



# Architecture and Urban Planning

*Think Tank and Joint In-Conference Workshop with AURIN & ETH Zurich's Future Cities Laboratory*

**Tuesday 26 August 2014 and  
Wednesday 27 August 2014**

Adelaide Convention Centre,  
South Australia

Sponsor:



## Guest Convenor

Tim Horton, Architect, Registrar, Architects  
Registration Board of NSW



If we want to unlock private sector investment in the infrastructure required, Australia must streamline the assessment and approval of infrastructure projects. Comprehensive modelling of cities and regions makes it possible to complete evidence-based environmental assessments, cost and benefit analyses, and life cycle assessment in a one stop shop capability. Drawing on existing live datasets to simulate factors within the environment enables rapid assessment of urban productivity, including land use; economic value; environmental sensitivities; social and public health. SimTecT brings together global and local best practice in new tools and capabilities to make this one stop shop evaluation a reality.

Making intelligent decisions about how our cities grow relies on us integrating complex, and often competing, influences including social and public health, urban economics, finance and funding, with emerging technology and infrastructure systems, in a spatial context. Architects, planners, engineers, authorities and constructors are increasingly using advanced simulation software, like BIM, to bring new productivity and efficiencies to the built environment, to explore alternative scenarios and simulate the performance of buildings, systems and spaces using interactive virtual environments.

Precinct-scale information modelling represents the next generation of smart infrastructure for better planning and assessment, as well as a platform for community interaction, sharing and communication. Engaging communities using advanced visualisation, immersion and a more direct human experience could open new possibilities for built environment professionals to more rapidly bring planning and design to life.

[www.simtect.com.au](http://www.simtect.com.au)



**Simulation**  
Australia

# Architecture and Urban Planning

## Think Tank

Tuesday 26 August 2014

Session 1 - 0830-1000

### Smart Cities, Smart Citizens, Smart Systems: New Frontiers in the Modelling, Design and Simulation of Future Cities

**Chair:** Tim Horton, Architect, Registrar, Architects Registration Board of NSW

#### KEYNOTE PRESENTATION

Urban Planning and Complex Systems: The ETH Participatory City Laboratory

**Speaker:**

Dr Bernhard Klein, Postdoctoral Researcher, Future Cities Laboratory

1000-1030 Morning Tea

Session 2 - 1030-1200

### Digital Humanities - Immersion and Simulation in the Cultural Sector

**Chair:** Tim Horton, Architect, Registrar, Architects Registration Board of NSW

**Speakers:**

Dr Sambit Datta, Professor of Architecture, School of Built Environment, Curtin University

Professor Ross Gibson, Centenary Professor in Creative and Cultural Research, University of Canberra

Professor Erik Champion, Professor of Cultural Visualisation, School of Media Culture and Creative Arts, Faculty of Humanities, Curtin University

1200-1330 Lunch

Session 3 - 1330-1500

### Immersive Visualisation: Past and Present

**Chair:** Tim Horton, Architect, Registrar, Architects Registration Board of NSW

**Speakers:**

Dr Bernhard Klein, Postdoctoral Researcher, Future Cities Laboratory

Dr Sambit Datta, Professor of Architecture, School of Built Environment, Curtin University

Professor Ross Gibson, Centenary Professor in Creative and Cultural Research, University of Canberra

1500-1530 Afternoon Tea

Session 4 - 1530-1700

### From Appearance to Performance: Parametric Modelling Applied

**Chair:** Tim Horton, Architect, Registrar, Architects Registration Board of NSW

**Speakers:**

Dr Marcus White, Architect, Lecturer and Assistant Dean IT - Faculty of Architecture, Building and Planning, University of Melbourne

Professor Mark Burry, Director, Design Research Institute, RMIT

Dr Tuan Ngo, MUTOPIA Platform Leader, Department of Infrastructure Engineering, University of Melbourne

1830-2300

#### Evening - SOCIAL FUNCTION

Simulation Australia Annual Awards Dinner in William Magarey Room, Adelaide Oval

KEYNOTE  
SPEAKER



## Dr Bernhard Klein

Postdoctoral Researcher  
Future Cities Laboratory  
Singapore

Bernhard Klein received his diploma degree in Computer Science from the Technical University of Munich and a doctoral degree at the University of Vienna in economic and social sciences. After his Computer Science study he worked for Siemens Corporate Research in Princeton at the Multimedia & Video Technology department. His duties included research and development of product prototypes for video collaboration, annotation and archiving. After several years in the industry he decided to go back to the university for a doctoral study.

