

R-IQ

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

MAY 2021



**AUSTRALIAN INSTITUTE
FOR MACHINE LEARNING**

- AIML researchers are proud to have supported the University of Adelaide student team in the [NASA Space Robotics Challenge](#), one of only 2 non-US based teams globally to make it to the next round!*



**ENVIRONMENT
INSTITUTE**

- A team led by Prof. Justin Brookes has secured ~\$6M funding from the Department for Environment and Water's "Healthy Coorong Healthy Basin" program.
- Only a few months into 2021 and Environment Institute members have published two papers in Nature and two in Science. Congratulations to corresponding author [Kieren Mitchell](#) for his paper on dire wolves and to [Frank Grutzner](#), [Seth Westra](#) and [Raymond Tobler](#) for their co-authored papers.
- Congratulations to Drs Ken Clarke and Boone Law for their recent awards from the Surveying and Spatial Sciences Institute. Ken accepted the "The Industry Award for Environment and Sustainability" and Boone the "APSEA Postgraduate Student of the Year Award (South Australian Region)".

The EI partnered with Ecoversity to host a “Pint of Ideas” on Single Use Plastic Pollution, held at the UniBar, with a panel of experts including SA Minister for the Environment, David Speirs. EI Director Prof. Bob Hill was facilitator with approximately 120 people in attendance. [Third of a three part series to come Thurs 27 May.](#)





INSTITUTE FOR MINERAL AND ENERGY RESOURCES

- IMER is leading a Hydrogen CRC bid on accelerating the transition to a hydrogen industry (lead academics: Prof. Christian Doonan & Dr Kathryn Amos).
- Prof. Gus Nathan and colleagues' [HiTeMP-2 Outlook Report](#) into transitioning heavy industry towards net zero emissions was launched by Minister Dan van Holst Pellekaan on 12 April 2021.
- Centre for Energy Technology researchers published an innovative (first ever) particle velocity measurement method important for [solar thermal research](#).

The University of Adelaide is leading an ARC Centre of Excellence Bid in Critical Minerals (lead academics: Profs Richard Hillis, Nigel Cook, Carl Spandler and Völker Hessel).

"...THESE RARE EARTHS AND CRITICAL MINERALS ARE WHAT LITERALLY PULLS TOGETHER THE TECHNOLOGY THAT WE WILL BE RELYING ON INTO THE FUTURE"

AUSTRALIAN PRIME MINISTER,
SCOTT MORRISON, 2021



INSTITUTE FOR PHOTONICS AND ADVANCED SENSING

- \$300k [ARC Linkage Project](#) awarded to Dr Fred Baynes and colleagues to transform Australia's multi-award winning sapphire clock technology so its performance is available from a unit an order of magnitude smaller, lower power and cheaper. This project is an outcome of collaboration between IPAS and Cryoclock (see also picture), and was one of four recent projects featured by the ARC.
- Dr Jiawen Li has been named among Australia's official Superstars of STEM for 2021-2022.
- IPAS Ultrafast Mid-IR Laser featured in Spotlight on Optics: [Ultrafast 3.5 \$\mu\$ m fiber laser](#), authored by Nathaniel Bawden, Ori Henderson-Sapir, Stuart Jackson, and David Ottaway.

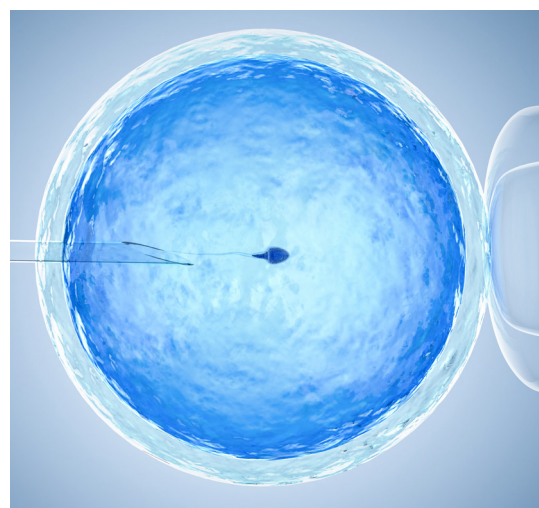
The Hon Steven Marshall MP, Premier of South Australia, officially launching IPAS start-up Cryoclock's new design and production facility on Lot Fourteen.



ROBINSON RESEARCH INSTITUTE

- Prof. Sarah Robertson has taken up a prestigious NHMRC Investigator Fellowship after over seven years as RRI Director. Prof. Ray Rodgers has stepped in as Interim Director whilst the University seeks a new Director.
- A/Prof. David Parsons and Dr Martin Donnelley, as part of the Australian Lung Health Initiative, have been awarded \$29M from the prestigious MRFF Frontiers H&M Research Program for development of "4D Functional Diagnosis : A new frontier in lung health for children".
- Prof. Helen Marshall's "[B Part of It](#)" has been launched in the NT to vaccinate thousands of young Territorians against Meningococcal B.

Prof. Rob Norman has [published in the Lancet](#) (IF 60.3) a randomized control trial showing no difference in success rates between the increasingly used technique of Intra Cytoplasmic Sperm Injection (ICSI; pictured) and the traditional IVF technique.

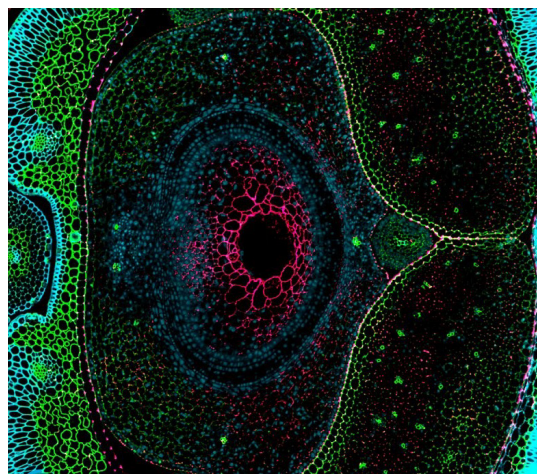




WAITE RESEARCH INSTITUTE

- WRI co-ordinated a successful \$20M bid to establish a [Federal Drought Innovation and Adoption Hub](#) to be headquartered at Roseworthy.
- Prof. Rachel Burton and A/Prof. Matthew Denton won ARC Linkage funding worth \$1.4M over 3 years, for projects establishing an Agave industry and developing novel biological fertilisers.
- WRI researchers have discovered a new drought resilience pathway in plants based on the 'animal signal' GABA, that was published in [Nature Communications](#).

WRI plant development researchers, and colleagues at Nottingham and Dundee (UK), have received an Australia-UK BBSRC (Biotechnology and Biological Sciences Research Council) partnering award related to their [work on genetic control of grain development](#).



RESEARCH INSTITUTE DIRECTORS

Professors Anton van den Hengel and Simon Lucey
Co-Directors, Australian Institute for Machine Learning
Phone: 8313 5309 and 8313 3495
Email: anton.vandenhengel@adelaide.edu.au
Email: simon.lucey@adelaide.edu.au

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

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

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

Professor Sarah Robertson
Director, Robinson Research Institute
Phone: 8313 4094
Email: sarah.robertson@adelaide.edu.au

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