I2S News

November/December 2012, #9

Australian National University

WELCOME

We welcome the formation of INIT-Info, the new newsletter of the International Network of Interdisciplinarity and Transdisciplinarity (see below under Featured Networks). This will have a broader reach than I2S News, but will cover some overlapping areas.

I2S News focuses specifically on methodological resources, rather than interdisciplinary or transdisciplinary topics. In particular, we are interested in how to bring together knowledge from different disciplines and stakeholders, how to understand and deal with a diverse range of unknowns, and how research can best be used to support policy and practice change. This bi-monthly newsletter provides highlights from materials compiled on the I2S website at http://i2s.anu.edu.au/resources/. We would be pleased to be notified about new relevant additions.

Gabriele Bammer and Peter Deane

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FEATURED METHODS

A Compendium of Modelling Techniques

Badham, J. (2010). A Compendium of Modelling Techniques. Integration Insights #12, May. Full text online at: http://i2s.anu.edu.au/sites/default/files/resources/integration-insight_12.pdf (859KB PDF) (viewed November 2012).

Details: This Integration Insight provides a brief overview of the most popular modelling techniques used to analyse complex real-world problems, as well as some less popular but highly relevant techniques. The modelling methods are divided into three categories, with each encompassing a number of methods, as follows:

1. Qualitative Aggregate Models (Soft Systems Methodology, Concept Maps and Mind Mapping, Scenario Planning, Causal (Loop) Diagrams),
2. Quantitative Aggregate Models (Function fitting and Regression, Bayesian Nets, System of differential equations / Dynamical systems, System Dynamics, Evolutionary Algorithms) and
3. Individual Oriented Models (Cellular Automata, Micro-simulation, Agent Based Models, Discrete Event Simulation, Social Network Analysis).

Each technique is broadly described with example uses, key attributes and reference material.

Policy Engagement: How Civil Society can be More Effective

Court, J., Mendizabal, E., Osborne, D and Young, J. (2006). Policy Engagement: How Civil Society can be More Effective. Overseas Development Institute, London, UK. Full text online at: http://www.odi.org.uk/resources/details.asp?id=160&title=policy-engagement-civil-society-can-be-more-effective (viewed November 2012).

Details: "Civil society organisations (CSOs) could have a greater impact on policy processes in developing countries. This report shows why and how better use of evidence by CSOs is part of the solution to increasing the policy influence and pro-poor impact of their work. The report includes strategic guidance and practical approaches regarding how CSOs can ensure their policy engagement is more effective, influential and sustained." The following issues and topics are discussed in the report:

- Policy entrepreneurship in challenging contexts
    - o 1. Campaigns to try to change policy
    - o 2. 'Boomerang' strategies
    - o 3. Policy pilots
- Improving understanding of policy processes: context assessments
- Better strategy: targeting the policy process
    - o 1. Agenda setting
    - o 2. Formulation
    - o 3. Implementation
    - o 4. Evaluation
    - o 5. Underlying capacity building

- Using better evidence
- Communicating for policy influence
- Building CSO (Civil Society Organisation) capacity
- The power of networks.

For more methods, such as
- Pre-empting Discord: Pre-nuptial Agreements for Scientists

See: http://i2s.anu.edu.au/resources/tools

FEATURED CASE REPOSITORY

Interdisciplinary Research: Case Studies from Health and Social Science

Kessel, F. S., Rosenfield, P. L., and Anderson, N. B. (Eds.). (2008). *Interdisciplinary Research: Case Studies from Health and Social Science* (2nd ed.). Oxford University Press: Oxford, UK (http://www.oup.com/us/catalog/general/subject/Psychology/CognitivePsychology/?view=usa&ci=9780195324273) (viewed: November 2012).

Details: "This book of case studies provides answers to questions such as:
- "What is the best way to conduct interdisciplinary research on topics related to human health, behavior, and development"
- "Which are the most successful interdisciplinary research programs in these areas"
- "How do you identify appropriate collaborators"
- "How do you find dedicated funding streams"
- "How do you overcome peer-review and publishing challenges"

The book presents "a series of case studies that reveal the most successful interdisciplinary research programs. These programs provide a variety of models of how best to undertake interdisciplinary research".

