for lifelong learning, ie helping people keep their skills at the state of the art. Our ICT Skills Gap project is about building tools that help people find their pathways, from high school students perhaps considering an ICT career all the way up to professionals looking to pick up the latest big data or software engineering techniques.”

Sisters need to start doing it for themselves

The question “Are women technical, entrepreneurial and innovative?” was the basis for the inaugural Women in ICT Breakfast NICTA ran in conjunction with Techfest in February.

The breakfast, which attracted 160 people, was designed as a panel Q&A session to discuss topics that rightly, or wrongly, are associated with female entrepreneurs.

The panel included: Senator the Hon. Kate Lundy, Minister for Sport, Minister for Multicultural Affairs, Minister Assisting for Industry and Innovation; Dr Michelle Deaker, Managing Partner One Ventures and NICTA Board Member; Ms Whitney Komor, Founder The Best Day; Ms Alex Young, Co-founder MOB Software R&D and Ms Sandy Plunkett, Digital Economy Strategist and Commentator.

The event was moderated by Pia Waugh, Policy Advisor for the Australian Government Information Management Office, who led the panel through a series of questions from herself and the audience.

It became apparent early on that the way in which women communicate was going to be a recurring theme. Being confident of your place at the table and learning to be more assertive was advice that all on the panel subscribed to. The importance of visibility and learning how to promote yourself and your achievements was seen as essential to succeeding in the VC world which was created and is predominantly populated by men.

This was highlighted by panelist Sandy Plunkett who spoke of how she has learned throughout her career to ask for things, something she struggled with initially. “You’ve got to ask and you’ve got to expect that you deserve it. And you’ve got to start acting like that”.

Another theme was the importance of surrounding yourself with strong mentors who encourage you to “think big”. Panelist Alex Young encouraged women to celebrate their achievements and create a narrative around you’ve got to expect that you deserve it. And you’ve got to start acting like that”.

Visit http://www.youtube.com/watch?v=yE_mbZC9Cfk to watch the event in full.
Manuel Cebrian’s Nature Science Reports article – most read for February

An article co-authored by NICTA Senior Researcher Manuel Cebrian – ‘The rich-club phenomenon in the classroom’. Sci. Rep. 3, 1174; DOI:10.1038/srep01174 (2013) – was the most read Nature Science Reports paper for the month of February and the second-most read paper in week two of February.

Vasanta Chaganti receives ISAE internship

Congratulations to Vasanta, PhD student from NICTA’s Canberra Research Lab, for receiving a three months internship at ISAE during 2013.

Successful ARC Discovery Projects funding

Congratulations to Julien Epps from the Machine Learning Research Group (MLRG), who is the most part of a team that has successfully secured $360K from the ARC Discovery Projects scheme. The project, led by Dr Ben Doherty (University of Canberra) and collaborators from the Black Dog Institute, UNSW and CMU, will develop sensing technology to objectively assess symptoms and speech, and evaluate it by developing the first automated, objective measure of depressive disorders.

MLRG PhD student Nicholas Cummins, whose topic falls directly within the scope of the project, has already made key advances. The speech-based depression measures build on earlier NICTA research into cognitive load estimation from speech.

Anirban Mahanti – Appointed Co-chair IEEE STC Committee on Sustainable Computing

Congratulations to Anirban Mahanti from the Networks Research Group for being appointed, to the position of co-chair on the IEEE Computer Society Special Technical Committee (STC) on Sustainable Computing, http://stc-sustainable-computing.ieee.net/about

Paper selected for Journal of Neural Engineering

Highlights of 2012

Hamish Meffin’s co-authored paper entitled ‘Modeling extracellular electrical stimulation: I. Objective measure of depressive disorders. was accepted from Journal of Neural Engineering, 6, 036007 (2012). The paper is the highest number of downloads in the field, for a term of four years.

