



Greg Torda

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Congratulations!



Congratulations again to the most recent AIMS@JCU graduates! Here is a lovely photograph from the 8th March ceremony which includes some of our AIMS@JCU supervisors, staff and committee members.

Back row: Dr Elodie Lédée, Dr Amin Mohamed Esmail, Dr Martino Malerba, Dr Kristen Anderson, Dr Line Bay.

Front row: Dr Melissa Rocker, Prof Helene Marsh, Libby Evans-Illidge, Dr Cherie Motti, Dr Kate Quigley, A/Prof Kirsten Heimann.

Congratulations also to Dr Catalina Aguilar Hurtado and Dr Adriana Humanes who both graduated in absentia in December 2016.

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Photographs in this publication were submitted by AIMS@JCU members unless otherwise stated

About the AIMS@JCU Newsletter:

This newsletter is produced quarterly and distributed by email to AIMS@JCU members, AIMS and JCU staff.

If you'd like to be added to our mailing list, or have a query regarding this newsletter, please contact:

Editor: Lauren Gregory
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2017 PhD Scholarship recipient

Marina Santana

Marina graduated with a Bachelor of Oceanography (2012) and Msc in Oceanography (2015) both at the Oceanographic Institute of the University of São Paulo (IOUSP, Brazil). From 2015 to mid 2017, she worked as a science technician at the Laboratory of Marine Management, Ecology and Conservation (IOUSP) for the "MARPLAST Project - Plastic debris along Brazilian coast: Diagnosis and monitoring". Since 2010, Marina's research field has been human impacts on marine ecosystems with particular emphasis on the biotic effects of microplastic marine pollution.



Marina has now started her PhD 'Impacts of microplastics on tropical marine organisms and ecosystems' under the supervision of Lynne van Herwerden (JCU), Frederieke Kroon (AIMS) and Cherie Motti (AIMS). The project will examine potential impacts of microplastics on tropical marine organisms and ecosystems of the Great Barrier Reef (GBR). For that, the aim is to investigate the bioavailability of microplastic particles along areas of the GBR (through field sampling) and some possible combined effects of individual and ecosystem levels through lab experiments (e.g. growth, reproduction, death, and trophic impacts). These results will then support the development of distribution maps of tropical species sensitivity for microplastics exposure, assisting further environmental risk assessments.

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2017 PhD Scholarship recipient

Paul O'Brien



It wasn't until Paul's final year of his Bachelor of Science at Monash University in Melbourne that he thought about pursuing a career in Marine Biology. Following a field trip to Heron Island, he came back fascinated by coral reefs and the diversity of life they hosted. A few years later, Paul decided to go back to University and study a Master's degree in Marine Biology at JCU. During this time, a career in research science became increasingly

appealing and he completed a Minor Project on the influence of ocean acidification on coral-associated microbial communities under the guidance of Dr. Kathy Morrow, Dr. David Bourne and Prof. Bette Willis.

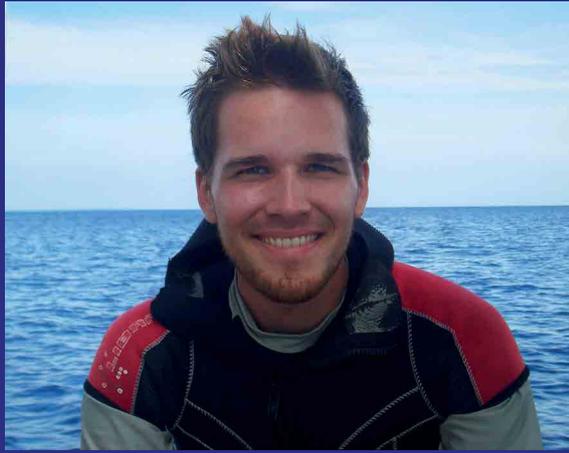
Not completely deterred by the challenges posed by bioinformatics analysis, Paul decided to follow this theme with a PhD and delve deeper into the world of marine invertebrates and their microbial communities. Commencing in July 2017 and supervised by Dr. David Bourne, Dr. Nicole Webster and Prof. Bette Willis, this project will employ metagenomic sequencing of a wide range of reef invertebrates to identify patterns of co-evolution between microorganisms and their host. It is likely these microorganisms are more relevant to host fitness and this project will also attempt to understand the functional roles of these microorganisms and how they may be influenced by environmental stress.

