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Scopus award winners for Australia and New Zealand announced

The 2017 winners were rewarded for their work in reducing the oil and gas industry's carbon footprint, advances in cloud computing and investigating ways to beat cancer

This year's winners of the Scopus Researcher Awards: Monika Janda, Ranjith Pathegama Gamage and Rajkumar Buyya

ADVERTISING FEATURE

Ranjith Pathegama Gamage has come a long way. He was the first person from his village in Sri Lanka to go to university. Now he is a winner of Australia and New Zealand's fiercely competitive Scopus Researcher Awards of 2017.

"Tokens of recognition like this are tremendously important in the life of scientists," he says. "You work so hard and it's not always easy, so it's really nice to have someone recognise and celebrate what you do."

The Scopus Researcher Awards are now in their seventh year. They were launched by the information analytics business, Elsevier, to support early career researchers in Australasia, Europe and the UK, and

have already helped dozens of young scientists gain international visibility and attract more funding and collaborators.

“Awards like this are crucially important because too many scientists do fantastic work without getting enough recognition,” says Aidan Byrne, provost at the University of Queensland in Brisbane and member of the judging panel.

The 2017 Scopus Awards for Australia and New Zealand were in three categories: Excellence in Sustainability Research, Women in Research, and Excellence in Innovative Research.

Ranjith received the Excellence in Sustainability Research Award for his work on minimising the environmental impact of oil and gas mining. He leads a team at Monash University in Melbourne that is developing technologies to extract fossil fuels more cleanly, turn waste products into fertiliser and cement, and store carbon dioxide deep underground.

His team’s aim is to reduce the carbon footprint of the fossil fuel industry while we transition to renewable energy. “Over 80 per cent of our energy still comes from oil and gas, so we must think about how to make them more sustainable,” says Ranjith.

Ranjith’s ability to come up with solutions that make both environmental and economic sense stood out, says Veena Sahajwalla, a sustainability expert at the University of New South Wales in Sydney and member of the judging panel. “We know we’ve got so much to do to combat the global challenge of climate change so we need holistic approaches like this,” she says.

Real-World Impact

One of the best things about the Scopus awards is that they reward research that has real-world impact, says Byrne. “The applications included lots of high-quality research, but we were particularly interested in researchers whose work was most likely to shape society for the better,” he says.

One example is the work of Monika Janda at the Queensland University of Technology, who won this year’s Women in Research Award. Janda is a psychologist and behavioural scientist who looks at ways to prevent cancer by raising awareness and at ways to catch it quickly using early detection.

Janda recently led a trial showing that text message reminders improve people’s sun protection habits and encourage them to check their skin for signs of melanoma. Her team is also working with Cricket Australia to introduce stickers for spectators that change colour when they need to reapply sunscreen.

“I feel really lucky to be doing what I’m doing because in many other careers you don’t have the opportunity to work on something that is for the public good and will help lots of people,” she says. “It’s fabulous to win this award because usually as scientists we work a bit in the background, so it’s really nice to get recognition.”

Prizes that celebrate women in science are important as they inspire girls and show them what is possible, says Janda. Sahajwalla agrees. “We want girls in high school to hear stories like Monika’s and think ‘wow, I could do that too’,” she says. They also encourage universities and other research institutions to better support female scientists, says Janda, by introducing childcare assistance, for example.

Rajkumar Buyya, winner of this year’s Excellence in Innovative Research Award, has also had an inspirational career. He grew up in rural India and first encountered a computer when he was 18. Now, as a computer engineer at the University of Melbourne, he has become a world leader in cloud computing.

Cloud computing

Buyya has invented several cloud computing platforms that are used internationally. The Indian government uses his software to monitor natural disasters, for example, and a Chinese railway

company uses it to speed up train design. His systems have also been used as templates for software developed by IBM, Amazon and Ericsson. “My aim is to minimise the energy of computing and the cost to the consumer,” says Buyya. “I love creating new knowledge that changes the way we do IT and helps solve important problems in all areas of society.”

The secret to being innovative is to always think about how you can put new knowledge into practice, says Buyya. “Research is not just about creating new theories – it’s also about turning them into real-world applications – I always take that into consideration,” he says.

“When I read Rajkumar’s application, I thought, ‘oh wow, this is so cool!’,” says Sahajwalla. “The fact that he pioneered the whole economic paradigm for cloud computing shows that he’s a really worthy winner of the innovation category.”

The three winners each received A$1000 prize money at a ceremony in Sydney’s Powerhouse Museum on 10 November. The runners-up were Michelle Colgrave, a molecular biologist at CSIRO, Peng Shi, an electrical engineer at the University of Adelaide, and Paresh Narayan, an economist at Deakin University in Melbourne.

The winners hope to use the award as a springboard to further their research. “For me, the end game is a world without melanoma,” says Janda. Buyya hopes his computing advancements will help a range of sectors, from medicine and finance to engineering and government.

Ranjith wants to tackle climate change head-on. “I plan to continue my own work, as well as encouraging young people to think creatively as scientists and engineers, and take on the responsibility of being stewards of this planet,” he says. “If I can contribute something meaningful to the community and make a difference, that will make me the happiest person in the world.”