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Research Institutes

Quarterly A summary of key happenings in University of Adelaide research institutes

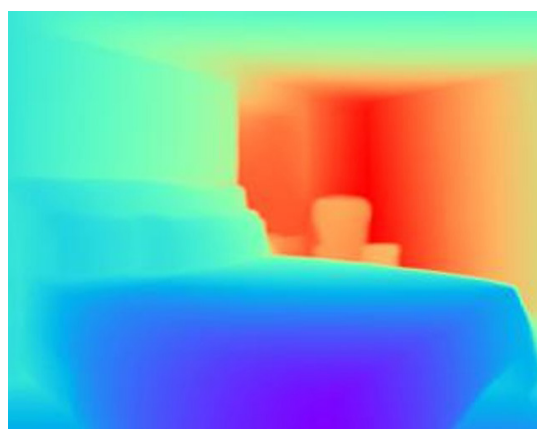
AUGUST 2021



AUSTRALIAN INSTITUTE FOR MACHINE LEARNING

- Professor Ian Reid was appointed as a Fellow of the Australian Academy of Science in late May.
- Professor Javen Shi is the AI lead on a \$500,000 National Citizen Science grant to help predict the likelihood of bushfires and minimise their devastating effects, one of nine citizen science awards nationally.
- The AIML-led 'Smarter Regions' CRC Bid will be submitted in August. If successful, it will empower regional Australia to gain the maximum benefit from the AI revolution.

PhD student WeiYin's paper 'Learning To Recover 3D Scene Shape From a Single Image' has been ranked amongst the top 2% of papers at the Computer Vision and Pattern Recognition (CVPR) conference 2021.



ENVIRONMENT INSTITUTE

- Dr Erinn Fagan-Jefferies, in collaboration with the SA Museum, was awarded \$480,000 in one of nine National Citizen Science grants for her 'Insect Investigators' program.
- Professors Christian Doonan and Chris Sumby have been awarded Phase 2 of their contract with Petronas for the conversion of CO₂ to methanol.
- Professor Andy Lowe has been nominated as the Australian lead for the Periodic Table of Food Initiative funded by the Rockefeller Foundation.

The 'Greening Adelaide Forum', to be held 3 August, will bring together key industry stakeholders to discuss critical issues around increasing urban vegetation cover, as is required to achieve climate-resilient and ecologically-vibrant cities.





INSTITUTE FOR MINERAL AND ENERGY RESOURCES

- The University of Adelaide (IMER) led 'Heavy Industry Low-Carbon Transition (HILT) CRC' has been successful. It has been awarded \$39M cash over 10 years by the CRC Programme to complement \$46M raised from partners including Adbri, Alcoa and Fortescue Metals Group. The lead academics are Professors Gus Nathan, Maziar Arjomandi & Peter Ashman.
- Associate Professor Simon Holford (ASPER) has been appointed to the State Chair in Petroleum Geoscience, thanks to ongoing support for this prestigious position (now for 25 years) from the South Australian State Government's Department for Energy and Mining.
- The ARC Training Centre for Integrated Operations for Complex Resources was officially launched in July by Hon Dan van Holst Pellekaan MP and Vice-Chancellor Professor Peter Høj AC. Professor Peter Dowd is the Centre's Director.

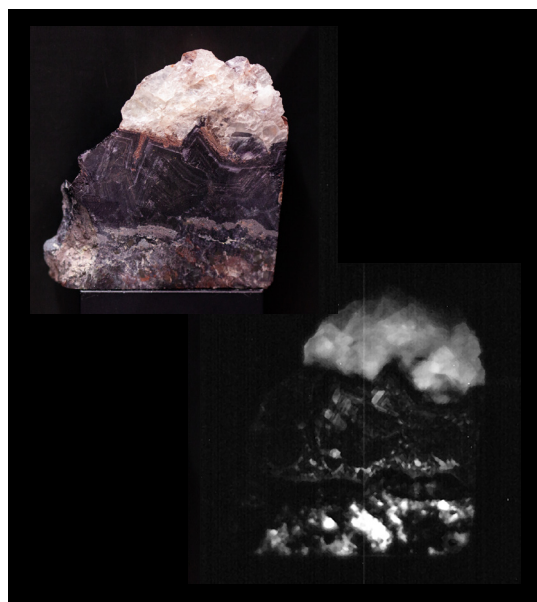
Professor Allan Collins (photographed at Cave Creek), whose research on deep time and the Earth's geological history features as cover article of the Magazine COSMOS.