For more case repositories, such as
- Interdisciplinary Research - Case Studies in Interdisciplinary Research (Repko, Newell and Szostak)

See: http://i2s.anu.edu.au/resources/case-repositories

FEATURED JOURNALS

Technological Forecasting and Social Change

"Technological Forecasting and Social Change focuses on the methodology and practice of technological forecasting as a planning tool and the analysis of the interaction of technology with the social, behavioral and environmental aspects in integrative planning". More broadly, this peer reviewed journal covers futures studies, technology assessment and forecasting with a wide range of articles covering areas relevant to I2S including uncertainty, policy and research, modeling, stakeholder engagement and dialogue methods.

- Website: http://www.journals.elsevier.com/technological-forecasting-and-social-change (viewed: November 2012).
- Impact factor (2011): 1.709

Call for Proposals: 2014 Inaugural Review Issue of the Small Group Research Journal

"The editorial team of *Small Group Research* invites authors to submit proposals for the inaugural 2014 Review Issue. Articles for the Review Issue are high-impact scholarly surveys of important group and team research literatures. They summarize recent research, provide integration across disciplines, and highlight important directions for future inquiries. The Review Issue is open to all areas of group and team research, including research methods and group-based learning activities". Proposals should be submitted during the month of April, 2013.

- Proposal details: http://sgr.sagepub.com/site/includefiles/SGR_CFP_Annual_Review_Issue.pdf (viewed: November 2012).
- Journal homepage: http://sgr.sagepub.com/ (viewed: November 2012).

For more journals, such as
- Social Studies of Science
- System Dynamics Review

See: http://i2s.anu.edu.au/resources/journals

FEATURED NETWORKS AND NETWORK RESOURCES

Innovations for Scaling Impact (iScale)

Details: *Innovations for Scaling Impact* (iScale) is a "...global network of individuals and organizations committed to developing, implementing and promoting innovations to scale the impact of efforts to address the world's most pressing challenges". The primary focus of iScale crosses five broad areas: (1) peace and security; (2) governance and transparency; (3) environment and climate; (4) health, education and livelihoods; and, (5) business and markets. In engaging with collaborators via action learning and in the development and application of innovations to further impact, iScale uses a variety of mechanisms such as:
- "fostering and supporting multi-actor initiatives, from action-learners and donor collaboratives to cross-sectoral action networks
- facilitating dialogue among practitioners, action-learners, beneficiaries and other stakeholders to share knowledge and develop new understanding
- spurring and supporting policymakers, action-learners, advocates and others working together to advance norms and improve institutions
- employing and advancing innovations such as systems-oriented theories of change and action for organizations and multi-stakeholder initiatives, outcomes mapping, and value network analysis
- integrating meaningful and actionable assessment effectively into programs to support the realization of their greatest impact
- deploying new technologies to expand access to information, foster open governance, and advance collective learning".

Individuals and organizations engage with iScale via communities of practice and the website has a members area and resources section.

- Website: http://www.scalingimpact.net/ (viewed: November 2012).

INIT-Info: Newsletter of the International Network for Interdisciplinarity and Transdisciplinarity (INIT)

[NEW: STARTED OCTOBER 2012] "INIT-Info fosters the regular exchange of news that are not only relevant for the members of one of the networks, but for the whole network of networks. In doing so INIT-Info complements the networks' individual info-mails and mailing lists". The digest showcases events, courses, publications, general information, job offers, etc, of relevance to interdisciplinary and transdisciplinary matters. The news digest is free. INIT-Info is hosted by td-net (network for transdisciplinary research, Switzerland).

- Website: http://www.transdisciplinarity.ch/e/init-info/index.php?sel=4 (viewed: November 2012).
- Email sign-up: http://lists.scnat.ch/mailman/listinfo/init-info (viewed: November 2012).

For more professional associations & networks, such as
- Science and Development Network

See: http://i2s.anu.edu.au/resources/associations_networks

FEATURED COURSES

Dynamic Modelling: What, Why & How?

