

## Applied Urban Modelling Conference, 24-26 May 2012 (AUM2012)

Alison Richard Building, Sidgwick Site, University of Cambridge

### PROGRAMME

#### Thursday 24 May

Koen Steemers and Marcial Echenique, Department of Architecture, University of Cambridge  
*Welcome address and introduction*

**Session 1: Spatial General Equilibrium Modelling**

Chair: David Newbery, University of Cambridge

**Johannes Bröcker** and Marie-Catherine Riekhof, University of Kiel, Germany:

*Fast or false: does the adverse announcement effect of climate policy matter?*

**Jie Zhu**, Ying Jin and Marcial Echenique, Department of Architecture, University of Cambridge:

*A Spatial CGE Model for London and Surrounding Regions*

**Ian Williams**, Ian Williams Services, Cambridge, and University of Cambridge, UK:

*Requirements for Modelling Commuting*

**Session 2: Large-Scale Integrated Urban Models (1)**

Chair: John Bates, John Bates Services, Oxford, and Transport Studies Unit, University of Oxford, UK

Duncan A Smith, Camilo Vargas-Ruiz & **Michael Batty**, CASA, University College London:

*Simulating the Spatial Distribution of Employment in Large Cities: with Applications to Greater London*

Marcial Echenique, Vadim Grinevich, Tony Hargreaves, **Vassilis Zachariadis**, University of Cambridge:

*An Integrated Economic and Spatial Interaction Model for Testing Spatial Planning Policies in combination with Green Technologies*

**David Simmonds**, David Simmonds Consultancy UK, and Olga Feldman, Transport for London, UK: *The*

*Enhancement and Updating of LonLUTI*

**Session 3: Large-Scale Integrated Urban Models (2)**

Chair: Ian Williams, Ian Williams Services, Cambridge, UK

**Paul Waddell**, University of California, Berkeley

*Simulating and Visualizing Sustainable Communities Strategies in the San Francisco Bay Area*

**Doug Hunt** and JE Abraham, University of Calgary

*Energy Mapping using the PECAS Spatial Economic Modelling Framework*

**Tim Gent**, WSP Group, London

*Application of a Land Use Transport Interaction Model to Development in the Cambridge Sub-Region*

Friday 25 May

**Session 4: Spatial Dynamics**  
**Chair:** Mike Batty, CASA, UCL, UK

**Roger White**, Memorial University, St John's, Canada, Inge Uljee, VITO-Flemish Institute for Technological Research, Mol, Belgium, Harutyun Shahumyan, University College Dublin:  
*Modelling the Spatial Dynamics of Population in Urban Regions with an Activity-Based Cellular Automaton*

**Lien Poelmans**, Guy Engelen, Pieter Loderwijks, VITO – Environmental Modelling Unit, Boeretang:  
*Spatial Mapping of Future Renewable Energy Potential in Flanders – Combining CA-Based Land Use Modelling and GIS*

**Anders Johansson**, Department of Civil Engineering, University of Bristol  
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**Session 5: Spatial Modelling**  
**Chair:** Roger White, Memorial University, St John's, Canada

**Alex Hagen-Zanker** and Ying Jin, University of Cambridge:  
*An Integrated Land Use and Transport Model Based on Adaptive Zoning*

**Elisabete A Silva**, Department of Land Economy, University of Cambridge:  
*Joining Cells and Agents in a Computer's 'Artificial Life'*

**Kiril Stanilov**, Department of Architecture, University of Cambridge, Paolo Masucci, CASA, UCL  
*Understanding Urban Transport Networks: An Evolutionary Approach*

**Session 6: Modelling Urban Form**  
**Chair:** John Ellis, Department of Architecture, University of Cambridge

Sergio Porta, **Robert Adam**, Ombretta Romice, **Alessandro Venerandi**, Emanuele Strano, A Russell, University of Strathclyde, Glasgow:  
*Multiple Centrality Assessment: Understanding the Evolution of Cities and Applying Knowledge to Practice in Professional Urban Design*