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2017 PhD Scholarship recipient

Christopher Brunner



Christopher completed his double MSc degree in Marine Biology in 2015, after studying one year at the University of Bremen (Germany) and another year at the Ocean University of China (Qingdao, China). He is especially interested in adaptation processes of different benthic

communities. Therefore, he investigated within the framework of his Master thesis the physiological adaptation of mesophotic *Leptoseris* spp. and *Pachyseris speciosa* colonies across an 80m depth gradient at the Coral Reef Ecosystem Laboratory of the University of Queensland. Besides this, he has worked above and below the water surface in arctic, antarctic, temperate and tropical regions. There, he studied the adaptability of cold-water and tropical corals, as well as other benthic organisms, towards impacts of climate change. As an extremely hydrophilic person and passionate underwater photographer, he not only enjoys working underwater, but also likes to spend his free time underneath the water surface.



In one of his most recent projects, he examined how coral larvae of multiple broadcast spawning and brooding coral species are attracted by waterborne crustacean coralline algae (CCA) cues. As a new AIMS@JCU PhD student, Christopher wants to add-on to his previous work by identifying how coral larvae perform under future climate scenarios in the presence of sedimentation. Under

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2017 PhD Scholarship recipient

Christopher Brunner (continued)

the supervision of Dr. Andrew Negri (AIMS), Dr. Sven Uthicke (AIMS) and Dr. Mia Hoogenboom (JCU), he will furthermore examine cumulative effects of near future climate scenarios (increasing temperature and ocean acidification) and water quality stressors (sedimentation, light reduction, nitrification and pesticides) on important calcifying reef taxa (e.g. corals, coralline algae and foraminifera). Finally, he will calculate concentration-response curves and climate-adjusted thresholds of these stressors. These data will be combined with datasets of AIMS and NOAA, so that spatial risk and exposure maps can be create, which will demonstrate how future climate scenarios and pollution affect calcifying organisms. The outcome could then provide decision makers with vital information in order to sustainably manage the tropical reef ecosystems.

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2017 AIMS@JCU Student Seminar Day



You are invited to the 2017 AIMS@JCU Student Seminar Day

When: 9am-5pm Friday 1st September

Where: Upstairs at the Metropole Hotel, 81 Palmer Street, Townsville (Parking at Oaks M on Palmer, the adjoining apartment accommodation)

Morning tea, lunch and finishing refreshments will be provided

RSVP to aims@jcu.edu.au prior to 23rd August with any dietary requirements

For more information, see <http://aims.jcu.edu.au/>



Image courtesy of Gerard Ricardo

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The annual AIMS@JCU seminar day is coming up - we hope to see you there supporting your students and peers (please note the change in venue).

Please remember that participation is compulsory for AIMS@JCU scholarship holders. The abstract deadline is 7th August 2017.

Sexual Harassment and Sexual Assault

AIMS@JCU cares a lot about the safety and wellbeing of our students, so it was with some alarm that we read the report released by the Australian Human Rights Commission on the unacceptably high incidence of sexual harassment and sexual assault at Australian universities. I'm sure you have all heard about this report – if not you can find a summary and link to it at www.humanrights.gov.au. With the spotlight on this topic, we thought it might be timely to point out the support available to you if you observe or find yourself a victim of this unacceptable behaviour.

- JCU has moved quickly to respond to the recommendations of the report. You can find out more about this at <https://www.jcu.edu.au/safety-and-wellbeing/ahrc-survey>.
- AIMS is committed to ensuring that you, along with all staff and other visitors and contractors at AIMS, work in an environment free from unacceptable behaviours. There is policy and procedure on AimScape, which outlines what to do if you or someone you know is harassed at AIMS.
- As a visitor of AIMS, you can access the Employee Assistance Program provided by AIMS. This provides free, professional and confidential counselling. It can be accessed 24 hours a day, 7 days a week. Further information is available on AimScape. Or just call 1300 361 008.

