

MSSANZ NEWSLETTER

February 2007

A Quick word from our President

I would like to take this opportunity to welcome you to the new look 2007 edition of the MSSANZ Newsletter. This newsletter contains reports from MODSIM05 and on the upcoming 2007 MODSIM conference. It gives us a great medium to report on the Society award winners from MODSIM05 as well as the recent activities and achievements of MSSANZ Inc.

It is especially pleasing to see that the 2007 conference to be held in Christchurch, New Zealand, is progressing strongly under the direction of co-convenors Don Kulasiri and Les Oxley. Many thanks to these members for accepting the challenge of running a MODSIM conference.

MODSIM07-CALL FOR PAPERS

Venue: University of Canterbury, Christchurch, New Zealand

Dates: 10-13 December 2007

Convenors: Prof. Don Kulasiri (Lincoln University);

Prof. Les Oxley (University of Canterbury)

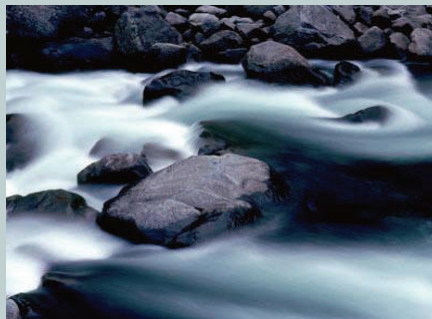
<http://modsim.lincoln.ac.nz>

MODSIM07 will be held in Christchurch, New Zealand from December 10-13, 2007 at the University of Canterbury.

University of Canterbury is one of the top two universities in New Zealand for research and is located in New Zealand's largest city, Christchurch, on the South Island. University of Canterbury promises to be an excellent venue with superb audio-visual and lecture theatre facilities. Combining this with the visually spectacular and vibrant city of Christchurch and it heralds MODSIM07 to be a great event.

MODSIM07 is being co-convened by Professor Don Kulasiri and Professor Les Oxley. A respected International Advisory Board and Technical Committee has been established, details of which are on the conference website. The conference website address is <http://modsim.lincoln.ac.nz> and already provides an excellent resource for presenters and delegates.

Planning for the conference is well underway with more than 60 special sessions proposed in a range of diverse topics. These sessions include relatively new and exciting disciplines including *Science and Technology Policy - Models and Indicators*, *Modelling of Diffuse Source Best Management Practices and Intervention Strategies* and *Appropriate Tools for Environmental Management and Policy*, to name a few.



The conference also sees a strong representation of traditional special sessions focussing on catchment modelling, decision support systems, modelling frameworks, economics and social applications.

As with MODSIM05 the Web-Based Conference Management Tool (WCMT)

is being used. WCMT was developed by MSSANZ member Andrea Rizzoli and really streamlines the review and submission process for session organisers, reviewers and paper presenters.

We would also like to draw members' attention to some important deadlines including; the Abstract Submission Deadline 16th of March and the Paper Submission Deadline 26th of October. The practice of including an Extended Abstract for each paper in a Printed volume of Abstracts will be continued. Extended abstracts allow authors to better communicate research findings to delegates. Fully reviewed paper proceedings will be provided in digital format on CD ROMs to all delegates.

Presently the conference convenors are busy advertising the conference as widely as possible and your assistance with this is appreciated. An electronic Conference Brochure is available at <http://modsim.lincoln.ac.nz> under 'Call for



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MODSIM07 Key Dates

- Deadline for abstracts
16 March 2007
- Deadline for early bird fee
10 August 2007
- Deadline for lodgement of
final paper
26 October 2007
- Deadline for final registra-
tion for authors
2 November 2007



Papers'. We encourage you to download this and distribute it widely amongst your colleagues and students.

We are keen to obtain any feedback or suggestions from MSSANZ members to ensure the success of MODSIM07. Please contact either Don or Les with your suggestions.

Finally, we look forward to your involvement in MODSIM07 as session organisers, paper presenters or as delegates. It's bound to be a great forum to learn about each other's science, to exchange ideas, to catch up with old friends, and to make new friends in the beautiful surrounds that New Zealand will offer.

President's Report

Once again welcome to this edition of the Newsletter. I would also like to take this opportunity to profile some of the recent achievements of the society.

