



MESSAGE FROM THE DIRECTOR

Sharing research is crucial to progressing collective scientific knowledge. Sharing has been a high priority for CEBRA during the last quarter—we've been publishing papers and attending national and international conferences. I'd like to heartily congratulate CEBRA PhD student, Victoria Hemming, who won the best student talk award at the 2018 SRA-ANZ conference in September (a well deserved win!).

The conference was attended by a CEBRA contingent comprising Victoria, Deputy Director Dr Aaron Dodd, Dr Anca Hanea, Dr Frith Jarrad and me. CEBRA has long supported SRA-ANZ. We were delighted that the University of Sydney hosted the conference this year, under the energetic and able guidance of SRA-ANZ President Dr Sandra Seno-Alday. There's more information about the conference in this newsletter.

In August, Deputy Director Dr Steve Lane spoke on *Multilevel modelling of key performance indicators* at the Statistical Society of Australia conference here in Melbourne. In October, Aaron and Deputy Director Dr Susie Hester presented at the Queensland Biosecurity Partners Forum in Brisbane. Aaron spoke on *Biosecurity at the system scale: where are we heading?* and Susie presented on *Government investment in biosecurity: why, when, how and how much?*

Also in October, Aaron and I travelled to Taiwan to present at the 2018 conference of the International Pest Risk Research Group. I spoke on *Proportional allocation of inspection resources to heterogeneous strata delivers nominal sensitivity: contradicting an*

international regulatory standard, which was a genuine page-turner, and Aaron presented *Biosecurity at the system scale: what's it worth?*

Recent work by Steve and Dr Edith Arndt focussed on uptake and classification of CEBRA projects. We have been working on creating a searchable database of CEBRA project reports, making it easier for stakeholders and interested parties to access and engage with our research. This will be available on our website soon.

Earlier in October, Dr James Camac, Professor Jane Elith, PhD student Elise Gould and I visited DAWR to hold a workshop as part of CEBRA Project 170607: *Developing scientifically robust risk maps for priority plant pests*. The goal of the workshop was to understand how decisions are made regarding climate suitability modelling for priority plant pests within the department.

In September, Edith facilitated a DAWR workshop for Project 170714: *Assessing the health of Australia's biosecurity system*, which is being led by Principal Investigator Karen Schneider (featured in this newsletter). The research was met with enthusiasm and there has also been interest in CEBRA's approach from our colleagues at Biosecurity Queensland.

We've also been thinking about other problems. [Research](#) led by Chief Investigator Professor Tom Kompas, foreshadowing the economic impacts of failing to limit Earth's temperature rise in line with the Paris Climate Agreement, recently created a stir.

The research was picked up by several news outlets, including [SBS](#) and [BuzzFeed](#). This is an excellent example of how we engage a wide audience to share the important work undertaken by our researchers.

At CEBRA, we support the professional development of our staff, to ensure that they have the skills to most efficiently carry out their roles. In September, several members of our team attended a spatial point pattern analysis workshop here at the University of Melbourne. Methods to analyse spatial data have developed hugely over the past years. Our researchers found the workshop challenging and useful for our work.

For a summary of CEBRA's activities over the past financial year, have a look at our 2017-18 annual report, to be released on the website shortly. To keep up to date with the latest CEBRA news, please follow us on [twitter](#) and [facebook](#).

Andrew Robinson

Managing Director,

Centre of Excellence for Biosecurity Risk Analysis

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Karen Schneider: Principal Investigator

Karen Schneider joined CEBRA in February 2017 to manage one of DAWR's key strategic projects: how to evaluate the health of Australia's biosecurity system.

Before joining CEBRA, Karen had a long career in DAWR in a number of different roles. She was the Executive Director of the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) from 2013–16 and was responsible for the wide range of research undertaken by the Bureau. This research encompassed analysis of Australia's agricultural, fisheries and forestry industries, regular assessments of commodity markets and international trade prospects, and research on issues such as climate change, water, land use, invasive species and biosecurity.

Prior to that, Karen was head of the department's Animal Biosecurity Division, where she was responsible for animal biosecurity policy and operational activities.

In both these roles, Karen was closely involved with CEBRA and its predecessor, ACERA. She worked collaboratively with ACERA's managing director to develop the early funding and governance arrangements between DAWR and the University of Melbourne. She was also an active member of the ACERA and then

CEBRA advisory boards, which provide independent oversight of the strategic direction and activities of the Centre, as well as serving as a link to other biosecurity research activities of DAWR.

