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View of the moon pool in the centre of the JOIDES Resolution as a camera sled begins its descent down the drill string, eventually to guide the insertion of a newly replaced drill bit into the re-entry cone atop the drill hole some 4,700m below the ship. Photo: Richard Arculus
Philanthropy has a long history within earth sciences at ANU. The School's endowment represents the cumulative goodwill of former staff stretching over 40 years from founding Professor John Jaeger to Professor Bruce Chappell. Income on our endowment supports activities that we are otherwise unable to fund - mainly stipends for international PhD students and student travel grants.

The Earth Sciences Future Fund, launched by Vice Chancellor Professor Ian Young in April is intended to increase our endowment in order to support additional high-priority activities. These include a prestigious postdoctoral fellowship, high-quality fieldwork training, and curation of our valuable geological collection.

For me, the Future Fund provides an opportunity to express my gratitude for the opportunities that I have enjoyed at ANU over more than four decades. During my time as a PhD student in the early 1970s, I was the beneficiary of both the high-quality undergraduate teaching of Professor Brown’s Department of Geology, and also the stimulating research environment of Professor Jaeger’s Department of Geophysics and Geochemistry, which in 1973 became the Research School of Earth Sciences. Following my return to the School as a Research Fellow in 1978, after postdoctoral experience at Caltech, I have enjoyed opportunities, unsurpassed elsewhere in the world, to explore new directions in experimental rock physics.

Accordingly, I have made a substantial personal financial commitment to the new Fund, and am delighted with the generous initial response from staff and students – past and present - who have already joined me in this endeavour. Our pledges already total more than $280,000.

On behalf of the School, I appeal to the goodwill of the entire ANU Earth Sciences Community. By donating to the Fund, you can help to ensure that our School continues to be a very special place for research, research training and undergraduate education. In this way, we can work together to ensure that the School’s future is as bright as its illustrious past.

Ian Jackson, September 2015

Thank you!

The staff and students would like to extend a heartfelt thanks to everyone who has supported the launch of the new Earth Sciences Future Fund. With your generous gifts we are able to support the next generation of students, sustain critical research and learn more about our dynamic planet.

Foundation Donors
- Michael Barbettii
- Ken & Daphne Campbell
- Bill & Elizabeth Compton
- Joerg Hermann & Daniela Rubatto
- Trevor Ireland
- Ian Jackson
- Sue Kesson
- Derry C “Bear” McPhail
- Mervyn Paterson
- RSES Seismology and Mathematical Geophysics group
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Students shine at 3-Minute Thesis Competition

An 80,000 word PhD thesis would take 9 hours to present. The 3-Minute Thesis (3MT) competition challenges students to explain their topic in just 3 minutes.

Kelsie Long, Veronika Emetc and Hannah James proudly represented RSES at the Colleges of Science final, where both Hannah and Kelsie were selected to compete in the ANU final.

An audience of 1,000 people gathered at Llewellyn Hall to listen to the 12 finalists. Hannah’s talk was titled “You are where you eat”. She is creating maps of environment strontium isotope values and then using these maps to help understand human migration.

The judges awarded the $2,500 runner-up prize in the ANU final to Kelsie Long for her presentation titled: ‘The memory of a fish: 3 seconds or 20,000 years?’ Kelsie is interested in how we can use the geochemistry of fish otoliths (earstones) to examine past climates and lake level conditions at the important archaeological site of Lake Mungo in south western New South Wales.

Congratulations to Kelsie, Hannah and Veronika.

A New Equity and Diversity Committee at RSES

Worldwide, fewer women than men occupy senior university positions in earth and marine sciences. This has been attributed to low numbers of women enrolled in undergraduate and postgraduate programs, but in Australia for several decades women have comprised more than 30% of students, in some cases outnumbering men. The loss of women from universities wastes expertise and talent, limits perspectives, and decreases productivity and flexibility in the workplace.

Where do the women go? Women leave the profession due to a lack of female role models, dual-career issues, and gender bias. Although most early career academics, both men and women, face significant job insecurity, it is mostly women who leave the profession because they feel that they must choose between career and family. Some Australian universities have bucked this trend, however, and employ women at rates closer to parity with the proportion of students.