MODSIM05 Outcomes

MODSIM05 was run with a great degree of professionalism and a hint of fun. The benefit of a friendly, well-run conference goes far beyond the conference itself as the scientific community benefits – personally through the building and re-affirmation of friendships, networks and alliances; and enduringly through publication of key papers in the international literature. Society members have a strong editorial presence in international journals and I am delighted to inform you that many Conference papers are appearing in special issues of:

- *Mathematical and Computer Modelling*
- *Mathematics and Computers in Simulation*
- *Environmental Management*

Preparation for MODSIM07

We have a great team in Don Kulasiri and Les Oxley as co-convenors. They both have MODSIM07 preparations well in hand. Please take the time to read their report on the front cover of this newsletter. I can't wait to see you all in beautiful Christchurch.

Preparation for MODSIM09

The 2009 congress is to be held in Queensland, Australia and is being held in conjunction with the IMACS Congress. The joint congress will bring together applied mathematicians and modellers and will provide fertile ground for forging cross-disciplinary collaborations and friendships.

Location and dates are nearly finalised with North Queensland in mid-July the hot favourite.



President – Prof. Tony Jakeman

In Appreciation

While 2006 was a 'quiet' year, activities associated with keeping the Society running, publishing MODSIM05, upgrading WCMT and organising MODSIM07 have been extensive. These activities reflect a real commitment by the Society and its members to advance the science of modelling and simulation and I thank those guest editors and conference convenors warmly for their selfless commitment and professionalism. I would also like to take this opportunity to thank those people who keep the society 'ticking over.' These are Susan Kelo — office administration, Susan Cuddy – Secretary, Lachlan Newham – Treasurer, Rob Argent – Public Officer, Michael McAleer – Vice-President, and all members of the Management Committee.

I can state with confidence that your Society is in good hands and look forward to renewing acquaintances (and making new ones) in Christchurch later in the year.

Tony Jakeman

Sister Conferences

As some of you may be aware MODSIM has a 'sister' conference, ASIMMOD. The first SIMMOD conference was held in 2005 by Dr Santhad Rojanasoonthon, Chair of the Thailand National Research Council. SIMMOD was set up after Dr Rojanasoonthon attended MODSIM03 with several of his colleagues and decided that a sister conference would be of great benefit to Thailand and South East Asia. SIMMOD2005 was a great success and he attributes some of this to working very closely with MSSANZ members through



the Asian Institute of Technology.

The second conference, ASIMMOD07, was recently held in Chiang Mai. We are now working with our Thai colleagues to establish a society (similar to MSSANZ) to provide a permanent and secure base for future conferences.

Both conferences were well supported by MSSANZ members and were very memorable, with a good range of papers and wonderful Thai hospitality. For more information go to:

<http://mccweb.agri.cmu.ac.th/ASIMMOD2007>.



The International Environmental Modelling and Software Society (iEMSS) also has very strong associations with MSSANZ. iEMSS' main aim is to develop and use environmental modelling and software tools to advance science and improve decision making with respect to resource and

environmental issues.

This society, was set up in 2000, with conferences being run every two years. iEMSS conferences have a strong focus on computer software and modelling.

The latest conference was held in Vermont, USA in July 2006. For more information about iEMSS and the upcoming 2008 iEMSS conference in Barcelona visit: <http://www.iemss.org/>



Report on MODSIM05 Conference, Melbourne Australia

<http://mssanz.org.au/modsim05/>

December in Melbourne, what a great time for a conference! This was our proposal for MODSIM05, and it was heartily endorsed with a fantastic attendance of some 500 delegates – more than any previous MODSIM. The success of this conference was influenced somewhat by the venue, but primarily by the efforts of our many special session organisers (and helped significantly by the great catering of Mary & Steve). A big thanks also go to Sue Kelo and Sue Cuddy for their efforts on the registration desk, and to David Post for leading the student prize assessment activity.



The conference was held in the pleasant environs of The University of Melbourne, and was opened by the President of the Academic Board, Professor Loane Skene, standing in for Vice-Chancellor Davis. Professor Skene briefly welcomed delegates and spoke about the role of modelling and simulation within the research portfolio of The University of Melbourne.

Monday's keynote speaker, Professor Randy Gimblett, set the scene for the conference with an interesting and thought provoking reflection on the nature and problems of modelling and simulation. This talk was extremely well targetted, with Randy having (briefly) reviewed many papers being presented at MODSIM05. The keynote speakers for the next three days provided further provoking presentations, with Professor Jerry Hausman discussing economic models of market change using a number of local examples, Dr Benchaphun Ekasingh talking through an interesting case study of integrated watershed modelling, and Dr Blair Nancarrow challenging delegates with reflections on social science and modelling.

