



NICTA

From imagination to impact



Australian Government
Department of Broadband, Communications
and the Digital Economy
Australian Research Council

NICTA Members



Department of State and
Regional Development



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Does Software Architecture Research have any impact on Software Architecture Practice?

Dr. Anna Liu

Research Group Leader

Software Systems

National ICT Australia



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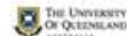
Department of State and
Regional Development



The University of Sydney



Queensland University of Technology



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Absolutely, Particularly for the Aspiring Architects



- ‘I read your book! It was my undergraduate text on software architecture!’
 - accessible expert knowledge at \$50!
 - Master-apprentice relationship
 - Disciplined way to do design
 - Principles to fall back onto in the midst of chaos
- Particular noteworthy impact in
 - Architecture review, assessment methods and process
 - Architecture documentation

- Divergent goals
 - Different career progression/incentives
 - Different timeline to success: WICSA looks at 20 years of impact, internet industry achieves ~3monthly upgrades
 - Generic Principles vs. Specific products to ship: principles do not help all the way, knowing how your technology behaves in some quantitative detail matters!
 - We end up with different languages, location for experience and knowledge sharing: WICSA vs. Vendor Conference (eg. Microsoft TechEd), Qcon, JA00, SOA/Cloud Symposium

Bridging the Gap – An Engagement Model?



- Establish Mutual Interest
 - Common Goal: Sustainable, high quality architecture across enterprise, product lines over time
 - Not #papers vs. dollars
- Demonstrated Ability to deliver
 - Strike the right balance between research goals vs. delivering value to industry partners
 - Spend some time to get to know the domain! Hang out at industry conferences that practicing architects hang out at!
 - Help your industry partner see the value of engagement, conceptual integrity, intellectual horsepower, alternative perspectives, critical analysis and critique, etc.
- Ongoing, meaningful two-way exchanges

What can we do as the WICSA community?



- More real world case studies
- More practitioner/researcher collaboration war stories
- More exploration into specific domains
- Matters of topical nature to industry at large
- Less ‘invented problem’, more ‘real problems’, inspired by those that:
 - Need to ship products
 - Need to innovate to sustain competitive advantage
- Solve the hard problem over the long term, not just low hanging fruit that gets you a publication or PhD



WICSA2014 Sydney Australia

7 -11 April 2014

General chair: Anna Liu

Program co-chairs: Antony Tang

John Klein



<http://www.wicsa.net>



From imagination to **impact**

NICTA's mission: to be an enduring world-class ICT research institute that generates national benefit.

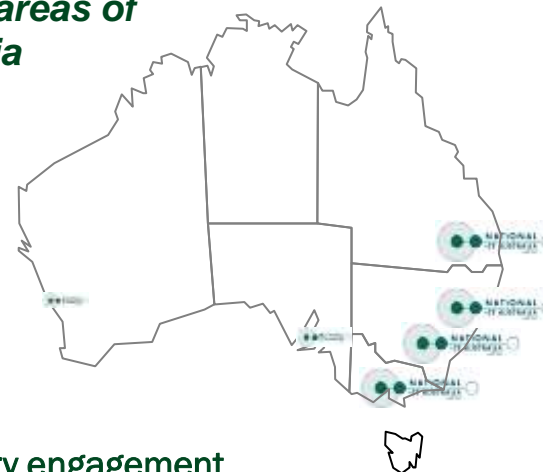


Australia's National Centre of Excellence in ICT Research

Research focused on *areas of importance to Australia*

Publicly funded, not for profit

**Best of breed research teams
(400 staff + 300 students)
7 University partners**



Industry engagement

Engagement models include...

- Contract R&D
- Consulting services
- Strategic Partnerships
- Licensing

**Industry outcomes
Enduring solutions
'Spinout' companies**



NICTA Research and Business areas