**Andres Sevtsuk**, City Form Lab, Singapore University of Technology and Design and MIT:  
*Location or Agglomeration: A study of retail distribution in Cambridge and Somerville, MA.*

**Ye Zhang**, Ying Jin and Koen Steemers, University of Cambridge  
*How does Street-Alleyway Network Affect Pedestrian Activities in the Old City of Beijing?*

**Session 7: Understanding the Modelling Context**  
**Chair:** Franz Fuerst, Department of Land Economy, University of Cambridge

**Felix Creutzig** and Rainer Muhlhoff, Economics of Climate Change, Technische Universität Berlin  
*Low Carbon Transport Scenarios for European Cities*

**Csaba Deak**, University of Sao Paulo, Brazil  
*Modelling Transformations Accounting for Fixed Capital*

**Haixiao Pan**, Department of Urban Planning, Tongji University, Shanghai  
*Rail Transit and Optimization of Spatial Structure in Metropolitan Areas — Shanghai Case Study*

**Saturday 26 May**

**Session 8: Building and Neighbourhood Level Modelling**

Chair: Koen Steemers, Department of Architecture, University of Cambridge

**Franz Fuerst**, Department of Land Economy, University of Cambridge and Michael Wegener, Spiekerman & Wegener, Dortmund:

*Energy Efficiency of Buildings: a New Challenge for Urban Models*

**Carlos Calderon**, School of Architecture, Planning and Landscape, University of Newcastle and **James Keirstead**, Imperial College London:

*Modelling Approaches for Retrofitting Energy Systems: Newcastle as a Case Study*

**Francisco J Martinez** and Pedro P Donoso, Landuse Transport Lab, University of Chile:

*A Quasi-Equilibrium Logit Model for Residential Suburbanization*

**Session 9: Transport and the City: New Frontiers**

Chair: Anders Johansson, Department of Civil Engineering, University of Bristol, UK

Friederike Hülsmann, **Regine Gerike**, Benjamin Kickhöfer, Kai Nagel, Research Centre for Mobility and Transport, Technische Universität Munich:

*Quantification and Mapping External Noise Costs to the Transport Users: Development of an Integrated Urban Modelling Approach*

**Anastasios Noulas**, Cecilia Mascolo, Computer Lab, University of Cambridge

*A Tale of Many Cities: Universal Patterns in Human Urban Mobility*

**Robin Morphet**, CASA, UCL

*Von Thunen's Legendre Transform*

**Setsuko Saya**, Regional Policies for Sustainable Development Division, OECD, Paris

*The Use of Urban Modelling in OECD's Compact City Studies?*

**LIST OF POSTERS:**

Dr Jaroslav Burian (Palacky University, Czech Republic) *"Urban Planner": a tool for optimal land use scenario modelling*

Enobong Equere (Kent School of Architecture) *New City Building and Population Displacement: Resettlement or Integration*

Joanna Bach Glowinska (Gdansk Development Agency) *Smart Growth, Smarter City and the Smartest Place*

Alastair Greig (University of Dundee) *Scale-Adjusted Dispersion Measures for Regional Labour Markets*

Mojan Kavosh (Cranfield University) *Dwelling Architecture: How Sustainability Scales with Size*

Razak Yinka Sherif (University of Salford) *Analysing an Overlay of the Key Elements of New Urbanism on Neighbourhoods in Abuja Federal Capital City, Nigeria: A Modelling Tool in Simulation of Neighbourhood Sustainability*

Athansios Votsis (University of Helsinki) *Modelling the Formal Structure of the Urban Built Environment under Conditions of Climate Stress*

Centre for Advanced Spatial Analysis (CASA), University College London *Smart Cities: Representing and Modelling Flows*  
(various posters)

Spiekermann and Wegener Urban and Regional Research, Dortmund, Germany  
*Research posters*

Martin Centre for Architectural and Urban Studies, Department of Architecture, University of Cambridge  
*ReVISIONS Project (various posters)*  
*Energy Efficient Cities (EECi) Project (various posters)*  
*Centre for Smart Infrastructure and Construction (various posters)*

18 May 2012