This course, with a focus on health, is based on exploring dynamic modeling and combines different methods including discrete event, system dynamics and agent based simulation. The course is split into a number of components that may be taken separately or together, involving a two day overview, a three day practical training component and a related two day choice behaviour modelling event. The overview is aimed at planners, managers, researchers, practitioners, consultants and policy makers interested in an advanced in-depth overview of dynamic modelling methods, examples of their use and potential. The three day practical component can be added for those students, researchers and modelling practitioners wishing to advance their use of AnyLogic for multi-method modelling. The related event, titled 'choice behaviour modelling and simulation in health: Theory meets data', involves an interactive discussion in a small group setting.

- Date: the main course is on between 18-22 February 2013 and the choice behaviour event that follows the main course is on between 25-26 February 2013, both in Sydney, Australia (places in the main course are allocated on a first apply and pay basis, whilst the choice behaviour event is at no cost to participants)
- Webpage for main course: http://www.systemswiki.org/index.php?title=Dynamic_Modelling_Workshop_%26_Training_Sydney_18-22_February_2013 (viewed: November 2012).

- Webpage for choice behaviour event:
  http://www.systemswiki.org/index.php?title=Choice_Modelling_CenSoC_Sydney_Feb_2013
  (viewed: November 2012).

International Spring University on Ecosystem Services Modeling

"The *International Spring University On Ecosystem Services Modeling* is a two-week intensive course...[which] aims to build a new generation of actors, in research, policy and management, who can effectively use ecosystem services models to address and solve sustainability problems. The participants of the course will learn how to express a problem, ranging from biophysical modeling of ES flow dynamics to the economic and societal consequences of their provision, into a state-of-the-art modeling language. That will allow the problem to be analyzed and simulated under different scenarios...The school will teach participants the use of open source modeling software, enabling participants to independently create, run and analyze models and scenarios. Models developed in this way can also be disseminated and run by remote users through the World Wide Web...[It is expected that the school will] attract practitioners, scientists and decision-makers from around the world".

- Date: 11-22 March 2013 in Bilbao, Spain (deadline for applications is 16 November 2012)
- Website: http://www.bc3research.org/springuniversity/ (viewed: November 2012).

Erasmus Mundus European Master Programme in System Dynamics

"The European master programme in System Dynamics is specifically designed for students who are interested in learning how to initiate strategic change in organizations, supported by the use of computer simulation models. With the growing interconnectedness of society and increasing turbulence, organisations in the public and private sectors are continuously confronted with the need for improvement in strategy development, policy design and decision making in and across complex, dynamic domains. History is full of examples where decision makers did not succeed in designing such effective policies...A common denominator here is a lack of understanding of the systems people control: they ignore or misperceive the nature of stocks and flows, feedback loops, delays, and non-linearities. Many such dynamic systems are not yet properly understood... Model based policy analysis and design (with the help of System Dynamics) has long been recognised as a way to help people make better decisions when confronted with the complexity of dynamic systems. [The aim of the programme is to teach participants] how to build a System Dynamics model, how to apply it to a variety of real life problems and how to facilitate the model building process with the client in such a way that not only a high-quality model can be built, but what is equally important is that a strategic change can be achieved and policies can be implemented".

- Date: mid-2013 to mid-2015 in a variety of locations in Europe (deadline for applications is 1 December 2012)
- Website: http://www.europeansystemdynamics.eu/ (viewed: November 2012).

Global Environmental Policy Programme: Executive Summer School (ESS) on Global Environmental Policy

"Organised in partnership with UNEP (United Nations Environment Programme), the main objective of the Executive Summer School (ESS) on Global Environmental Policy is to provide professionals with a broad training programme in order to bridge the common gap between scientific knowledge and professional expertise related to core environmental themes. The modules provide an intensive immersion in the latest political and scientific issues on the global environmental agenda. They link scientific knowledge, political sensitivity and practical negotiation techniques relevant to the development and implementation of both legal and voluntary international agreements. Beyond enlarging each participant's knowledge base, the ESS is designed to enhance concrete decision-making, problem-solving and negotiation skills."