Building on the tradition of MODSIM03 and previous MODSIMs, MODSIM05 had a fully packed social

calendar, starting with warm-up drinks at the Corkman Irish Pub on Sunday. This was a great opportunity for delegates to re-meet and re-greet friends and colleagues, and to start building new links and networks. A thank-you event was held for Session Organisers on Monday, giving us an opportunity to express our gratitude for the work done over the previous 18 months.

The beautiful Melbourne Museum played host to the conference dinner on Wednesday, allowing delegates an opportunity to further sample the culinary and cultural delights of Melbourne. Wednesday night also saw the presentation of the

2005 Biennial Medals to Dr Rodger Grayson, Dr Jerry Hausman, and Dr Benchaphun Ekasingh, and Early Career Research Excellence (ECRE) Awards to Dr Barbara Robson, Dr Barbara Baginska, Dr Suhejla Hoti, Dr Rich Little, Dr Carmel Pollino and Dr Lachlan Newham. Rodger Grayson gave the Medallist speech, challenging the crowd with some advice and lessons for students and early career researchers.

Recognition and encouragement of students is a key objective of MSSANZ with student prizes and commendations awarded in general, natural and socio-economic systems categories. Congratulations to all winners, and we look forward to seeing your papers in one of the journal Special Issues that will follow MODSIM05. A number of special issues are proposed for journals, including Environmental Modelling and Simulation, and Mathematics and Computers in Simulation. In the mean time, all of the MODSIM05 papers are available from the MSSANZ website (<http://www.mssanz.org.au/modsim05/>).

We thank those of you who attended MODSIM05 for making it such a wonderful success, and look forward to meeting you all again in Christchurch, New Zealand, for MODSIM07.

Robert Argent and Andre Zerger

Convenors

MSSANZ aims to promote, develop and assist in the study of all areas of modelling and simulation.

The society's main activity is organising the MODSIM biannual conferences of Modelling and Simulation (the first in 1974). These conferences are highly regarded and well attended and attract strong student representation through the award of student prizes and subsidised registration.



Awards

At the 2003 AGM, an Awards Committee was established as a regular Committee of the Society to manage the nomination and selection process for fellowships, biennial medals and ECRE prizes. The Committee is composed of Fellows of the Society, currently Dora Marinova, Les Oxley and Tony Jakeman (Chair). The committee makes recommendations to the executive, most recently on 2006 Fellows.

Fellows are recognised for their unselfish dedication to the aims of the society as well as for their contributions to modelling and simulation. The 2006 Fellows are:

Dr Andre Zerger, Dr Robert Argent, Dr Christine Lim, Professor Al Bartolucci and Dr Santhad Rojanasoonthon.

Dr Andre Zerger (CSIRO Sustainable Ecosystems)



Andre Zerger is a research scientist (Spatial Analyst) with CSIRO Sustainable Ecosystems Agricultural Landscapes Program, Canberra having commenced there in March 2003. Prior to his move to Canberra, he spent four years

lecturing at the University of Melbourne. In his earlier research life his interests focussed on the development of spatial methodologies for natural hazard risk reduction with a major focus on flood risk modelling and interfacing models with geographical information systems. He also has a broader research interest in applying geospatial technologies to natural resource management challenges and spatial decision support.

His current research focuses on the development of methods for assessing biodiversity benefits from vegetation enhancement activities, vegetation mapping, and regional scale vegetation condition modelling using GIS, remote sensing and predictive modelling.

Dr Robert Argent (University of Melbourne)



Dr Robert Argent has been based in the Department of Civil and Environmental Engineering, at The University of Melbourne, for over fifteen years. During that time he has been involved in engineering research and teaching,

project management, design, and consulting, focusing primarily on environmental modelling theory and application. A PhD on the Dendroclimatology of *Eucalyptus camaldulensis* (River Red Gum) in the early 1990's included his first work on environmental modelling and subsequent work in the University's Centre for Environmental Applied Hydrology (CEAH) included development of the FILTER, AgET and Flowtube software applications. In the late 90's he worked on a Land and Water Australia research project, investigating the technical and social processes of participatory model development for community-based environmental management groups, focussing on the practices of active adaptive management.

Since 2000 he has had two Project Leader positions with the Cooperative Research Centre for Catchment Hydrology (CRCCH), joint Program Leadership of the CRCCH "Predicting Catchment Behaviour" Research Program, and was one of the co-developers of E2, an innovative catchment modelling software system. In addition to full time research consulting work, Dr Argent has led research in the areas of environmental modelling development and integration, and holds a position on the Editorial Board of the journal 'Environmental Modelling & Software'. In 2005/2006 he held the position of Deputy Executive Manager of Product Development for the eWater CRC, and he is currently a Program and Project Leader in model development and integration for the eWater CRC. In 2005 he also shared the MODSIM convenor role with Dr Andre Zerger, and was happy to be part of the best-attended (and best fed) MODSIM ever!

