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Prize winners at the Australian Coral Reef Society 84th annual conference

Emily Howells

The 84th annual conference of the Australian Coral Reef Society (ACRS) was held in the capital of the Northern Territory and was superbly opened by a representative of the Larrakia or "saltwater people", the traditional owners of Darwin. Indigenous accounts of declining reef resources highlighted the need for ongoing scientific research and education directed at the conservation of Australian coral reefs. The conference theme "Reefs of the Indo-Pacific: Hopes for the future and lessons from the past" encompassed a broad scope of research from the coral reefs of Darwin, Ningaloo, and the Great Barrier Reef. Additionally, two special sessions were devoted to science and management in the Indo-Pacific coral triangle.

AIMS@JCU was represented at the conference by a large number of student members from the Stress in Tropical Marine Systems and Coastal Processes and Modelling programs. The strong presence of students in sessions on corals and their symbiotic partners (dinoflagellates and bacteria) demonstrated the success of the joint-venture in producing high calibre research in this field. Two AIMS@JCU students were awarded with prizes for their presentations, judged by members of the ACRS council. Emily Howells received the Vicki Harriott memorial prize (www.australiancoralreefsociety.org/vicki_harriot.htm) of \$500 for the best student presentation for her talk on the connectivity of Symbiodinium populations.

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About the AIMS@JCU Newsletter:

This newsletter is produced quarterly and distributed by e mail to all AIMS and JCU staff.

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

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ACRS prize winners' report

Emily Howells continued

The conference dinner and awards ceremony at the Darwin sailing club was a highlight. It provided a great opportunity for networking in an informal atmosphere with time to relax after two busy days of presentations. AIMS@JCU students were able to make contacts with researchers outside of the Townsville scientific community, which have since led to ongoing discussions, specialised training opportunities, and the potential for future collaborations.

At the end of the conference, the ARC Centre of Excellence hosted a student day, providing a series of useful workshops including advice on publishing, applying for research funding, and employment options for early career scientists. The ACRS conference venue for 2010 will soon be announced and the society will be again offering a number of travel scholarships for students to attend. In 2011, ACRS will be running a joint conference with the Australian Marine Sciences Association (AMSA) in Perth. See www.australiancoralreefsociety.org for news on these and other events, as well as ACRS membership information.

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Yui Sato

The ACRS Student Presentation Prize was awarded for Yui's oral presentation on the dynamics of black band disease outbreaks affecting corals in the inshore central Great Barrier Reef. His talk outlined a three year coral monitoring project and reported the first epizootic of this coral disease in the region, showing recurring summer outbreak patterns. He also documented in this talk how the complex pathogenic microbial communities develop from an early and previously unreported stage, using molecular techniques for the first time. Yui has used the prize of bench fee at the One Tree Island Research Station for his disease sample collection and a part of the GBR coral disease long-term monitoring project.



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AIMS@JCU student presentations at the 2009 ACRS conference were Tom Bridge, Vivian Cumbo, Emily Howells, Jasmine Jaffres, Kimberley Lema, Raechel Littman, Adrian Lutz, Jean-Baptiste Raina, Yui Sato and Jessica Stella.

New AIMS@JCU Management Committee Member

Professor Jeff Loughran

We would like to welcome Professor Jeff Loughran to the AIMS@JCU Management Committee, replacing Professor Chris Cocklin as one of our JCU representatives along with Professors Helene Marsh and Michael Kingsford (alternate member). Thank you to Chris Cocklin for his support over his years on the AIMS@JCU Board, he remains an active AIMS@JCU member.

Professor Jeff Loughran was appointed to the position of Pro Vice-Chancellor (Faculty of Science and Engineering) at JCU in March 2009. His previous appointment at JCU was Acting Pro-Vice-Chancellor of the Faculty of Science, Engineering and Information Technology (July 2008). Prior to that he was employed as Professor and Head of the School of Engineering at James Cook University (2006-2008). He has had senior academic positions within engineering at JCU since 1992. Prior to 1992 he worked in a senior research capacity at the Sugar Research Institute in Australia (10 years).



Professor Loughran's research and teaching interests are in the area of computational mechanics, specifically finite element and particle methods. At an applied level he has published widely in the following areas: geomechanics, plasticity and discontinuous media; large strain coupled problems in porous media with evolving boundary conditions; modelling of hyperelastic materials; constitutive models – inelastic and time dependent; particle methods – DEM applied to mining and bulk solids; mechanical design and durability modelling; transient dynamic modelling of quasi-brittle fracture; biomechanics.

