

# FINAL PROGRAM



**23-25 October 2013**



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## General Information

### 1. Conference Location

The **ESM'2013 Conference** is being held at Lancaster University.




In the [Conference Centre](#)

Bowland Avenue

Lancaster University

Lancaster LA1 4YT

 Tel: +44.1524 594194/4189

 Email: [conferenceoffice@lancaster.ac.uk](mailto:conferenceoffice@lancaster.ac.uk)

The registration desk will be placed in the foyer from Wednesday morning October the 23<sup>rd</sup> onwards, where registration will start at 08.00 and will end at 5.00 p.m. On Thursday October 24<sup>th</sup> registration will be from 8.30 a.m. - 5.00 p.m. with Friday registration only from 8.30 a.m.- 9.00. a.m. The way to the conference and desk will be signposted.

### ALL MAJOR MAPS ARE AT THE BACK OF THIS PROGRAMME

#### How to reach the conference location in Lancaster:

##### By Plane

When arriving by plane in the UK you are mostly destined to arrive in London either at [Heathrow](#), [Stansted](#), [Gatwick](#) or [Luton Airport](#). From these airports you need to make your way by train or [tube](#) to [Euston Station](#) from where you can take a direct train to Lancaster. (journey time 2 1/2 to 3 hours - depending on the time of day)

We recommend that, whenever possible, overseas visitors reach Lancaster via [Manchester International Airport](#). From the airport, there are a number of travel options:

- a) There is a direct rail link from the Manchester International Airport (terminal 2) to Lancaster, (total journey time is between 1 1/2 and 2 1/2 hours, depending on the time of day). This is our recommended option.
- b) There is a shuttle bus from the Main Bus Station near the International Arrivals to either Manchester Piccadilly rail station or (better) Manchester Victoria rail station (total journey time is between 1 1/4 and 2 3/4 hours, depending on the time of day).

## General Information

- c) By car: take M56 motorway from junction 5 and then join the M6 at junction 20a (North) and proceed as in by car below. See the map of the terminals [here](#) at Manchester International Airport

### By Train

When taking the train to the United Kingdom, you will be using the [EUROSTAR](#) service arriving at [St.Pancras station](#). After clearing customs and passport control you leave the station and walk to [Euston Station](#) from where you can take a direct train to Lancaster. (journey time 2 to 2 1/2 hours - depending on the time of day)

If you arrive from [Birmingham Airport](#) then take a train from the airport to [Birmingham New Street Station](#). (See [Journeyplanner](#) to work out your itinerary).Book train tickets on the [National Rail website](#).

Taxis are usually available from outside Lancaster station; otherwise, there is a bus stop a few minutes walk away, next to Lancaster market on Common Garden Street.

### By Tram and Bus

Lancaster city is on the national coach network; National Express coaches call at the University. To plan your coach journey, consult the [National Express Coach](#) Timetable.

Local buses (numbers 2, 2A, X2, 3, 3A, X3) from Lancaster bus station run approximately every 20 minutes to the University. - From rail station to university is X1. All buses are served by a company called StageCoach. Hence, their timetable can be found [here](#).

There is also a direct service - UniSprint - which again runs at 20 minute intervals. See [Lancaster Bus station](#)

### By Car

From the north or south: leave the M6 motorway at junction 33 and take the A6 north towards Lancaster and continue for 1 3/4 miles - passing through the village of Galgate. After leaving Galgate, turn right at the second set of traffic lights into the University main drive. (Do not turn right at the first set of traffic lights - signposted to Alexandra Park).

At the roundabout at the top of the drive, turn right for the Management School. The Management School is the large glass-fronted building, located just past Gillow Avenue (the third turning on the left after the roundabout).

Visitors to Lancaster University Management School should park in Gillow Avenue (third left after the roundabout at the top of the University Drive). You will need either a valid one-day visitor scratch card or a pay and display sticker available from the machine in Gillow Avenue.

## General Information

Ticket machines dispense tickets for 2 hours at £2. From January 2011 chip and pin card payment facilities are available at each machine. All-day visitor scratch cards are available from the LUMS Reception or Security Reception on Bowland Avenue priced at £5 each.