- Date: 1-13 September 2013 in Geneva, Switzerland (deadline for applications is 31 March 2013)
- Website: http://www.unige.ch/gepp/ess.html (viewed: November 2012).
- Brochure: http://www.unige.ch/gepp/ess/GEPP-Summer-School-2013-Brochure.pdf (viewed: November 2012).

FEATURED CONFERENCES

8th Annual Conference of the Interdisciplinary Network for Group Research (INGRoup)

"Societies are dependent on the formation and utilization of groups and teams, making them relevant to countless aspects of life. Accordingly, scholars who study groups can be found across a wide array of disciplines (e.g., anthropology, communication, education, history, information systems, nursing, organizational behavior, philosophy, psychology, political science, public health, sociology)... The 8th Annual INGRoup Conference will be held so scholars across disciplines can come together, share information, and learn from one another. The conference program will include paper, symposia, and panel sessions, a keynote address, and a business meeting open to all members so the future of INGRoup can be collectively planned and shaped. [More broadly the conference will echo the aims of the network, which was created to provide]... a context for scholars to: promote communication about groups and teams research across fields and nations; advance understanding about group dynamics through research; advance theory and methods for understanding groups and teams; and, promote interdisciplinary research.

The conference will be held in Atlanta, USA from 11-13 July 2013.

- Website: http://www.ingroup.net/conference.html (viewed: November 2012).

2nd Biennial Global Implementation Conference (GIC)

"The Global Implementation Conference promotes the rapid development of implementation science, practice, and policies to support organizational change, system transformation, and implementation in human services. [The first Implementation conference gathered]... participants from a variety of disciplines, domains, and countries to share ideas and research around implementation science,

practice, and policy." The aim was to exchange knowledge and best practices towards integrating knowledge across practice groups "to create a common language, framework, and measures to guide implementation policy, practice, and research."

The conference will be held in Washington DC, USA from 19-21 August 2013.

- Website: http://www.implementationconference.org/ (viewed: November 2012).

Other Upcoming Conferences
Conferences which have not been listed in previous newsletters are marked [NEW].

General Interdisciplinarity/Transdisciplinarity/Team Science/ Action Research
- 23-25 November 2012, Collaborative Action Research Network(CARN) & International Practice Development Collaborative (IPDC) International Conference: Towards Creative Action: Transformations and Collaborations in Practice, Ashford, England (http://www.canterbury.ac.uk/health/EnglandCentreforPracticeDevelopment/CARNConference2012/home.aspx)
- [NEW] 7 June **2013**, Swiss Conference on Interdisciplinarity and Transdisciplinarity: University Education in Transition, Berne, Switzerland (http://www.iukb.ch/itd13)
- [NEW] 11-13 July **2013**, Interdisciplinary Network for Group Research (INGRoup) 8th Annual Conference, Atlanta, Georgia (http://www.ingroup.net/conference.html)

Systems and Modelling/Simulation
- 9-12 December 2012, Winter Simulation Conference (WSC), Berlin, Germany (http://wintersim.org/)
- 12-14 December 2012, Complex Systems Design and Management (CSDM) Conference, Paris, France (http://www.csdm2012.csdm.fr/)
- 7-10 January **2013**, 46th Hawaii International Conference on System Sciences (HICSS), Grand Wailea, Hawaii (http://www.hicss.hawaii.edu/hicss_46/apahome46.htm)
- [NEW] 8-9 February **2013**, 18th Coalition Theory Network Workshop, Coventry, UK (http://www.feem-web.it/ctn/events/13_Warwick/ctn18i.html)
- April 7-10 **2013**, Symposium on Theory of Modeling and Simulation (TMS' 13), San Diego, USA (http://www.sce.carleton.ca/faculty/wainer/DEVS13/doku.php)
- [NEW] 9-11 April **2013**, YoungOR (Operational Research) 18, Exeter, UK (http://www.theorsociety.com/Pages/Conferences/YOR18/YOR18.aspx)
- [NEW] 18-20 April **2013**, Plexus ACTION 2013: Tales, Tools, and Tactics, Silver Spring, USA (http://www.plexusinstitute.org/events/event_details.asp?id=256114)
- 8-10 May **2013**, 7th International Workshop on Self-Organizing Systems (IWSOS), Palma de Mallorca, Spain (http://innaxis.org/events/iwsos-2013/)
- [NEW] 10-14 June **2013**, 21st Conference on User Modeling, Adaptation and Personalization, Rome, Italy (http://www.um.org/)
- [NEW] 11-14 June **2013**, 6th Chaotic Modeling and Simulation International Conference, Istanbul, Turkey (http://www.cmsim.org/)
- 24-27 June **2013**, 23rd Annual International Council on Systems Engineering (INCOSE) International Symposium, Philadelphia, United States of America (http://www.incose.org/symp2013/)