ANU is committed to improving gender representation across all staff.

Currently RSES has only three female academics on continuing appointments (<10% of academic staff). To this end, in November 2014, RSES set up an Equity and Diversity Committee (EDC) to identify the factors contributing to the low number of female academics and the best strategies to promote gender equity and diversity.

The EDC has raised awareness of equity and diversity issues at RSES through School meetings and a Workplace Cultural Survey to understand the climate for women and underrepresented minorities. The committee has provided information on ‘best practice’ to appointment committees, promotion committees and senior management. Resources on equity and diversity issues are available on the RSES intranet and an article on gender bias has been published (King et al., 2015, Elements, April, 88-89). We will keep you updated on our progress!

Hungarian delegation visit

Professor Ian Jackson was delighted to welcome His Excellency, Dr Attila Gruber, Ambassador for Hungary and his delegation to RSES. “Our School has a proud history of collaborating with many European countries. We have PhD students from all over the world.” The delegation were given a tour of some of our facilities including the SHRIMP, Radiocarbon Dating Lab, Seismology and Mathematical Geophysics, Experimental Petrology Lab, and the Engineering Workshop. Researchers spoke about some of our current programs including the Australian Seismometers in Schools Network.
Launch of multidisciplinary research project to study Lake George

An exciting new ARC Linkage Project, focusing on an integrated study of Lake George, was officially launched at RSES with a gathering of the industry sponsors and the multidisciplinary team that will undertake the research. The project will run for the next three years, involving 10 Chief and Partner investigators from 7 organisations.

Lake George, some 40 km northeast of Canberra, is an outstanding natural archive – it contains the longest continuous sedimentary record (several million years) of any Australian lake and has a long, unresolved human occupation history. The lake basin also supplies the majority of sand used in the Canberra construction industry.

The new study will examine the tectonic, sedimentary, hydrological, vegetation, climatic and archaeological history of Lake George, including the application of new and improved methods in geochronology, remote sensing, and geophysics.

Project outcomes will increase knowledge of landscape evolution and human history in eastern Australia from improved understanding of the responses of Lake George to past and future climate change and human impact, as well as optimising sustainable extraction of sand and gravel.

This may be the first time in Eastern Australia that sand quarry operators and agricultural business owners are supporting such a large multidisciplinary scientific project, with aims for the common good. As Henry Osborne, Bungendore resident and Dr Éva Papp, ANU researcher, the originators of the project expressed it: “We want to leave a home for our children and grandchildren that is sustainable for many generations to come. We want to understand the past so we can take care of the future.”

The Ore Genesis Research Enterprise (OGRE) teaching success

Congratulations to Dr John Mavrogenes and PhD candidate Mr Tarun Whan who have been awarded a Vice Chancellor’s Teaching Enhancement Grant for their program Ore Genesis Research Enterprise (OGRE). They have transformed the Economic Geology course using an innovative, integrated teaching and mentoring approach designed to promote immersive learning.

Students are mentored through the processes of preparing, analysing and interpreting a suite of samples. In this case, they study ore deposits, but this system of learning could be applied to any suite of materials. OGRE challenges and supports students to pose and test their own research questions, synthesising knowledge they have gained throughout their undergraduate education to tackle unresolved areas of investigation in ore genesis.

Science undergraduate, Chris Ingles stated that “Economic Geology is the most interactive course I’ve studied!”

The OGRE initiative has additional benefits beyond the student experience, in that it will result in the production, growth and upkeep of an online student-run research and teaching database.

“Through the OGRE project I have learned a lot about the world of research” said science student, Genevieve Crutchley.

Further value is returned to the school in the form of ongoing synthesis of physical teaching and research materials as well as the creation of industry partnered student linkage projects.

Florey refurbishments

This year RSES staff and students were able to move into refurbished space within the heritage-listed Florey building, formerly the John Curtin School of Medical Research, directly opposite the Jaeger complex. The attractive new space on the ground floor and basement accommodates the micropalaeontology and marine geoscience labs. It is also the new home of our irreplaceable geological collections.