Karin Verspoor – Publication featured in Nature Methods

Congratulations to Karin Verspoor whose publication was featured in the prestigious journal Nature Methods. Karin was a co-author of the paper entitled ‘A large-scale evaluation of computational protein function prediction’. To view the paper visit http://www.nature.com/nmeth/journal/vaop/ ncuurent/full/nmeth.2340.html

Toby Walsh – Keynotes and conferences

Toby gave an invited talk at the 4th Summer Workshop on ‘Algorithmic Game Theory and Computational Social Choice’ held at the National University of Singapore (NUS).

Honors in final year of PhD

Toby also gave the keynote talk at Foundations of Genetic Algorithms (FOGA) 2013 and an invited tutorial and talk at the Winter School and Workshop on ‘Algorithmic Game Theory and Computational Social Choice’ held at the National University of Singapore (NUS).

NICTA’s Haris Aitz and Nick Mattei also received financial support from NUS to attend and present at the School.

Congratulations Sylvie Thiebaux and Pascal Van Hentenryck

NICTA’s Sylvie Thiebaux and Pascal Van Hentenryck were elected associate editors of Artificial Intelligence, the Centre for Artificial Intelligence, in 2012, and the second-most read paper in week two of February.

Congratulations Ethan Dong and Karan Narula for being shortlisted for Best Poster Prize in The Big Data Fest

Ethan Dong, ‘A statistical approach for detecting failures in public cloud computing’. Ethan was a Software Systems Research Group (SSRG) Summer Scholar.

Karan Narula, ‘Towards Opportunistic Indoor Localization: Activity Recognition on Smart phones’. Karan was a NICTA Summer Student under the UNSW ToR Programme supervised by Mahbst Hassan and Sara Khalifa.

Using Formally-Verified Hypervisor; (DBMS setup


NICTA’s eHealth Group collaborates in new GP Super Clinic at the University of Canberra

Work has begun on building a new GP Super Clinic at the University of Canberra. The clinic will host general practitioners, a pharmacy, pathology labs, radiology and psychology services and the University of Canberra’s existing students and allied health clinics. Its research capacity will be enhanced by the involvement of NICTA’s eHealth group.

Operational Excellence – Sarah Sims.

Read the article here http://www.canberra.edu.au/monitor/2013/feb/11-superclinic

ePSA wins Commercialisation Australia grant

Performance Assurance, the company started by Jon Gray and members of the ePSA team, was successful in winning a Skills and Knowledge Grant from Commercialisation Australia. The grant is for $50,000 and will help them research and penetrate new markets. Congratulations to the team!

NICTA’s Future Logistics Living Lab conceives first product!

Living Lab participant 1-Stop has launched the first product conceived in the Living Lab community, Container Control. Container Control allows transport companies to work with shipping lines to re-use empty import containers as export containers, thus eliminating unnecessary trips for transport Container Parks.

This re-usability will reduce the number of trucks on the road, meaning less congestion and CO2 emissions.

Swedish Foreign Affairs Minister visits NICTA

Carl Bildt, Swedish Minister for Foreign Affairs and former Swedish Prime Minister visited NICTA. He took a tour of the Future Logistics Living Lab, the Data Productivity tool, and for the NICTA Systems group. To view photos visit http://on.fb.me/1y5Aif.

Congratulations to NICTA Software Systems team members who had papers accepted in high-impact venues


Thomas Sewell, Magnus Myreen and Gervin Klein ”Translation Validation for a Verified OS Kernel’, PLDI ’13


Software Systems Summer School

NICTA hosted the first NICTA Software Systems Summer School in February featuring lectures by 12 international leaders (Facebook, Apple and Oracle to name a few) in computer systems from industry and academia, interspersed with short student talks and poster sessions. Topics included virtual machines, hypervisors, compilation, operating systems, language implementation, memory management and security.

Intel Research Grant

Well done to Leonid Ryzhik and Gernot Heiser who won a Research Grant from Intel to the value of $565K over a 3-year period for driver synthesis research.

