



In the spotlight

Star power ... (l-r) Professors Mark Bradford, John Piggott, Matt England, Andy Pitman and Michelle Simmons. Not pictured: Professor Chris Turney

Three Centres of Excellence will help our researchers continue to shine on the world stage. Adding to the success, another three people have been made laureates. By Bob Beale.

Climate change is the great threat to our future and while our political response is still being debated, there is agreement on at least one point – UNSW will play a national leadership role in Australia’s response to this mounting challenge.

The new Centre for Climate System Science, headed by the co-director of the UNSW Climate Change Research Centre, Professor Andy Pitman, was awarded \$21.4 million in the latest Australian Research Council Centres of Excellence grants.

“Climate change presents an unacceptable risk to the wellbeing and prosperity of Australians,” says Professor Pitman. “Using the best science to minimise threats and maximise opportunities is a national priority of international significance. This will have direct economic, social and environmental benefit by improving advice to all levels of government and the broader community on the scale, speed and timing of regional climate change.”

The new Centre of Excellence was one of three awarded to UNSW – out of only 13 funded nationally – with a total value of \$58.6 million in combined funding over seven years. It was the best result of any university. The centres are designed to be hubs of expertise through which high-quality researchers develop Australia’s international standing in research areas of national priority.

The other new Centre of Excellence is the Centre for Population Ageing Research headed by Professor John Piggott from the Australian

School of Business, which was awarded \$12.7 million. It will bring together researchers, government and industry to address one of our major social challenges. The Centre’s work promotes policy outcomes that will improve the wellbeing of the aged, says Professor Piggott.

The Centre for Quantum Computation and Communication Technology, headed by the Director of the Centre for Quantum Computer Technology, Professor Michelle Simmons, was

“It will allow us to maintain the international leadership we currently have.”

made a Centre of Excellence for a second time, receiving \$24.5 million in the process.

“The most important thing about being made a Centre of Excellence is that it will allow us to maintain the international leadership we currently have in quantum information. If we hadn’t won it, it would have jeopardized that,” says Professor Simmons.

“By having a coordinated international research effort you can achieve more ambitious goals with highly collaborative, interdisciplinary teams.”

A team from the Centre recently made headlines around the world by making the world’s smallest precision-built transistor – a “quantum dot” of just seven atoms in a single silicon crystal.

“Australian researchers are at the forefront

of an international race to develop and commercialize powerful new information technologies based on quantum physics,” she says. “Our success will establish access to unprecedented communications security and computing capability for Australia.”

UNSW’s star also shone brightly in the earlier announcement by the ARC of the esteemed Australian Laureate Fellowships, valued at up to \$5.1 million each over five years. The scheme is designed to attract and retain world-class researchers to key positions in Australia and three of the 15 fellowships awarded nationally came to this University.

The recipients are Professor Matthew England, who with Professor Pitman is joint Director of the UNSW Climate Change Research Centre; Professor Chris Turney, a Professor of Physical Geography at the University of Exeter in the UK, who will soon join UNSW, and Professor Mark Bradford of UNSW’s Faculty of Engineering.

Professor England is an expert in the ocean’s role in the global climate system, climate change and large-scale climate dynamics.

Professor Turney researches past and future climates, how people respond to change, dating of natural archives, and recent human evolution and migration.

Professor Bradford will develop a “green” sustainable, composite steel-concrete building frame system that reduces greenhouse gas emissions throughout the life cycle of building construction, usage and deconstruction. •