Emeritus Professor Ken Campbell with Ms Lynne Bean touring the new facilities. Photo: Patrick De Deckker.
RSES excels in World University Rankings

ANU has secured its position as Australia’s top university in the latest QS World University rankings for 2015-16. ANU has rated equal 19th in the world, up from 25 last year.

The QS World University Rankings named ANU as the number one institution in Australia, based on a range of measures such as academic reputation, employer reputation, research citations and the ratio of staff to students. Fourteen ANU subjects have been rated in the top 25 in the world, including Earth and Marine Sciences, which rated 12th. Nationally, ANU topped the Earth and Marine Sciences rankings followed by University of Melbourne (34th) and University of Western Australia (44th).

According to the RSES Director Professor Ian Jackson, “this is a pleasing result but of course, we should aim to do even better”.

The QS World University Rankings examined 36 disciplines at almost 900 universities around the world. They considered the opinion of more than 85,000 academics and analysed 17.3 million research papers.

Two new AGU fellows

Congratulations to Professor Michael Roderick and Professor Hugh O’Neill who have been admitted as Fellows of the American Geophysical Union (AGU) for their exceptional contribution to Earth and space sciences.

Professor Roderick, researches environmental physics, hydrology, ecology and climate science.

“I was surprised, thrilled and honoured when I found out because I didn’t even know I’d been nominated,” he said.

Professor Roderick’s election to the Fellowship was for scientific contributions to hydrology with special emphasis on the science of evaporation, including the role of vegetation.

“In Australia water is such a big deal for us. We don’t have a lot of it and the award of an AGU Fellowship in Hydrology to an Australian is fantastic”

Professor O’Neill’s research interests cover a remarkably wide spectrum of important earth sciences issues. He has made seminal contributions to the chemical composition of the Earth and how the Earth differs from other possible planetary compositions, the origin of the Earth-Moon system, and how melting in the Earth’s mantle relates to global tectonics and Earth history.

The pair are among only 13 Fellows from outside the US and the only Australians to be recognised. The School takes great pride in the achievements and recognition of Professors O’Neill and Roderick.

Celebrating 200 years of the Smith map

This year marks the bicentenary of the publication of the ‘Map of the Strata of England and Wales’ by William Smith, an original copy of which is hanging in the foyer of the Research School of Earth Sciences. This map (on a scale of 1 inch to 5 miles) was the first of its kind in the world and relied on many innovations championed by William Smith. His visionary achievements clearly influenced geological mapping, first in Europe and later on elsewhere, including the British colonies, such as Australia.

The map is one of the treasures that ANU possesses. It was purchased 50 years ago by Professor David Brown, the founding Professor of the Department of Geology in the Faculty of Science and was frequently used for teaching purposes.

A public lecture by Emeritus Professor Patrick De Deckker AM FAA will be held on Thursday, October 15 at 5.30pm at the Finkel Theatre. Come and see the map at RSES.
Brief News

Great Men Great Scientists

This year we celebrated the 90th birthdays of two of our most distinguished Emeritus Professors, Mervyn Paterson and Ross Taylor. Director, Ian Jackson welcomed special guests and family members who had travelled great distances - from USA, Hong Kong, Perth, Cairns, Melbourne and Sydney – to join us for the celebrations.

The earth sciences community came together at morning tea to hear some wonderful reflections on the careers of Mervyn and Ross. The celebrations continued with family and friends enjoying lunch in the Common Room at University House. Speakers (throughout the day and at a Planetary Crusts symposium the following day) included distinguished visiting scientists Roberta Rudnick, Scott McLennan, David Olgaard, Jeff Taylor, Larry Taylor, and Teng-Fong Wong.