### 2. Badges

Each registrant will receive a name badge upon registration. **The badge must be worn, in order to be admitted to the technical sessions, lunches and social event.**

### 3. Tickets

Extra tickets for the social event and lunches are available from the registration desk. Price: (or equivalent in another currency) for extra tickets

<b>Extra conference dinner</b>	<b>€ 60</b>
<b>Extra lunch ticket</b>	<b>€ 25</b>

### 4. Registration

The ESM'2013 Registration Desk will be open for information and registration:

**Wednesday, October 23..... 8.00 a.m. to 5.00 p. m.**

**Thursday, October 24..... 8.30 a.m. to 5.00 p. m.**

**Friday, October 25 ..... 8.30 a.m. to 9.00 a.m.**

**The location of the registration desk will be signposted**

### 5. Conference Proceedings

Each fully paid registrant will be provided with a copy of the Conference Proceedings (printed format). **This is NOT applicable to students who are not authors and who have not fully registered.**

(Extra copies are available on a cash and carry basis at special rates during **ESM'2013**)

**Price: (or equivalent in another currency) for an extra copy**

<b>ESM'2013 Proceedings CASH AND CARRY</b>	<b>€ 50</b>
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### 6. Meeting Rooms

The ESM'2013 conference will be held in meeting room 2 (main room) and meeting room 4 (breakout room). **They are designated A and B** in this programme.

## General Information

The way to the rooms will be signposted. WIFI-Internet and electrical connections are available in every room.

### 7. Need Help?

Please see the conference desk for your questions

### 8. Social Events and Lunches

**All registrants are invited to**

All **Coffee Breaks** are served in the hallway in front of the meeting rooms.

The lunches are served in **on the ground floor on the reception level.**

#### **The Conference Dinner**

All participants are invited to the conference dinner on **THURSDAY** the 24<sup>th</sup> of October. As we need to give an exact number of participants we would appreciate **your confirmation at the desk before Wednesday evening.**

The dinner will be held at:



**The Midland  
Marine Road West  
Morecambe**

**Lancashire, LA4 4BU**

**Tel: +44(0)1524 424000**

**email:**

**[themidland@englishlakes.co.uk](mailto:themidland@englishlakes.co.uk)**

### 9. Room Legend

The parallel meeting rooms will be designated **ROOM A (room 2) and B (room 4)**. Signposts will indicate the room number and programme above each door.

### 10. Best Paper Award

During the conference the papers, which were accepted as **extended** papers will be judged by the committee in order to choose the best paper of the ESM'2013 conference.

## General Information

### 11. Session Chairs information

**ALL SESSION CHAIRPERSONS IN THIS PROGRAM ARE PROVISIONAL**

**Session Chairs** are chosen on a voluntary basis by proposals by either authors or local committee members or are appointed by the Track Chairs, General Program Chair or General Conference Chair. They are responsible for their assigned session. They make sure their speakers are available, take care of the timing within the session, chair the discussion after each presentation and introduce each speaker based on the CV's given to them by the authors. **If a session chair is not available then the first author takes on the responsibility to chair** In case they chair a session featuring **extended papers**, then they are required to distribute and collect the reviews of that or those papers at the beginning and end of the session. If they have time they should also indicate in their papers the number of session participants.

**THE NUMBERS NEXT TO THE PRESENTATIONS DENOTE THE PAGE-NUMBERS IN THE PROCEEDINGS. IF NO NUMBERS ARE MENTIONED THEN THIS PAPER IS NOT PUBLISHED IN THE PROCEEDINGS**