Recent research includes development of a Decision Support System, using E2, for the Port Phillip and Western Port Catchments near Melbourne, and in 2007 he has embarked on a new research direction in catchment constituent dynamics and processes.

Dr Christine Lim (University of Waikato)



Dr Christine Lim is a Professor of Tourism Management at the University of Waikato. Her research is of an applied nature in tourism demand modelling,

which combines time series modelling, tourism economics and management. Before moving to the University of Waikato she was a senior Lecturer at Edith Cowan University, and an Associate Professor at Griffith University. Dr Lim is on the Editorial Board of the *Annals of Tourism Research* and the *Journal of Travel Research*, and an Associate Editor of the *Journal of Hospitality and Tourism*.

Dr Lim has a strong interest in collaborative work and is especially helpful in encouraging young researchers and other colleagues to publish their research work. Dr Lim has participated actively at every MODSIM conference of the Society since 1991, and has served as an Executive Committee member of the MSSANZ since 1999. Dr Lim is a Fellow of both MSSANZ and iEMSs.

2006 Fellows

Dr Andre Zerger
 Dr Robert Argent
 Dr Christine Lim
 Professor Al Bartolucci
 Dr Santhad Rojanasoonthon

Professor Al Bartolucci (University of Alabama)



Dr. Bartolucci is Professor of Biostatistics at the University of Alabama at Birmingham (UAB). He has over 30 years experience in designing and analyzing clinical trials. He has served as the chief statistician for several NIH sponsored studies in Oncology including the Southeastern Cancer Study Group and the Urologic Oncology Group. He has over 250 publications in the clinical trial area including oncology, cardiology, dermatology, endocrinology, rheumatology, Alzheimer's disease, Parkinson's disease and other neurological disorders.

Dr Bartolucci has been a strong supporter and contributor to the Society since 1993. He has contributed papers to the Society scientific meetings in Australia and New Zealand. He constantly assists in organizing sessions for the presentation of Biostatistics papers and will be organizing the biomedical session for MODSIM07 in New Zealand.

Dr Santhad Rojanasoonthon (Royal Project Foundation, Thailand)



Dr Rojanasoonthon is an esteemed science leader in his country with over 50 publications across a range of fields, including soil science, land use planning, science and technology, technology

transfer, and rural and highland development. His strategic vision has seen his country at the forefront of adoption and implementation of integrated catchment assessment, always with the twin goals of alleviating rural poverty while managing and retaining natural resource condition.

Dr Rojanasoonthon currently holds the very prestigious position of Director of Research of the Royal Project Foundation of Thailand. He has been working with His Majesty within the Royal Project since its inception in 1969. He is also a Fellow of the Royal Institute of Thailand and, until recently, the Chairman of the Executive Board of the National Research Council of Thailand. He has been president, chairman and members of more than 20 societies, foundations and committees in agricultural science and scientific and technological organizations.

Dr Rojanasoonthon has been an outstanding advocate for the Society by promoting MODSIM conferences to the research community in Thailand and by funding a small group of Thai researchers to attend the past two conferences in Australia. Dr Rojanasoonthon was impressed by the role that the society plays in bringing modelers and researchers' together and is developing a similar organization in Thailand. SIMMOD05 debuted in January 2005 and continued the tradition with ASIMMOD in January 2007.



Biennial Medals

Biennial Medals go to outstanding contributors to modelling and simulation over a sustained period and who have a record of service to the Society (such as organising sessions at biennial Conferences). Medallists automatically become Fellows of the Society.

Natural Systems

Professor Rodger Grayson (University of Melbourne)



Rodger Grayson is currently Director of Catchment to Sea Pty Ltd, an environmental consulting company and an honorary Professorial Fellow in the Department of Civil and Environmental Engineering at the University of Melbourne. He was the Director of

the Cooperative Research Centre for Catchment Hydrology for its final two years and involved in the development of the successful eWater CRC bid. Professor Grayson focuses his efforts on analysis and modelling research and development. He has been involved in fundamental and applied research, student supervision, consulting and teaching related to environmental hydrology, the modelling and monitoring of water quality and quantity, and integrated catchment management for 20 years.

Rodger has been involved in a number of projects

around Australia related to the involvement of management agencies in accessing and using research results to assist in management decision making. This work has focussed on Integrated Catchment Management where key issues have been sediment and nutrient generation and transport in rivers and estuaries, dryland and irrigation based salinity, and in the management of major industrial and point source discharges. Other research interests relate to spatial patterns in environmental model assessment and the broader role of modelling in decision making. Rodger has published over 160 papers in international and national journals and conferences as well as two books and many book chapters.