Dr Everett Gibson, representing the Director of NASA, presented Ross with a special New Zealand flag flown aboard the Orbiter Columbia 14 Dec 1981 with the inscription:

In recognition of your many scientific contributions across six decades. Your assistance in analyzing the returned Apollo samples and interpreting the analytical data from NASA’s planetary missions continues to contribute to our exploration efforts

Whilst these two gentlemen officially retired in 1990 they both continue to actively participate and enrich the life of the School in many ways – perhaps most importantly through the example they set for students, and in the mentoring of early-career staff, but also provision of valuable advice to those somewhat further advanced in their careers.

Some reflections:

To Mervyn and Ross, and their families, I express our appreciation for your highly-valued, continuing, association with the School.

Director, Ian Jackson

These were days of great experiments not only with rocks but with wine, food, bushwalking and architecture. Mervyn introduced me to red wine and classical music.

Bruce Hobbs

There was Mervyn the brilliant scientist…numerous papers and publications and then we remember the man you were: friendly, smiling and attentive to others – long life to you!

Nicole et Jean-Claude Doukhan

Mervyn – we hope to be there for the 100th from the Zurich crews

Jean – Pierre Burg

Thank you Ross… I am proud to have been your student in the lineage of Goldschmidt to whom you can be worthily compared

Jim Gill Santa Cruz CA

Mervyn and Ross celebrating 90 years

Everett Gibson (NASA) with the Taylor family

Barrie, Mervyn and Elizabeth Paterson
University of Tokyo student visit

A group of 20 students from University of Tokyo had the opportunity to visit several research groups and laboratories. The visit provided a rich overview of the current research being carried out by RSES academics and current PhD students.

“All of our students were impressed to see how science is conducted at RSES and some said already that they want to explore to do PhD overseas”, said Prof Yusuke Yokoyama from University of Tokyo.

In early March, ANU and the University of Tokyo, an IARU partner, signed a strategic partnership agreement aimed at bolstering research, collaboration, and exchanges between the two institutions.

Alumnus visit

In July, alumnus Dave McPherson (ANU BSc First Class Hons 1999) returned to the school to speak with staff and students. Dave gave a presentation entitled ‘Geoscience careers in the oil and gas industry’. Using his own life experiences he gave examples of the diverse and challenging career opportunities in the energy sector. Dave shared stories about his career: early days as an exploration geologist in Perth; working in Tanzania; deepwater, HPHT and sub-salt exploration in the Gulf of Mexico; HPHT exploration in Nigeria; and closer to home work on the North West Shelf and Timor Sea. Since mid-2013 Dave and his family have been based in Brunei. It was wonderful to welcome him back to RSES.

Alice Springs joins the program

In August 2015 a new seismometer was installed in St Philip’s College in Alice Springs as part of the Australian Seismometers in Schools (AuSIS) program. This station provides the network with a valuable Central Australia site. We now have 43 schools around Australia who are part of the AuSIS network. The program aims to provide good quality seismic data to researchers while getting teachers and students interested in the dynamic nature of the earth. The Kathmandu Earthquakes and the recent seismic activity around Fraser Island in Queensland have all been recorded on the AuSIS network providing us with teachable moments. If you want to know more visit our web page.

Ross has had a significant impact on my life…he was a one-man provider of what we in the States call a “liberal education”. Learning the geochemistry of course was a given…it was all the other things beyond geochemistry that were so important and made such a difference.

Scott McLennan

Ross is always held up as the archetype “gentleman scientist”. Not only does he write influential papers and books about the Moon, the solar system and the continental crust, but he is widely read of history and philosophy of science and brings this broad perspective to bear on the topics he tackles…it is a great personal honor to have been a student of Ross’s.

Roberta Rudnick
WORLD’S LONGEST CONTINENTAL VOLCANO TRACK

RSES researchers have discovered the world’s longest known chain of intra-plate continental volcanoes, running 2,000 kilometres across Australia, from Cape Hillsborough in Central Queensland to near Melbourne in central Victoria.

The volcanic chain was created over the past 33 million years, as Australia moved northwards over a hotspot in the Earth’s mantle, said lead researcher, Dr Rhodri Davies.

“We realised that the same hotspot had caused volcanoes in central Queensland and the central Victoria region, and also some rare features in New South Wales, roughly halfway between them,” said Dr Davies.