Professor Loughran has delivered many national and international keynote addresses at conferences and symposia. Over the course of his career, Professor Loughran has published over 140 articles (refereed journal and conference papers and consulting reports to industry). His competitive research earnings (grants) exceed \$3M.

In addition to being on the AIMS@JCU Management Committee, Professor Loughran is a member of the following Boards: Australian Tropical Herbarium, Cyclone Testing Station, and the Tropical Landscape Joint Venture. He is a Director of the Queensland Cyber Infrastructure Foundation, UniNet Ltd. and Rockfield technologies Australia Pty. Ltd.

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2010 AIMS@JCU Student Seminar Day

16th April 2010

We are pleased to announce the 2010 AIMS@JCU Student Seminar Day.

The event will be held Friday 16 April at Uni Hall. All AIMS@JCU student members are eligible to compete with oral presentations mandatory for AIMS@JCU scholarship students. Please contact the AIMS@JCU office for further information.

Friday, 16th April 2010, James Cook University, Endeavour Room, Halls of Residence.

PRIZES TOTALLING \$3,500

Presentations First Prize - \$2,000

Presentations Second Prize - \$1,000

Best Poster Display Prize - \$500

AIMS@JCU invites all students who are AIMS@JCU Members to participate in our annual Seminar Day.

The tentative schedule for the day will include:

9.00am - 4.00pm Presentations from students

12.30pm - 1.00pm Lunch

4.00pm - 4.30pm Poster presentation/discussion

4.45pm - 5.00pm Prize winners announced

- Presentations are to be 15 minutes with 5 minutes question time.
- Posters can be new productions or posters previously presented at conferences.
- Prizes are contributions to costs of attending conferences to present a paper.

RSVP:

Staff and Students of both AIMS and JCU are invited to attend and should advise the office by 29 March 2010 for catering purposes.

2010 Student Travel & Honours Awards



In 2009, 14 AIMS@JCU student members enjoyed financial assistance from this funding opportunity and have been travelling to conferences within Australia and around the world. The Joint Venture also gained three honours students: Alex Vail, Heather Welladsen and Karen Chong-Seng, who have been an asset to the group.

In addition to the AIMS@JCU funds available this year, our extremely kind Joint Venture benefactor Dr Joe Baker has once again offered student memberships and additional travel bursaries for students attending the July 2010 AMSA conference in Wollongong, NSW. Below are comments from some of last year's recipients of AMSA memberships donated by Dr Baker:

Gergely Torda – I attended the AMSA 2009 conference with a poster, I think the membership was a prerequisite for presenting. I got pretty good comments on my presentation, which is good in itself. At the conference I met a UQ PhD student, Pim Bongaerts, who works on slightly similar issues, somewhat complementing my work, so that was very interesting to learn, too. And of course the many interesting talks, some of them very inspiring, like the keynote talk of Dr. Warner.

Alexander Vail – AMSA membership has been invaluable to me in terms of a source of information and financial opportunities. Being part of the AMSA family means I receive regular email communications concerning important happenings in the world of marine biology, keeping me up-to-date on the latest and in the loop should any opportunities arise. Furthermore, by being part of AMSA I am eligible to apply for important and highly beneficial awards, such as the AMSA Allen Award to an international conference.

Jasmine Jaffrés – For me, the main benefit so far was/is to be able to keep up to date with funding and work opportunities.

Chun Hong Tan – Being a member of AMSA, I received updates regarding research funding and opportunities, as well as information of marine research related conferences. I think it is very important for me as sometimes I am busy with my project thus missing important events.

Patricia Warner – The AMSA membership is an excellent opportunity to be involved in an organisation with members who span the field of marine science. Being exposed to researchers, government administrators and private sector representatives from across the spectrum of marine related endeavours enriches my opportunity as a student to access information and important contacts.

We look forward to hearing about the conference experiences and new honours student projects supported by the 2010 AIMS@JCU awards - good luck to those student members who have applied.

Where are they now?

Meir Sussman

I arrived in Townsville with my two kids, Angel and Avshalom and our dog Luci in May 2003 on a IPRS scholarship after completing my Masters degree at the Tel-Aviv University under the supervision of Professor Yossi Loya and Professor Eugene Rosenberg identifying the first coral disease vector, the fireworm *Hermodice carunculata*.