AIMS@JCU News

- The AIMS@JCU R-course is well underway for 2017; thanks so much to Melissa in the office and Murray Logan for all of your hard work to offer this fantastic opportunity each year.
- We are now inviting applications for our second round of Pilot Research Awards - the application deadline is 3rd September.
 - » Applications are invited from any AIMS@JCU student member who is not currently receiving an AIMS@JCU PhD scholarship.
 - » These awards are one-off pilot research grants, to explore a new method or initiate a new experiment that might not otherwise have been possible.
 - » They are for a maximum of \$1,000.

Where are they now?

Catalina Aguilar



Catalina is now a Postdoctoral associate at the Ocean Chemistry and Ecosystems Division of NOAA's Atlantic Oceanographic and Meteorological Laboratory (AOML) and the University of Miami Rosenstiel School's Cooperative

Institute of Marine and Atmospheric Sciences (CIMAS). Catalina completed her PhD last year with Prof. David Miller at JCU and Dr. David Bourne at AIMS/JCU where she investigated the responses of corals to environmental stress using transcriptomics. Catalina wanted to continue in this research area and decided to move to Miami and start a new project within the AOML and CIMAS.

The project involves using both genomics and traditional data to better understand if Caribbean corals can acclimatize and adapt to thermal stress, ocean acidification, and other stressors. These experiments are run at the Marine Technology and Life Sciences Seawater Complex (MTLSSC) at RSMAS (<http://www.rsmas.miami.edu/seawater>) using specimens from *Acropora* nurseries. One of main goals of this project is to provide data to the University of Miami restoration programs of the threatened staghorn coral (*Acropora cervicornis*). In addition to work on other projects in the field that are part of the Acidification, Climate and Coral Reef Ecosystem Team (ACCRETE, <http://www.coral.noaa.gov/research/accrete.html>).



Acropora cervicornis nurseries at the Biscayne National Park, photos by Sephanie A. Schopmeyer.

Catalina's role is to conduct all the genomic analyses within these projects as well as running the experiments with the ACCRETE team leaders Dr. Derek Manzello and Dr. Ian C. Enochs, and in collaboration with other RSMAS and AOML scientist. She is very excited about her new position and new location been closer to her family in Colombia. Catalina would like to thank AIMS@JCU Quantitative Marine Science program for her scholarship and support during her PhD, and for the opportunities this program brought to her career.

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Research Director Report

Science communication is an important skill that we try to foster in the AIMS@JCU cohort, through both our annual seminar day and the special science communication awards. Some of you have recently received AIMS@JCU science communication support for travel to international conferences, and I know that you represent AIMS@JCU well with high quality presentations. Special congratulations to Cecilia Pascelli and Brian Strehlow who recently attended the International Sponge Conference in Galway and both won a best-talk prize. I hope that all AIMS@JCU students are busily putting the finishing touches on their abstracts for the annual seminar day on 1st September. We have a great line-up of judges and of course prizes, and it promises to be another day of excellent science communication. Don't miss it!

Welcome to the new students commencing their PhD journey this year. I look forward to meeting you at seminar day – and reading about your proposed research in this and future editions of our newsletter. And to any of our alumni reading this – don't forget to keep in touch and let us know what you are up to.

It's great to be back in the saddle at AIMS@JCU after my unexpected leave of absence, and I am happy to report a clean bill of health. Sincere thanks to Dr Cherie Motti for stepping into my role and doing such a wonderful job of leading AIMS@JCU in my absence. It really was a huge leap of faith to tackle the role at such short notice and in addition to the responsibilities of her 'day job'. I feel very grateful for this support in addition to the fresh pair of eyes which Cherie brought to the role. Of course – the smoothness of these transitions was also due in large part to the ongoing efforts of Lauren Gregory and Melissa McLean – the heart and soul (and nerve centre) of AIMS@JCU. I am so grateful to both of you for your continued expertise and professionalism as you seamlessly plug any gaps if and when they appear. And finally – thanks to everyone who sent messages of health and moral support. It was very much appreciated.

Libby Evans-Illidge, AIMS@JCU Research Director

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