“The track is nearly three times the length of the famous Yellowstone hotspot track on the North American continent,” said Dr Davies.

This kind of volcanic activity is surprising because it occurs away from tectonic plate boundaries, where most volcanoes are found.

These hotspots are thought to form above mantle plumes, narrow upwellings of hot rock that originate at Earth’s core-mantle boundary almost 3,000 kilometres below the surface.

The study, published in *Nature*, found that sections of the track have no volcanic activity because the Australian continent is too thick to allow the hot rock in mantle plumes to rise close enough to the Earth’s surface for it to melt and form magma.

The research found that the plume created volcanic activity only where Earth’s solid outer layer, called the lithosphere, is thinner than 130 kilometres. Co-authors, Dr Nick Rawlinson, now at the University of Aberdeen’s School of Geosciences and Professor Ian Campbell (RSES) believe that these new findings will help scientists to understand volcanism on other continents and from earlier periods in Earth’s history.

The scientists have named the volcanic chain the Cosgrove hotspot track. Dr Davies said the mantle plume that formed the Australian volcanoes is probably still in existence, under the sea a little to the northwest of Tasmania.

ICE SHEET COLLAPSE TRIGGERED ANCIENT SEA LEVEL PEAK IN AUSTRALIA

RSES scientists have discovered a dramatic ice sheet collapse at the end of the penultimate ice age that caused widespread climate changes and led to a peak in the sea level well above its present height. The team found the events 135,000 years ago caused the planet to warm in a different way to the end of the most recent ice age about 20,000 to 10,000 years ago.

The international team, which includes researchers from ANU as well as the Universities of Southampton and Swansea in the UK, has published their findings in *Nature*.

The findings will help scientists understand the processes that control Earth’s dramatic climate changes, said the leader of the study, Dr Gianluca Marino.

“We knew the sea level had overshot its present levels during the last interglacial period, but did not know why. Now we for the first time can explain the processes that caused the sea levels to exceed the present levels,” said Dr Marino.
Development of subduction at convergent plate margins is a critical part of plate tectonics. However, the processes accompanying initiation of subduction are not well understood, as the geologic record is either absent, ambiguous, or buried beneath younger deposits. The International Ocean Discovery Program's Expedition 351 "Izu-Bonin-Mariana Arc Origins", targeted a single site west of the active Izu-Bonin-Mariana (IBM) volcano chain where it was believed evidence of subduction initiation for this archetypal intra-oceanic arc could be preserved. The Amami Sankaku Basin west of the Kyushu-Palau-Ridge, representing the 25-50 Ma old, remnant part of the modern IBM arc, was identified as the best candidate to have preserved a geological record of subduction initiation that occurred some 50 Ma ago.

During the two month-long expedition, lead by co-chief scientists Dr. Osamu Ishizuka from the Geological Survey of Japan and Prof. Richard J. Arculus from the Research School of Earth Sciences (RSES), a set of holes ultimately reaching 1600 m below sea floor in 4,700m of water depth, were drilled through mainly volcaniclastic sediments and the oceanic igneous basement. Dr. Philipp A. Brandl, a second RSES member on the expedition, was part of the core description team.

The age and the nature of the oceanic igneous basement were regarded before the expedition to be the key for unravelling the processes of subduction initiation. If the basement was considerably older than the IBM arc, it was suggested that "induced/forced" subduction driven by remote subducted slab pull or ridge push for example, would have uplifted the basement and been accompanied by shedding of debris, prior to development of a magmatic arc. If initiation was "spontaneous", then foundering and sundering of the overriding plate would have occurred. In the event, the basement proved to be equivalent in age and distinctive composition to that preserved in the current IBM trench wall, and consistent with formation through spontaneous subduction. The basement was formed by seafloor spreading at a high rate of magma emplacement, over a short period of time, and with distinct inputs from the nascent subducting Pacific plate. The observations and results leading to these new insights are published in an article in Nature Geoscience.

Sure, winter felt chilly, but Australia is setting new heat records at 12 times the rate of cold ones.