Introducing the 2012 NICTA Impact Award Winners

A. Richard Newton Wealth Creation – The Big Data Team – Rami Mukhtar, Tiberio Caetano, Ben Lever, Glenn Downey, Russell Aronson, Eric Torreborre and Eric Springer. In 2012 alone the team signed up, and delivered on, five external big data analytics contracts with revenue to NICTA of over half a million dollars. The release and support of their open source project SC008i library is now being developed by developers at companies such as eBay, Foursquare and Klout.

FB Rice Prize for Best Patent Activity - Merkens van den Briel. This award recognises best engagement in patent activity from NICTA researchers and was awarded for the provisional patent, Randomised Load Control, which provides a simple but effective way to control peak demand at power grid scale, whilst respecting consumer privacy and constraints.

2012 NICTA Best Invention Prize Joint Winners

Peter Single and James Laird from NICTA’s Software Systems team for their research into the electrical properties of tissue, above.
The 2013 Graeme Clark Oration
Mr Geoffrey Lamb, President, Global Policy and Advocacy, Bill & Melinda Gates Foundation presents “Global Health, Economic Growth and the End of Absolute Poverty: hopeful evidence and hard challenges”.
Geoffrey Lamb is the Gates Foundation’s President, Global Policy and Advocacy. He leads the foundation’s international policy and advocacy team, and its engagement with governments and international institutions. Lamb was previously Managing Director, Public Policy and a Senior Fellow in the foundation’s Global Development Program.
When: Monday 29 April 2013
5.30pm for 6.15pm start till 7.15pm
Where: Melbourne Convention Centre
1 Convention Centre Place, South Wharf, Victoria 3006
To register: [link]

ICT for Life Sciences Forum - Dead men do tell tales: The unnatural history of seven lethal prostate cancer cases
Prostate cancer is now the most common newly diagnosed malignancy in the Western world. However, our ability to predict which cancers are a serious threat to life confounds clinical decision making. Join Associate Professor Christopher Hovens to hear about the advances in high throughput genomic technology and how an accompanying expansion of computing power have led to a previously unprecedented ability to probe the prostate cancer genome and transcriptome.
Associate Professor Christopher Hovens is the Scientific Director of the Australian Prostate Cancer Research Center at the Epworth Hospital, and is also a part of the Departments of Surgery, University of Melbourne and Department of Urology, Royal Melbourne Hospital.
When: Wednesday 10 April
5pm – 6pm Refreshments
6pm – 7pm Lecture
Where: The Auditorium, Melbourne Brain Centre, Corner Royal Parade & Genetics Lane, The University of Melbourne
To register: [link]

CeBIT Australia
CeBIT Australia is the leading business event in the Asia Pacific region for Information and Communications technology organisations, with more than 30,000 people attending each year.
The 2013 event will feature over 600 exhibition spaces, more than 100 sessions in the exhibition floor theatres and the opportunity to mix with corporate and government leaders at a number of key networking functions. Claim your complimentary exhibition ticket valued at $99 – see CeBIT advertisement below.
When: 28 – 30 May 2013
Time: 10am – 6pm
Where: Sydney Convention & Exhibition Centre, Darling Harbour

The Canberra Times highlighted the collaboration between the University of Melbourne, IBM (NYSE:IBM) and NICTA to develop the Australia Disaster Management Platform (ADMP), a next generation open standards-based IT platform aimed at improving disaster management, protecting communities and potentially saving lives.
[link]
NICTA’s Rami Mukhtar appeared in Technology Decisions Magazine, talking about Big Data being about really smart people forging the tools to enable business and organisations to stop guessing about which decision is the right one to make.
[link]
In March, Sky Business News got to hear what was on NICTA’s Director ICT Skills and Industry Transformation, Professor Simon Kaplan’s mind when he spoke about the resources bubble that is masking a serious shortage in ICT skills. He explained the resources sector is a driver in this as is the hangover from the dotcom boom and that we need to help students understand why studying IT is sensible because it is vital we shift the economy to a digital one. He spoke about how the Group X program works, noting that it is a coalition of the Qld Government Qld universities, industry, and organisations. He stressed the need of the Government to ensure we’re producing people with the right mix of skills and have the capacity to do what we need for the economy’s transformation.
[link]