INSTITUTE FOR PHOTONICS AND ADVANCED SENSING

- The University of Adelaide has made a Top Talent appointment to boost the State's quantum materials future: Professor Glenn Solomon has been appointed as the inaugural Hicks Chair of Quantum Materials.
- Professor Kishan Dholakia has been awarded a \$3.4M prestigious ARC Laureate Fellowship to shape the future of optical imaging, through new 'intelligent' microscopy able to capture 3D volumetric images.
- IPAS scientists are part of the ARC Centre of Excellence for Gravitational Wave Discovery (OzGrav) team, close to detecting a new type of gravitational wave 'the murmuring of a neutron star', which could provide insights into one of the strangest things in the Universe.

Professor Nigel Spooner and team have received a Moon to Mars Demonstrator Feasibility Grant from the Australian Space Agency that will enable real-time, non-contact identification of specific materials of critical importance for space resource and manufacturing. The image shows a fluorite-bearing ore specimen in visible-light and as an NIR fluorescence image.





ROBINSON RESEARCH INSTITUTE

- Associate Professor Louise Hull, Professor Gustavo Carneiro, Dr Jodie Avery and Dr Beck O'Hara have been awarded \$1.9M through the MRFF Primary Healthcare Research Scheme to apply machine learning for non-invasive diagnosis of endometriosis.
- Professor Sarah Robertson received the NHMRC Elizabeth Blackburn Investigator Grant Award for her work in peri-conception determinants of reproductive and pregnancy health.
- Professor Sarah Robertson and Professor Philippa Middleton were part of a successful tender (\$970K) led by Dr Jacqueline Bowden and others to The Foundation for Alcohol Research and Education to evaluate the Fetal Alcohol Spectrum Disorder National Awareness Campaign on Alcohol, Pregnancy and Breastfeeding.

Ms Amita Ghadge and Dr Ella Green jointly received the Ross Wishart Memorial Award at the SA Annual Scientific Meeting for Australian Society of Medical Research. Three of the four finalists were RRI young researchers. Amita and Ella are pictured with Khalia Primer, SA Convenor for ASMR.



WAITE RESEARCH INSTITUTE

- The ARC Training Centre for Accelerated Future Crop Development was awarded \$5M funding from the ARC, complementing \$5M from research and industry partners. Professor Barry Pogson from ANU will lead the centre. The University's Associate Professor Stuart Roy will be the centre's Deputy Director - Industry.
- Two agriculture-facing centres have submitted Expressions of Interest for the ARC Centre of Excellence scheme, proposing research in 'Animal Pain Solutions' and 'Plants for Space'. The University of Adelaide submitted seven Expressions of Interest for Centres of Excellence.
- HiCite Dabing Zhang and colleagues published new findings on boosting barley yields at high temperatures in Nature Plants.

The University of Adelaide's Space Agriculture programs are getting air time with an ABC landline interview and online story.



RESEARCH INSTITUTE DIRECTORS

Professor Simon Lucey
Director, Australian Institute for
Machine Learning
Phone: 8313 3495
Email: simon.lucey@adelaide.edu.au

Professor Bob Hill
Director, Environment Institute
Phone: 8313 6807
Email: bob.hill@adelaide.edu.au

Professor Michael Goodsite
Director, Institute for Mineral and Energy Resources
Phone: 8313 4320
Email: michael.goodsite@adelaide.edu.au

Professor Andre Luiten
Director, Institute for Photonics and Advanced Sensing
Phone: 8313 4380
Email: andre.luiten@adelaide.edu.au

Professor Ray Rodgers
Interim Director, Robinson Research Institute
Phone: 8313 4094
Email: ray.rodgers@adelaide.edu.au

Professor Matthew Gilliam
Director, Waite Research Institute
Phone: 8313 8145
Email: matthew.gilliam@adelaide.edu.au