Spring feels like a welcome relief from an Australian winter that felt very cold and very long. Melbourne has just shivered through its coldest winter in 26 years and Canberra hibernated through more cold nights than any winter since 1997. But while it felt cold, it turns out we've just become accustomed to unusually warm conditions. Researchers Sophie Lewis and Andrew King in their new study online in Geophysical Research Letters show that Australia has been losing out on cold temperature records over the past 55 years.

They investigated the frequency of new hot and cold temperature records for months, seasons and years, for each state and Australia as a whole, from 1910 to 2014. The results were straightforward. Record-breaking hot temperatures have outnumbered new cold records by a factor of 12 to 1 over the last 15 years. The cause is also clear: global warming.
OPEN DAY A HIT

ANU Open Day on 29 August was a huge hit. The new Science labs were crammed with activities. There was plenty to see: spectacular thin sections of igneous and metamorphic rocks, working seismometer, demonstrations including a gravity flow experiment and examples from our spectacular fossil, mineral, rock and meteorite collection. Staff and students shared their passions for science with prospective students and their families. Penny King and Marnie Forster also delivered public presentations that covered the nature of our undergraduate and masters programs.

2015 highlights available online: https://www.youtube.com/watch?v=CfKpcpBv1XE

QUATERNARY CONFERENCE, NAGOYA, JAPAN

It was a hot and humid week at the end of July 2015 when nearly two thousands scientists from all over the world gathered in Nagoya, Japan for the INQUA XIX Congress – the first to be held in Japan since the organization’s 1928 inception. Nagoya is located in central Japan and is easily accessible by shinkansen (bullet train) from Tokyo and Osaka.

On Monday morning, at the Opening Ceremony, delegates were honoured and awed by the presence of Their Majesties, the Emperor and Empress of Japan, as well as Guests of Honour, the Minister of Science and Technology Policy and the Governor of Aichi Province.

The honour of the first talk went to Georgia Tech’s Kim Cobb, who gave a brilliant lecture on Holocene ENSO variability in the tropical Pacific.

After that, delegates broke off to listen to the first sessions on a wide range of Quaternary topics, including palaeoclimate, human dispersal, tephrochronology, archaeology and much, much more.

The first evening ended with a welcome function that featured greetings from Nagoya’s mayor and traditional Japanese taiko drummers.

The conference schedule was intense; the day regularly started at 9am with two orals sessions separated by a 30-minute tea and coffee break (which didn’t include biscuits, much to the dismay of the Brits and Aussies who cherish their proper morning tea).

The hour break for lunch was followed daily by plenary lectures and the poster session, before oral sessions resumed at 5pm, running until nearly 7pm. Throughout the week, up to 14 sessions could be running concurrently, leading to some difficult decisions about which sessions to attend.

With six full days of conference proceedings, the intensity didn’t let up until the afternoon of the very last day, at which point, our group bid a fond farewell to Nagoya before embarking on some post-conference travels of Japan.

Jennifer Wurtzel
STUDENTS ENJOY MINES AND WINES

On the 3rd and 4th of September PhD students Michael Anenburg and Patrick Carr attended the Mines and Wines 2015 conference in Queanbeyan, NSW. This annual conference, attended primarily by industry geologists, showcases the diverse mineral (and wine) endowment of Eastern Australia. Attendees were shown significant deposits within the Canberra region including the Lake George Mine, the Dargues Gold Mine project and Snobs Reef at Majors Creek to examine historical gold workings. Following the conference attendees relaxed whilst tasting wines from Tallangandra Hill, McKellar Ridge, Murrumbateman and Barton Estate. Michael and Patrick came equal first in a student poster competition, each winning a bottle of local red wine. Well done!

GOLDSCHMIDT 2015

In August, the annual Goldschmidt geochemistry conference was held in the beautiful city of Prague in the Czech Republic. The conference is very large with thousands of geochemists flocking to Prague for days of oral presentations, evenings of poster presentations and nights of organised social events and networking.