Socioeconomic Systems

Professor Jerry Hausman (MIT)



Dr Hausman is the John and Jennie S. MacDonald Professor of Economics at MIT. He has taught at MIT for 30 years and is currently the Director of the MIT Telecommunications Economics Research

Biennial Medal winners

Natural Systems
Dr Rodger Grayson

Socioeconomic Systems
Dr Jerry Hausman

General Systems
Dr Benchaphun Ekasingh



Program. Professor Hausman is internationally renowned for his contributions in specification testing, panel data models, missing data and unobservable effects, errors in variables models, qualitative choice models, duration and risk models, optimal taxation, labour supply decisions, labour force participation, pension plans, disability insurance and social security, contingent valuation of natural resources, telecommunications, railroads, regulation, energy, innovation, research and development, intellectual property, securities trading, and sports economics.

Professor Hausman is a truly distinguished academic receiving many honours for his seminal contributions to economic science. He has received the John Bates Clark Award from the American Economic Association and the Frisch Medal from the Econometric Society to name a few of his achievements. Professor Hausman's academic research has been in a number of areas, recently publishing papers on topics including the effect of new goods on economic welfare and their measurement in the CPI, new telecommunications technologies including cellular 3G and broadband, regulation of telecommunications and railroads, and competition in network markets.

General Systems

Dr Benchaphun Ekasingh (Chiangmai University)

Dr Benchaphun Ekasingh has over 20 years of experience in the fields of agricultural and resource economics and has made substantial contributions to the areas of sustainable development and poverty alleviation in developing countries. Dr Ekasingh has held key positions on internationally significant committees including Chair of the Genetic Resource Policy Committee, Consultative Group of Agricultural Research (CGIAR); Chair of Board of Trustees, International Center for Plant Genetic Resources (IPGRI); and Chair of Board of Trustees, International Network for Improvement of Banana and Plantains (INIBAP). She is now the Deputy Director of the Multiple Cropping Center, Faculty of Agriculture, Chiang Mai University, Thailand and is serving as a Board member of the Center for International Forestry Research (CIFOR) in Bogor, Indonesia. Her record is substantial in terms of teaching, research and outreach in South-east Asia. In 2007, she chaired the Program Committee of the Asian Simulation and Modelling Conference in Chiang Mai (ASIMMOD2007) which will help laying the foundation of this Simulation and Modelling Society in Asia in the coming year.

Early Career Research Excellence (ECRE) Awards

Early Career Research Excellence (ECRE) Awards are awarded in each of the three categories. These commenced in 2001 and are normally awarded to researchers who obtained their PhD less than seven years ago.

Natural Systems

Dr Barbara Robson



Barbara Robson has established herself very quickly in the field of ecological modelling and is currently an early career research scientist based at CSIRO Land and Water. Her expertise lies in process-based modelling of coastal and estuarine ecosystems, water quality and phytoplankton dynamics. Since joining CSIRO, she has been involved with modelling of the Ord River Estuary as part of the Ord Bonaparte Project, and is currently leading a NAP-funded project that continues this work. She recently completed a modelling study of the Fitzroy Estuary in Queensland, as a member of the Contaminants Subproject of the Coastal Zone CRC. Before going to CSIRO she focussed on three dimensional ecological/hydrodynamic modelling of the Swan-Canning Estuary and modelling of Western Australian wetlands.

In addition to her modelling activities, Barbara has been very generous in reviewing papers. To date she has reviewed papers submitted to *Limnology and Oceanography*, *Hydrobiologia*, *Marine and Freshwater Research*, *Ecological Modelling*, *Environmental Modelling and Software*, *Estuaries and Estuarine*, *Coastal and Shelf Science* as well as a project proposal submitted to Connecticut Sea Grants.

Natural Systems

Dr Barbara Baginska



Dr Baginska is a Senior Environmental Scientist in the Waters and Catchments Science Section of the Department of Environment & Conservation, NSW. Barbara's research interests are broadly in the areas of hydrogeology and surface water and catchment modelling.

She is a leading researcher in water and soil pollution from urban and agricultural land. Her specific areas of expertise include: predicting the impact of catchment processes and land uses on the supply of sediment and nutrients, determining relationships between landscape attributes, hydrologic responses and water quality; modelling and managing runoff and nutrients to reduce environmental impact; application of remote sensing and geographic information systems (GIS) to water resources and environmental management; and establishing environmental objectives for stormwater management. Barbara's research interests also extend to analysis of space and time sensitivity of distributed catchment models.

