



AMSI News

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Vacation Research Scholarships hit 58

As a result of our partnership with the Commonwealth Department of Education, a record 58 students undertook Vacation Research Scholarships (VRS) at AMSI member departments. There is no doubt that we have a wealth of talent going on to third year, honours and masters programs in 2014. You can see them all at www.amsi.org.au, and their reports will be posted soon. Fifty-six students presented their VRS projects at CSIRO's Big Day In at UNSW on 11 and 12 February. The quality of the talks was exceptional and I enjoyed the whole event immensely. Thank you to the many supervisors who attended and chaired sessions. Congratulations to Thomas Moore (UQ) and Melissa Lee (UWA) who won the Cambridge University Press Book Prizes for the best AMSI presentations at Big Day In. Thank you to CSIRO's division of Computational Informatics for letting us be part of their standout event.

Winter School security breach

It is no longer a secret that the theme of this year's AMSI Winter School at sunny Brisbane's University of Queensland is Contemporary Aspects of Cryptography. In fact the only secret about the pivotal role of mathematics in cryptography and cybersecurity in particular are the mathematicians' salaries. The School will be attractive to postgraduates and postdocs who want to learn about, for example, post-quantum cryptography (in a pre-quantum computing world!) from Australian and international experts.

The first week consists of relatively broad courses, introducing the mathematical tools and techniques used in this area. The second week will feature specialised advanced courses building on the first week, giving an understanding of some current research aspects of modern cryptography.

The speaker list includes, amongst others, Professor Tanja Lange of Technische Universiteit Eindhoven. Tanja has published more than 50 research papers bridging the gaps between algebraic geometry, theoretical cryptography, and real-world information protection. She is an expert on curve-based cryptography and post-quantum cryptography. She is on the editorial board for two journals and serves on three steering committees, including the workshop series on Post-Quantum Cryptography. She has organised around 20 conferences and workshops, has served

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on more than 40 program committees. She is coordinator of the EU-FP7 project PUFFIN — Physically unclonable functions found in standard PC components.

Tanja will also be speaking at the Women in Maths networking event at the Winter School on 16 July. The University of Queensland's Professor Andrew White will be giving a public lecture in conjunction with BrisScience and the Winter School on 14 July.

The 9th AMSI Winter School will be held at the University of Queensland from 7 to 18 July. Registrations close on 2 May 2. The Winter School is supported in partnership with the Commonwealth Department of Education. The event website and a full speaker list is at www.amsi.org.au/index.php/higher-education/winter-school.

I strongly recommend this Winter School to all postgraduates and postdocs interested in this exciting area where maths meets technology meets business meets national security.

Erratum. In my last AMSI News piece I omitted Geoscience Australia (GA) from the list of government agencies participating in the new Agency–University network. GA were an enthusiastic partner and sponsor of the International Year of the Mathematics of Planet Earth 2013 and a driving force behind the successful mid-year MPE conference in Melbourne.



I completed a BSc (Hons) and secondary Dip Ed at Monash University in the 1970s and moved to La Trobe where I undertook a PhD in 1981 in geometric mechanics and Lie groups. I did a postdoc at the Institute for Advanced Study in Dublin.

I've taught at RMIT, UNE and La Trobe University, where I was Head of Department a couple of times in the last decade. I worked at AMSI from 2004 through to 2006 in part as executive director to Garth Gaudry and I oversaw the introduction of the AMSI/ICE-EM Access Grid Room project. I became AMSI director in September 2009.

My research interests lie mainly in differential equations and differential geometry and I work with friends in Europe: Mike Crampin, Willy Sarlet, Olga Krupkova and Demeter Krupka.

My partner is a mathematician and we have two children with a refreshing lack of interest in mathematics. On the margins I brew beer and ride a bike.

I'm a proud Fellow of the Society and am currently a Council member and a steering committee member.