Thanks to travel scholarships and support from the School, many RSES PhD students had the opportunity to attend and present their research, including myself. The feedback given by the conference attendees, was very constructive and has given me new ideas to pursue. I learned many exciting and new things from outside my field of expertise by attending the seminars throughout the conference and also gained valuable tips for writing journal articles. It was a fantastic conference to attend and if you ever get the opportunity I would highly recommend attending an international conference. The next Goldschmidt conference will be in Yokohama, Japan on the 26th June 2016.

2015 RSES HONOURS STUDENTS

Back Row (L-R): Nicholas Badullovich, Tilen Milojkovic, Shannon McConachie, Sam Henderson, Catherine Kooymans, Cornell Hanxomphou, Elizabeth Philippa
Front Row (L-R): Aero Leplastrier, Lym Garratt, Jiadong Shi, Prof Bradley Opdyke (Convenor), Eloise Casinader, Matt Peacock, Laura Fry, Ellen Cliff, Hamish Leitch, Geoff Bonning, Aziah Williamson
ROCK STARS

Dr Nerilie Abram
2015 Dorothy Hill Award of the Australian Academy of Science – for female researchers in earth sciences

‘Dr Abram’s pioneering research addresses the past behaviour of the Earth’s climate system, and implications for anthropogenic climate change. Her outstanding research portfolio has generated unique new records of past climate and environmental impacts from regions spanning the tropics to Antarctica, and assessing these alongside state-of-the-art climate models. Her high-impact work has led to ground-breaking advances in understanding how climate change is impacting Southern Ocean winds, Antarctic temperatures and Australian rainfall patterns.’

Professor Kurt Lambeck AO FAA FRS
2015 Matthew Flinders Medal of the Australian Academy of Science
2015 Knight of the Order of Merit – Italian Republic

Both these prestigious awards recognise Professor Lambeck’s lifelong achievements in science. ‘A globally pre-eminent geophysicist’ Lambeck has constantly been engaged in promoting relations between Italy and Australia in the field of science. The Academy citation states: ‘his work has fundamentally influenced a range of disciplines from geophysics to oceanography, glaciology and archaeology.’ He has made fundamental contributions to understanding Earth’s rotation, the strength of Earth’s mantle and its role in plate tectonics, and the complex global geometry of sea level variations associated with ice sheet melting.

Dr Sophie Lewis
2015 Early Career Researcher Award of the Australian Meteorological and Oceanographic Society

“In a relatively short time Dr. Lewis has established broad expertise in climate science, publishing on a range of topics including speleothem reconstructions, palaeoclimate simulation, and the detection and attribution of climate extremes. Dr. Lewis has been very active in the public communication of her research and in her service to the scientific community. Now, she is the leading early career researcher globally on the attribution of extreme weather and climate events, and still also manages to nurture younger scientists through various mentoring roles at multiple levels.”

Professor Malcolm Sambridge
2015 Fellow of the Australian Academy of Science

This is a Fellowship of the nation’s most distinguished scientists and recognizes Professor Sambridge’s outstanding career. His research contributions have been in the development and application of mathematical methods for analysis of complex geoscience datasets. Malcolm’s work has changed the way in which we analyse seismic waves for the structure of the Earth’s interior, model landscape evolution, understand populations of mineral ages from isotopic microanalysis, and interpret infrared absorption spectra associated with hydrous crystal defects in silicate minerals.

EVENTS

10 October
RSES Students’ Geoball

15 October
Smith Map Public Lecture

27 November
ANU Alumni Dinner, Melbourne

14 December
Reunion at AGU Meeting, USA

16 December
ANU Science Graduation Day

MID-YEAR GRADUATES

We congratulate the following students on completion of their degrees. We celebrate their achievements and are immensely proud of them.

PhD
Luna Brentegani
Evan Gowan
Amber Jarrett
Aimee Komugabe
Laura Richardson
Nick Scroxton
Kelly Strzepek
Dominique Tanner
Claire Thompson
Irina Zhukova

Honours
Sam Boak
Lym Garratt
Kristine Head
Jack Muir
Madeleine Rosevear
Jiadong Shi