The quality of Barbara's work is evidenced by an excellent publication record and her participation

Early Career Research Excellence Award Winners

Natural Systems

Dr Barbara Robson
Dr Barbara Baginska

Socioeconomic Systems

Dr Suhejla Hoti
Dr Rich Little

General Systems

Dr Carmel Pollino
Dr Lachlan Newham

and leadership on a large number of challenging research projects in Australia and internationally. Barbara has been a regular contributor to MSSANZ, contributing papers since 1999.

Socioeconomic Systems

Dr Suhejla Hoti

Dr Hoti is an ARC Postdoctoral Fellow at the University of Western Australia. Dr Hoti has 15 journal publications (including *Mathematics and Computers in Simulation*, *Journal of Economic Surveys*, *Environmental Modelling and Software*, *Emerging Markets Review*, *Econometric Reviews*, *Journal of Travel Research*, *Tourism Economics*, *Tourism Management*, and *Risk Letters*), 28 fully refereed papers in conference proceedings and transactions volumes, and a 512-page monograph on modelling the riskiness in country risk ratings, which appeared in the "Contributions to Economic Analysis" series, undoubtedly the most prestigious book series in economics.

Dr Hoti has had a strong presence at MODSIM conferences since MODSIM01, presenting papers and chairing and organising sessions. Dr Hoti has received Commendations for Excellent Student Paper and Presentation in the Socioeconomic Systems category at both MODSIM01 and MODSIM03.

Socioeconomic Systems

Dr Rich Little



Dr Rich Little is a Research Scientist at CSIRO Marine and Atmospheric Research in Hobart, Tasmania. His research interests are simulation modelling to aid in the management of natural resources, and a major focus is on modelling fish behaviour and fishing dynamics, including the effects of information sharing in social networks, and associated complex system applications. Originally from Canada, Rich undertook undergraduate studies in Mathematics and Statistics. He has a Master's degree in Environmental Science, and completed a PhD in 2000 focusing on spatio-temporal patterns in post-fire boreal forests from the University of Alberta. Since then he has worked at CSIRO on models that evaluate management strategies in fisheries on the Great Barrier Reef, Fly River of Papua New Guinea, Eastern Torres Strait and the Australian Northwest-shelf. Rich is also a member of the CSIRO Agent-based modelling working group, and the ARC complex open systems Research Network. He is currently working on developing a model to evaluate management strategies on Ningaloo Reef, Western Australia.

General Systems

Dr Carmel Pollino

Carmel Pollino is a recently appointed Research Fellow at ANU, Canberra. Her current research focuses on the development of decision support frameworks for natural resource management, in particular examining the links between investments in catchment management activities and land use on outcomes in resource condition.

Prior to her ANU position she spent four years at the Water Studies Centre at Monash University, Melbourne. Although Carmel began her research career as an ecotoxicologist, her research interests have shifted to the use of ecological data in risk assessments, communication of risk analysis outcomes to stakeholder groups, and designing risk analysis methodologies that fit into an adaptive management cycle.

General Systems

Dr Lachlan Newham

Lachlan Newham is a Research Fellow at the Integrated Catchment Assessment and Management Centre at the Australian National University. His research interests are in water quality assessment and modelling for environmental management. A major focus of his research is on improving



the representation of the sources, transport and fate of stream pollutants to elucidate options for catchment remediation and management activity. Lachlan's undergraduate studies were in the field of environmental management. His PhD studies, focused on catchment-scale modelling of water quality and quantity, at the Centre for Resource and Environmental Studies at the Australian National University in 2002. Since then he has been developing his experience as a researcher on projects with industry and Government partners.

Of note is his contribution, in a key role, to the very successful NSW Environmental Trust funded project titled 'Management of Diffuse Source Pollutants in the Ben Chifley Dam Catchment'. Lachlan is currently working on an exciting ARC Linkage project with Eurobodalla Shire Council and NSW Department of Natural Resources. That study aims to apply and integrate water quality models and economic assessment techniques to assist policy makers and catchment managers to balance competing development pressures and environmental concerns in coastal catchments. Lachlan is the Treasurer of MSSANZ Inc.