I completed my PhD research in 2006 under the supervision of Dr. David Bourne and Professor Bette Willis, in which I was able to identify the first coral-disease pathogen on the Great Barrier Reef and several other novel pathogens in the Indo-Pacific region. Following my departure from Australia, I spent a year as a post doc in Professor Yossi Loya's laboratory at the Tel-Aviv University, where we tried to raise funding for a commercial coral-diagnostics project that would enable the assessment of coral reef health by employing molecular tools. In October 2009 I moved to the northern Swedish city of Umea, where I'm currently employed on a two year contract as a post doc in one of the world's largest centres for the study of infectious diseases – (UCMR: Umea Center for Microbial Research) housing more than a dozen research groups with more than 150 scientists.

Moving from Townsville, where it is rarely cold, to a city that has been



under ice and snow ever since mid-December of last year in the coldest winter since 1970, was a big change in perspectives. The sun sets down here at 13:30 in December after rising past 9:00 and climbing barely above the tree tops. Global warming, as you may imagine, is not the only topic that interests the scientific community over here. My project under the supervision of Dr. Debra Milton centres around

exploring a novel secretion system of bacterial pathogens (including the coral pathogens I identified during my PhD on Pacific corals) which is called the Type 6 Secretion System.

The largest organisms we have to deal with in our work are bacteria from a -80° C freezer and most other targets of interest are single proteins and the genes that produce them, post-transcription and post-translation mechanisms and effector-molecules, such as small RNA's. When I tell my colleagues here that there are still some prominent professors in Australia that preach that there are no bacteria on corals, we all understand that our work is important. I hope to be able to implement the amazing knowledge I acquire here in my future studies of coral disease and coral pathogen virulence mechanisms in the future.

Besides work, Umea is a rather small city with a giant university (like Townsville) lying close by and imbedded in nature. People cycle here on bikes all year round (they have snow tyres for bicycles) and go cross-country skiing to work and in the city's large open grounds and forests.

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Where are they now?

Meir Sussman continued



Swedes don't drink as much as the rumour suggests and food-wise, I have not yet been able to pin-point a local speciality, as most of our community is made up of international new comers. But having your weekend Barbeque on the snow by a frozen lake is something your eyes must see in order to believe... Life here starts in the spring when days become 20 hours long (they also have mosquitoes here) and this is when I plan to travel to the Northern tips of Norway

and Sweden (with our loyal Townsville Nissan mule that we shipped to Europe). On days, in which you might find yourself running into a 4° C cold room just to warm up, I cherish my memories from beautiful Australia and of the wonderful people I got to know at AIMS and JCU.

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David Abrego

David Abrego came to JCU in 2003 to pursue a Masters of Applied Science degree that eventually grew into a PhD, which he completed in May 2009. David was supervised by Professor Bette Willis and Dr. Madeleine van Oppen. David studied the temporal and environmental influences on the early establishment and maintenance of the coral-Symbiodinium symbioses.



After finishing his PhD, David helped with coordination of coral disease surveys on the Great Barrier Reef, which kept him occupied until October of 2009. In January 2010 David started as a Post-Doctoral Fellow working on a large project at AIMS. David forms part of a multi-disciplinary project that will study the role of inter-kingdom signaling in the settlement of corals as well as in the formation and establishment of the algal and microbial associations found in the coral holobiont (comprised of the coral host, algal and microbial symbionts). In addition to the research team at AIMS, the project will be supported by collaborators at the University of New South Wales and the Plymouth Marine Laboratory in the United Kingdom.

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Research Director's Report

As you will all be aware there have been a few changes with AIMS@JCU over the last few months. The main one has been moving our office location. We have moved yet again to another temporary space in the Math Building (room 135). We will, however, move into more permanent space in the ground floor of the Math Building in the next couple of months. Our office will be co-located with the Science Faculty offices and we encourage you to come by and say hello or catch up with us in our new location (and our current one).

I am looking forward to the 2010 Seminar day to be held in April and hearing the latest results of AIMS@JCU student members. Your results no doubt shape the framework of science to come in your fields of study and I am interested to hear what you have learned. Hopefully the timing of this event works out better for students so we can get greater participation and showcase your results to each other and to members of the science communities at AIMS and JCU. All are welcome to the day. Details will follow via email and the web site once the program is better defined.

I hope the continued high quality outputs of AIMS@JCU will carry this group into the future as we gain momentum from the past and present research efforts. Thanks for all of your hard work.

Michelle

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Photographs in this publication were submitted by AIMS@JCU students/staff or have been sourced from the AIMS Long Term Monitoring Team.