During this time, he worked as a research assistant and lecturer for the Distributed and Multimedia Systems research group at the University of Vienna. During a research collaboration he transferred to the University of Deusto in Spain, where he joined the Mobility Research Lab. As project manager and senior researcher he participated in several European projects in the area of smart homes and smart cities. Since February 2014 he moved to the Singapore ETH centre as postdoctoral researcher, where he is working on extensions for the Value Lab to support interactive urban modeling, simulation and visualisation.

# Architecture and Urban Planning Think Tank

Wednesday 27 August 2014

Session 1 - 0900-1015

## The Urban Simulation Workbench

**Chair:** Tim Horton, Architect, Registrar, Architects Registration Board of NSW

**Speakers:**

Associate Professor Chris Pettit, Strategic Implementation Coordinator, Australian Urban Research Infrastructure Network (AURIN), University of Melbourne

Eva Friedrich, Doctoral Researcher, Collaborative Simulation, Value Lab Asia Infrastructure, ETH Zurich's Future Cities Laboratory

1015-1030 Morning Tea

Session 2 - 1030-1200

## Transport Modelling and Simulation

**Chair:** Tim Horton, Architect, Registrar, Architects Registration Board of NSW

**Speakers:**

Pieter Fourie, Doctoral Researcher, Agent based Transport Modelling, ETH Zurich's Future Cities Laboratory

Professor Rocco Zito, Head of Civil Engineering, School of Computer Science, Engineering and Mathematics, Flinders University

1200-1330 Lunch

Session 3 - 1330-1500

## Emerging Platforms for Integrated Decision Making

**Chair:** Associate Professor Chris Pettit, Strategic Implementation Coordinator, Australian Urban Research Infrastructure Network (AURIN)

**Speakers:**

Zeng Wei, Doctoral Researcher, Visualisation & Visual Analytics, ETH Zurich's Future Cities Laboratory

Professor Bill Randolph, Director of City Futures - Faculty Leadership, City Futures Research Centre, UNSW

1500-1530 Afternoon Tea

Session 4 - 1530-1630

## Next Generation Imperatives

Joint Plenary with Keynote Speakers

**Chairs:** Teresa Crea, Convenor, SimTecT and Kirsty Freeman, Convenor, SimHealth

**Sponsor:**



## Register

To register for SimTecT 2014's two day Architecture and Urban Planning program please visit

[www.simtect.com.au](http://www.simtect.com.au)

## TWO DAY REGISTRATION

**Tuesday 26 August and  
Wednesday 27 August 2014**

**\$895**

### Inclusions:

- Program on 26 August and Wednesday 27 August 2014
- Exhibition Access on Tuesday 26 August and Wednesday 27 August 2014
- Simulation Australia Annual Awards Dinner at William Magarey Room, Adelaide Oval on 26 August 2014
- Catering (morning tea, lunch, afternoon tea)
- Delegate Satchel

## DAY REGISTRATION

**Available for Tuesday 26 August  
and Wednesday 27 August 2014**

**\$450 per day**

### Inclusions:

- Day Program
- Exhibition Access
- Catering (morning tea, lunch, afternoon tea)
- Delegate Satchel





# SPEAKERS



**Professor Mark Burry**  
Director, Design Research Institute  
RMIT



**Professor Erik Champion**  
Professor of Cultural Visualisation,  
School of Media Culture and Creative  
Arts, Faculty of Humanities  
Curtin University



**Dr Sambit Datta**  
Professor of Architecture, School  
of Built Environment  
Curtin University



**Pieter Fourie**  
Doctoral Researcher, Agent based  
Transport Modelling  
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**Eva Friedrich**  
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Simulation, Value Lab Asia Infrastructure  
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**Professor Ross Gibson**  
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University of Canberra



**Dr Tuan Ngo**  
MUtopia Platform Leader, Department  
of Infrastructure Engineering  
University of Melbourne



**Associate Professor Chris Pettit**  
Strategic Implementation Coordinator,  
Australian Urban Research  
Infrastructure Network (AURIN)  
University of Melbourne



**Professor Bill Randolph**  
Director of City Futures - Faculty  
Leadership, City Futures Research Centre  
UNSW



**Zeng Wei**  
Doctoral Researcher, Visualisation &  
Visual Analytics  
ETH Zurich's Future Cities Laboratory



**Dr Marcus White**  
Architect, Lecturer and Assistant Dean  
IT - Faculty of Architecture, Building  
and Planning  
University of Melbourne



**Professor Rocco Zito**  
Head of Civil Engineering, School of  
Computer Science, Engineering and  
Mathematics  
Flinders University

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