Student Award Winners

Natural Systems
Nicholas Surawski

**Socio-economic
Systems**
Bernardo da Veiga

General Systems
An Tran Duy

Student Award Commendations

Natural Systems
Alice O'Connor
Jakín Ravalico
Celina Smith

**Socioeconomic
Systems**
Jared Greenville
Isabel Casas

General Systems
Asif Zaman
Michael Bode

Student Awards

Students presenting the best papers at Biennial conferences in the three categories of Natural Systems, Socioeconomic Systems and General Systems are awarded a cash prize and a Commendation Certificate. 2005 awards went to:

Natural Systems

Nicholas Surawski



Nicholas Surawski is a PhD student at Griffith University. Nicholas presented one paper at the conference on Sustainability of groundwater extraction for the Pimpana Coastal Plain, Queensland, Australia.

Socioeconomic Systems

Bernardo da Veiga

Bernardo da Veiga is a PhD student at the University of Western Australia. Bernardo presented one paper at MODSIM05 titled- It pays to violate: Model choice and critical value assumption for forecasting value-at-risk thresholds.

General Systems

An Tran Duy



An Tran Duy is a PhD student at Wageningen University. An presented a paper titled: Modelling fish growth using the concentration of metabolites to regulate feed intake and metabolism. An is currently in his 4th year of research, focusing on oxygen as a determinant of fish production in aquaculture systems in Vietnam.

Student Commendations

Natural Systems

Alice O'Connor (University of Melbourne). SIEVE, an online collaborative environment for visualising environmental model outputs.

Jakín Ravalico (University of Adelaide). A comparison of sensitivity analysis techniques for complex models for environmental management.

Celina Smith (Australian National University). Predicting suspended sediment loads at a catchment scale: a comparison between models.

Socioeconomic Systems

Jared Greenville (University of Sydney). Economics of Marine Protected Areas as a tool for fisheries management.

Isabel Casas (University of Western Australia). Stochastic volatility with long-range dependence.

General Systems

Asif Zaman (University of Melbourne). Estimating temporary water trading impacts through integrated modelling

Michael Bode (University of Queensland). Optimally managing oscillating predator-prey systems

MSSANZ Treasurers' report

The major financial activity of MSSANZ since the production of the last regular newsletter was the Melbourne conference in 2005. The financial management of the conference was of the highest standard. On behalf of MSSANZ members I would like to congratulate the conveners for their hard work to ensure that was the case.

The large number of participants at the Melbourne conference resulted in MSSANZ turning a modest profit. Such profits are invested to ensure long-term financial viability of the Society, to support running of the office, and to improve conference management. MSSANZ financial statements are audited on an annual basis by Canberra-based firm Les Ellis and Associates. Statements are available to members and can be obtained by contacting the Treasurer directly.

In preparation for the Christchurch conference in 2007, a redesign of the Web-based Conference Management Tool (WCMT) is in progress and is being overseen by the MSSANZ Office. The Canberra-based firm, Resultz (www.resultz.com.au) is undertaking the re-design and programming. The redesign consolidates the years of development of WCMT by Andrea Rizzoli and other members of MSSANZ and iEMSs. The functionality of WCMT will be expanded, with improvements to the database structure and

interface which are designed to ease the paper submission and review process, particularly for those members performing multiple roles.

The re-design of WCMT includes an upgrade of the processing of conference registrations. For MODSIM07, WCMT will link directly to the Commonwealth Bank of Australia to enable credit card payments to be more easily and securely accepted online. Cheque payments will still be manually processed via a form printed directly from WCMT. To allow for simpler processing of payments, the differential between member and non-member rates has been removed. As in the past, the membership fee of \$22AUD is incorporated in the conference registration cost. A reduced student rate is available but a scanned copy of a student card or a signed letter from a supervisor will be required as proof of student status. The proof of student status will need to be provided as part of the registration process. Good progress has been made in implementing the changes to WCMT and testing is now well underway.

For further information on any aspect of MSSANZ financial management or the work associated with WCMT please feel free to contact me directly. Lachlan Newham- Treasurer, MSSANZ

WCMT – the Web-based Conference Management Tool

Authors and attendees at MODSIM05 will have come into contact with WCMT, the web-based conference management tool. This article gives some background to WCMT, including its development, structure and future.

WCMT is an open source PHP/MySQL-based groupware tool for the management of conferences. It is believed that there are no other open source efforts of this nature. The software is written using PHP 4.0 and it relies on MySQL 3.23. It also uses an Apache webserver.

WCMT was originally developed to assist in paper submission and reviewing for the first iEMSs conference, held in Lugano in 2002. It has been subsequently developed and used for MODSIM03 and MODSIM05, and iEMSs 2006. The iEMSs version of WCMT is available at <http://www.iemss.org/wcmt06/>. It is also planned to use WCMT for MODSIM07, to be held in Christchurch, New Zealand.