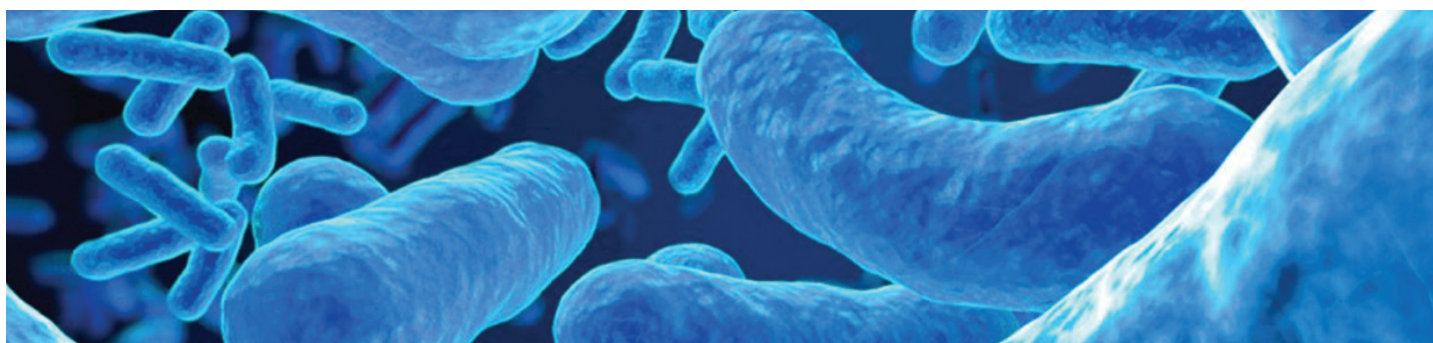
Joining CEBRA as a Principal Research Fellow means that Karen is now seeing the organisation from the other side. 'It's interesting to now be part of the CEBRA team and to use my experience in DAWR to help deliver targeted, policy-relevant research that can be used directly by the department,' Karen says.

Karen's focus is on delivering a multi-year project on evaluating the health, or the performance, of the national biosecurity system. It's a complex task as the biosecurity system is made up of so many different parts: multiple participants and many activities across the pre-border, border and post-border elements of the system. While evaluation of components of the national biosecurity system occurs on a regular basis, there has not been a consistent, rigorous approach to evaluating the performance or health of the biosecurity system at the national level. This gap has been identified by the review into the Intergovernmental Agreement on Biosecurity.



The project aims to help fill that gap by developing a performance evaluation framework that can be used repeatedly to evaluate the health of the national biosecurity system against agreed performance criteria using appropriate performance indicators. Performance evaluation underpins the accountability of agencies engaged in the biosecurity system and can be used to identify risks in the system and areas for improvement, as well as guiding evidenced-based investment decision making.

Implementing such a system will be a major challenge that will involve close collaboration among all jurisdictions. As Karen says, that's one of the satisfying things about working for CEBRA: the chance to work with a wide range of stakeholders on a subject that can make a practical difference to biosecurity management and outcomes.



SRA-ANZ 2018 Conference Wrap-up

The 2018 conference of the Society of Risk Analysis–Australia and New Zealand (SRA-ANZ) was held at the University of Sydney from September 26–27. The theme of this year's conference was Risk prisms: exploring the multifaceted nature of risk. Talks covered many fields and aspects of risk including risk perception, biosecurity, cyber security, fire risk management and environmental contamination.

The keynote speakers were CEBRA Director, Associate Professor Andrew Robinson, who presented on the nature of risk analysis and aspects of risk analysis in biosecurity, and Professor Terje Aven, President of SRA International, who spoke on the foundation and challenges of risk analysis science. Dr Aaron Dodd presented on *Estimating the monetary value generated by Australia's biosecurity system*, Dr Anca

Hanea presented on *Identifying incorrect probabilistic intuitions in a climate trend uncertainty quantification context* and Dr Frith Jarrad spoke on a panel in her role as Managing Editor of the journal Conservation Biology. PhD student Victoria Hemming was awarded the best student talk award for her presentation on whether quantile aggregation and performance weighting improves judgement.



SRA International President Professor Terje Aven, Best Student Talk winner Victoria Hemming, SRA-ANZ President Dr Sandra Seno-Alday and SRA-ANZ President Elect Lee Bailey.



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