Dynamic Modelling: What, Why & How?
Workshop & Training Sydney 18-22 Feb 2013

Examples from New Technology Adoption, Infectious Disease and Health Care

Designed to provide insights and knowledge for researchers, practitioners and policy makers, the University of NSW in collaboration with Evans & Peck has secured two world leading expert practitioners and trainers in Dynamic Modelling to run a series of workshops detailing multimethod modelling techniques.

These workshops will cover modelling frameworks and processes necessary to develop in-depth understanding of real world problems. Participants will be exposed to a wide range of relevant case studies and will have an opportunity to discuss their own modelling projects with internationally recognised experts.

Through this guided, hands-on approach, attendees will build actionable skills that can be applied to real world problems using AnyLogic.

Dynamic Modelling: What, Why & How is led by Nathaniel Osgood, one of the premier minds in multimethod modelling, an Associate Professor at the University of Saskatchewan and a lecturer at the Massachusetts Institute of Technology. Nathaniel will be joined by Andrei Borshchev, CEO of XJ Technologies and the developer of AnyLogic Modelling Software, and Dr Geoff McDonnell, Simulation Research Fellow at the Centre for Health Informatics, UNSW. Together, these three bring over half a century of modelling expertise gained across the globe and throughout a multitude of industry sectors.

Workshop (2 Days):

What & Why

Monday 18 Feb – Tuesday 19 Feb 2013

What & Why is designed for Policy Makers, Planners and Managers. This workshop will provide participants with an advanced overview of current methods and practices utilised for dynamic modelling. A range of topics and worked examples will be covered and these will be tailored to suit the final participant make-up. Topics will include:

- Why Multimethod Modelling
- An overview of the different modelling techniques
- The modelling process with illustrated examples
- Hybrid models
- Java basics
- An overview of validation, calibration and sensitivity analysis
- Choice and behavioural modelling

Workshop & Training (5 Days):

How: Practical Modelling Techniques and Best Practice

Monday 18 Feb – Friday 22 Feb 2013

The extended Workshop is designed for Researchers, Students and Modelling Practitioners and builds on the learnings from the first two days. These additional three days involve intensive hands-on tutorials that focus on developing the modelling skills of all participants, enabling them to construct working multimethod models. The final agenda will be tailored to suit the registered participants and is expected to cover such topics as:

- Emergence, structure and dynamics
- State chart messages
- Spatial mobility
- Stochasticity
- Hybrid modelling
- Choice and behavioural modelling
- Debugging
- Validation and calibration
- Advanced data input
- Best practice

The Instructors

Dr Nathaniel Osgood

Associate Professor, University of Saskatchewan

Nathaniel Osgood is an Associate Professor in the Department of Computer Science and Associate Faculty at the University of Saskatchewan. His research, which has resulted in dozens of papers in peer-reviewed journals and conferences, is focused on providing tools to inform understanding of population health trends and health policy trade-offs. Dr Osgood has been applying Agent Based modelling to understand human health and behaviour for over 20 years. Dr Osgood has additionally contributed new innovations to the Agent Based modelling process, and has helped introduce novel techniques that combine Agent Based models with System Dynamics and Social Network Analysis approaches. Dr Osgood has conducted tutorials on Agent Based modelling and System Dynamics modelling internationally, and has served as a course instructor, guest lecturer, and plenary speaker on simulation modelling for health for the NIH-sponsored Institute for Systems Science and Health. Dr Osgood has worked for many years in a number of academic and industry positions, including work on industry and academic projects applying modelling to tobacco and environmental epidemiology, health informatics, and multi-framework modelling for natural resource policy making. He has also taught several undergraduate and graduate level courses at MIT.

Dr Andrei Borshchev

CEO XJ Technologies

Andrei is the CEO and co-founder of XJ Technologies and the developer of the AnyLogic Modelling Software. Andrei teaches and presents regularly at international meetings and conferences, covering a wide range of multimethod applications and techniques. When Andrei is not teaching or further developing the AnyLogic software, he is utilising his extensive experience to assist a wide range of government and private organisations to understand their complex dynamic problems.

Dr Geoff McDonnell

Simulation Research Fellow, AIHI

Geoff is the Simulation Research Fellow at the Australian Institute for Health Innovation, University of NSW. Geoff has been undertaking research and lecturing in multimethod modelling techniques for over a decade and brings with him a wealth of real world knowledge gained from careers in consulting and industry.

Venue

University of NSW, Tyree Energy Building, Anzac Parade, Kensington Campus

Costs

2 Day Workshop: $1,950 ($1,055 Academics) including GST
5 Day Workshop & Training: $3,950 ($1,995 Academics) including GST

Cost includes:

- Trial versions of all software
- All notes and worked examples
- One-on-One time during the course with each instructor to discuss your specific projects
- Breakfast, lunch and refreshments throughout the workshops.

All participants should bring their own laptop for use during the workshop(s).

Contact, Registration & Payment

Registration and payment must be made online through University of NSW: http://bit.ly/RJgWpE

For information about online registration and payment or all other inquiries, please contact Geoff McDonnell: geoff.mcdonnell@unsw.edu.au

To assist with customising the content of the workshop for your needs, please email the following details to Geoff McDonnell:

Name: _____

Email: _____

Status: Academic / Student ☐
Commercial / Government / Other ☐

The workshop you wish to attend: 2 Day ☐ 5 Day ☐

Background in Simulation : _____

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Software packages used : _____

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Main areas of Interest : _____

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