To operate WCMT, the organisers or Convenors of the conference set up a number of sessions, where different scientific topics are discussed. The responsibility for each session is delegated to a Session Organiser, who, in turn, arranges for Reviewers for each paper in each session. Through WCMT various levels of access to the papers and reviews are available for the Convenors, Session Organisers and Reviewers, and each have specific roles and responsibilities.

From an author's perspective, WCMT allows confer-

ence participants to register and to log in to submit their papers. Papers are uploaded and assigned to different sessions, according to their relevance. Session Organisers assign Reviewers to each paper. The Reviewers use WCMT to fill in their reviews, and the final evaluation is left to the Session Organiser. In the meantime, the papers' authors can verify the state of advancement of the review. When the review is ready, they can read the anonymous comments and revise the paper as requested.

Closer to the conference, authors and other participants can use WCMT to register and pay for the conference. For many conferences, each paper must be accompanied by a paid registration, so WCMT also tracks the association between accepted papers and conference registrations.

WCMT is an open source initiative, supported and developed by users through cash or in-kind contributions. The development was initiated by Andrea Rizzoli, and he has now been joined by Robert Argenti. Each application of WCMT to a conference generally results in support for improvements and refinements to WCMT, with, for example, some AUD10,000 of in-kind contribution made during application of WCMT to MODSIM05.

Future developments include a revamp of the conference registration section of the site, some improvements in capabilities for editing paper details, and further implementation of cascading style sheets. Look out for these improvements at MODSIM07!



2007 Biennial Medallists and ECRE Awards

CALL FOR NOMINATIONS

Nominations are required by 30 June 2007 for the Biennial Medallists and Early Career Research Excellence Awards.

Categories

The Society has three categories, namely Natural Systems, Socioeconomic Systems, and General Systems. The Society is by its nature integrative, and the three categories reflect different emphases and perspectives regarding modelling and simulation.

The Society awards Fellowships, Biennial Medals, Early Career Research Excellence Prizes, Student Prizes for Best Paper and Presentation, and Student Commendations for Excellent Paper and Presentation, in each of the three categories. Fellows are awarded in every even-numbered year. Biennial Medals, Early Career Research Excellence Prizes, and Student Prizes and Commendations are awarded in every odd-numbered year to coincide with the Biennial Conferences. This year, they will be presented at the MODSIM07 Conference in Christchurch.

Biennial Medals

Biennial medals recognise "exceptional research contributions to modelling and simulation, and for promoting the aims of the Society."

Any member of the Society may be nominated for a Biennial Medal. The proposer and seconder must be members of the Society and self-nomination is not permitted. The Awards Committee assesses the nominations and makes recommendations to the Management Committee for approval.

Early Career Research Excellence Awards

ECRE awards recognise "early career research excellence in modelling and simulation." An early career researcher should have graduated with a PhD degree or equivalent within seven years of being nominated for the award.

As for Biennial Medals, any member of the Society may be nominated. The proposer and seconder must be members of the Society and self-nomination is not permitted. The Awards Committee assesses the nominations and makes recommendations to the Management Committee for approval.



Student Prizes

Depending on the Conference convenor, students may need to register for consideration prior to the Conference. They are assessed on excellence of paper and presentation. The 2007 procedure will be available from the Conference website.

Nomination Procedure

Written nominations should be sent directly to the Chair of the Awards Committee (President, Tony Jakeman) (see contact details at end of Newsletter), accompanied by a written statement and a curriculum vitae of the nominee. The deadline for nominations is the 30th of June 2007.

Medallists automatically become Fellows of the Society, and are entitled to use the post nominal "FMSSANZ".

Presentation

The awards will be presented at the biennial conference, MODSIM07.

Members

The Society has more than 500 members from 50 countries, including Australia, Canada, China, France, Germany, Italy, Japan, New Zealand, the Netherlands, South Africa, Spain, Switzerland, Thailand the United Kingdom and the United States. Members are from a wide range of professional disciplines including hydrology, agricultural science, economics, engineering, atmospheric science, ecology and many others.

MSSANZ Membership

Membership fee for MSSANZ is AUD\$22 (including 10% GST) for two years and is included in conference registration.

Newsletter Production

This newsletter has been produced by the MSSANZ Inc. office at iCAM, The Australian National University. Sam Davies and Susan Cuddy have compiled the newsletter from material provided by David Post, Andre Zerger, Robert Argent, Susan Cuddy, Tony Jakeman and Lachlan Newham. Where the Society did not have photos or biographies of award winners, these were sourced from the web.

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