- [NEW] 1-4 July 2013, XXVI European Operational Research Societies (EURO) and Institute for Operations Research and the Management Sciences (INFORMS) Joint International Conference: All Roads Lead to OR, Rome, Italy (http://euro2013.org/)
- 14-19 July **2013**, 57th World Conference of the International Society for the Systems Sciences - Curating the Conditions for a Thrivable Planet: Systemic Leverage Points for Emerging a Global Eco-Civilization, Hai Phong City, Viet Nam (http://isss.org/world/Hai_Phong_City_2013)
- 21-25 July **2013**, 31st International Conference of the System Dynamics Society: Creating the Future from Within, Cambridge, Massachusetts, United States of America (http://conference.systemdynamics.org/)
- [NEW] 3-6 September **2013**, Operational Research (OR) 2013 Conference, Rotterdam, The Netherlands (http://www.or2013.org/)
- 1-6 December **2013**, MODSIM2013: International Congress on Modelling and Simulation: Adapting to Change - The Multiple Roles of Modelling, Adelaide, Australia (http://www.mssanz.org.au/modsim2013/index.html)

Uncertainty, Risk and Decision Making
- 22-23 November 2012, Risk and Uncertainty in Changing Society, Antwerp, Belgium (http://www.ucsia.org/main.aspx?c=*UCSIAENG2&n=106210)
- 6-8 December 2012, MutaMorphosis: Tribute to Uncertainty, Prague, Czech Republic (http://mutamorphosis.org/2012/)
- 9-12 December 2012, Society for Risk Analysis (SRA) Annual Meeting, San Francisco, USA (http://www.sra.org/events_2012_meeting.php)
- 23-25 January **2013**, Risk and Uncertainty: Ontologies and Methods, Amsterdam, The Netherlands (http://www.riskanduncertainty.net/content/call-papers-isaesa-mid-term-conference)
- 10-12 May **2013**, International Symposium on Integrated Uncertainties in Knowledge Modelling and Decision Making, Beijing ,China (http://icmll.buaa.edu.cn/IUKM2013/)
- [NEW] 21-24 May **2013**, 11th International Conference on Naturalistic Decision Making (NDM11), Marseille, France (http://www.atoutcom.com/ndm11/)
- [NEW] 17-19 June **2013**, 22nd Society for Risk Analysis (SRA) Europe Conference: Safe Societies – Coping with Complexity and Major Risk, Trondheim, Norway (http://srae2013.no/)

Bridging the Research-Policy/Practice Gap
- 7-10 January and 4-7 February **2013**, 'Science Meets Practice' Winter School of the Competence Center Environment and Sustainability of the ETH Domain (CCES), Propstei Wislikofen, Switzerland (http://www.cces.ethz.ch/winterschool/coming_winter_school)
- [NEW] 19-21 August **2013**, 2nd Biennial Global Implementation Conference (GIC), Washington DC, USA (http://www.implementationconference.org/)

Other
- 5-7 December 2012, 26th Annual Australian and New Zealand Academy of Management Conference: Managing for Volatility and Stability, Perth, Australia (http://www.anzamconference.org/default.asp)

- 13-14 January **2013**, 9th International Conference on Technology, Knowledge, and Society: Organize, Challenge, Re-Imagine - New Media and Social Movement, Vancouver, Canada (http://techandsoc.com/2012/02/02/ninth-international-conference-on-technology-knowledge-and-society/)
- 5-8 February **2013**, XIX International Conference of the Society for Human Ecology jointly with IV International Conference on Sustainability Science in Asia - Decisions that Work: Linking Sustainability, Environmental Responsibility and Human Well-being, Canberra, Australia (http://societyforhumanecology.org/she-xix-2013-canberra-australia/)
- [NEW] 6-7 May 2013, 12th Institute for Advanced Studies on Science, Technology and Society (IAS-STS) Annual Conference, Graz, Austria (http://www.ifz.tugraz.at/ias/IAS-STS/Upcoming-Activities/12th-IAS-STS-Annual-Conference/Call-for-Sessions-12th-IAS-STS-Annual-Conference)
- [NEW] 13-15 February **2013**, 2nd Annual European Postgraduate Symposium: Sustainable Development Symposium, Naples, Italy (http://sds2013.uniparthenope.it/)
- 4-8 June **2013**, 19th International Symposium on Society and Resource Management (ISSRM) Conference: A Time for Integration, Estes Park Centre, United States of America (http://www.issrm2013.iasnr.org/?p=963)
- 9-14 June **2013**, 7th World Environmental Education Congress: The Rural-Urban Relationship, Marrakech, Morocco (http://www.weec2013.org/)
- 12-15 June **2013**, Communities and Universities (CU) Expo 2013: Engaging Shared Worlds, Corner Brook, Canada (http://cuexpo2013.ca/Pages/default.aspx)
- 13-14 June **2013**, 13th International Conference on Knowledge, Culture and Change in Organizations, Prague, Czech Republic (http://ontheorganization.com/the-conference)
- [NEW] 19-21 June **2013**, 4th International Conference on Sustainability Transitions, Zurich, Switzerland (http://www.ist13.ch/index_EN)
- [NEW] 30 June-3 July **2013**, 26th Annual Conference of the International Association for Conflict Management, Tacoma, USA (http://iacm-conflict.org/sites/default/files/IACM_2013_Call_for_Submissions.pdf)
- 1-3 July **2013**, 19th International Sustainable Development Research Conference: Just Transitions, Stellenbosch, South Africa (http://www.isdrc19.co.za/)
- [NEW] 15-17 July **2013**, 9th Annual AUCEA International Conference - Next Steps: Community Engaged Learning, Brisbane, Australia (http://auceaconference.org.au/2013-conference/)
- 19-21 July **2013**, WorldFuture 2013: Exploring the Next Horizon, Chicago, United States of America (https://www.wfs.org/civicrm/event/info/?reset=1&id=28)
- 30 July-1 August December **2013**, 8th International Conference on Interdisciplinary Social Sciences, Prague, Czech Republic (http://thesocialsciences.com/the-conference/)
- [NEW] 27-31 August **2013**, 6th Annual International Ecosystem Services Partnership (ESP) Conference, Bali, Indonesia (http://www.espconference.org/ESP_Conference)
- 1-4 November **2013**, Association for Qualitative Research (AQR), in association with the international Discourse, Power, Resistance (DPR) community, 2013 Conference: Sub-prime Scholarship, Melbourne, Australia (http://www.aqr.org.au/conferences/conference-2013/)

ABOUT I2S NEWS

The aim of this newsletter is to provide regular (bi-monthly) updates about resources for researchers interested in Integration and Implementation Sciences (I2S), which underpins the investigation and tackling of complex real world problems, by:

- Synthesizing knowledge from different disciplines and stakeholders,
- Understanding and managing diverse unknowns, and
- Providing integrated research support for policy and practice change.

Each issue features concepts, methods and case studies relevant to I2S – either a useful compilation or a single example of note. We also provide information about journals, professional associations & networks, courses and conferences where researchers can learn from others, report their methodological findings and interact with like-minded peers.

I2S News is archived at: http://i2s.anu.edu.au/i2s-publications/newsletters/i2s-news.

To subscribe or unsubscribe to the newsletter go to "I2S Updates" at http://i2s.anu.edu.au or contact Peter Deane at peter.deane@anu.edu.au.

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