**THE AUTHORS WHO ARE UNDERLINED ARE NORMALLY THE PRESENTERS**

**PAPERS IN GREY BOXES ARE THE EXTENDED PAPERS ELIGIBLE FOR THE BEST PAPER AWARD**

**CHECK OUT THE OTHER EUROSIS EVENTS ON OUR WEBSITE:**

<http://www.eurosis.org>



<b>WEDNESDAY, 23<sup>rd</sup> OCTOBER 2013</b>		
<b>08.00-17.00</b>	<b>REGISTRATION</b>	
<b>09.00-09.15</b>	<b>WELCOME BY STEPHAN ONGGO – ESM’2013 CONFERENCE CHAIR - ROOM A</b>	
<b>09.15-10.00</b>	<b>KEYNOTE ADDRESS BY PROFESSOR MICHAEL PIDD, LANCASTER UNIVERSITY - ROOM A</b>	
<b>10.00-10.30</b>	<b>COFFEE BREAK</b>	
<b>10.30-12.30</b>	<b>PARALLEL SESSIONS</b>	
	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>VEHICLE ROUTING SIMULATION</b>	<b>DATA DRIVEN SIMULATION IN ENGINEERING</b>
<b>12.30-14.00</b>	<b>LUNCH BREAK</b>	
<b>14.00-15.00</b>	<b>PARALLEL SESSIONS</b>	
	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>INVITED SPEAKER VALERIAN CROITORESCU</b>	<b>ELECTRONIC DATA NETWORK SIMULATION</b>
<b>15.00-15.30</b>	<b>COFFEE BREAK</b>	
<b>15.30-17.30</b>	<b>PARALLEL SESSIONS</b>	
	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>HOSPITAL LOGISTICS AND TRAFFIC SIMULATION</b>	<b>ENGINEERING SIMULATION</b>
<b>18.00-.....</b>	<b>FREE EVENING</b>	

<b>THURSDAY, 24<sup>th</sup> OCTOBER 2013</b>		
<b>08.30-17.00</b>	<b>REGISTRATION</b>	
<b>09.00-10.00</b>	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>INVITED SPEAKER SUZANNE HARRISON</b>	<b>GRID SIMULATION</b>
<b>10.00-10.30</b>	<b>COFFEE BREAK</b>	
<b>10.30-12.30</b>	<b>PARALLEL SESSIONS</b>	
	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>POPULATION DYNAMICS SIMULATION</b>	<b>TRAINING SIMULATION</b>
<b>13.00-14.00</b>	<b>LUNCH BREAK</b>	
<b>14.00-15.00</b>	<b>PARALLEL SESSIONS</b>	
	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>INVITED SPEAKER STEWART ROBINSON</b>	<b>DISTRIBUTED SIMULATION</b>
<b>15.00-15.30</b>	<b>COFFEE BREAK</b>	
<b>15.30-18.00</b>	<b>PARALLEL SESSIONS</b>	
	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>FLUID FLOW SIMULATION</b>	<b>DATA MANAGEMENT SIMULATION</b>
<b>19.30 – 22.30</b>	<b>CONFERENCE DINNER</b>	

<b>FRIDAY, 25<sup>th</sup> OCTOBER 2013</b>		
<b>08.30-09.00</b>	<b>REGISTRATION</b>	
<b>09.00 10.15</b>	<b>PARALLEL SESSIONS</b>	
	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>TUTORIAL SIEBERS</b>	<b>ECONOMICS AND PRODUCTION SIMULATION I</b>
<b>10.00-10.30</b>	<b>COFFEE BREAK</b>	
<b>10.30 12.30</b>	<b>PARALLEL SESSIONS</b>	
	<b>ROOM A (room 2)</b>	<b>ROOM B (room 4)</b>
	<b>WATER DISTRIBUTION SYSTEMS</b>	<b>ECONOMICS AND PRODUCTION SIMULATION II</b>
<b>12.30-12.45</b>	<b>CLOSING SESSION AND BEST PAPER AWARD ROOM A</b>	

# Notes

## NOTES

**Wednesday, 23<sup>rd</sup> October 2013**

**HALLWAY**

**Registration**

**08.00 - 17.00**

**ROOM A**

**09.00 – 09.15**

**Opening ESM'2013 and Welcome**

**Welcome Address**

**Stephan Onggo**  
**Lancaster University**  
**ESM'2013 General Conference Chair**

**ROOM A - 09.15-10.00**

**KEYNOTE**

**KEYNOTE SPEECH**

**Chair:** Stephan Onggo, Lancaster University, United Kingdom



**Rethinking the Place of System Dynamics and Discrete Event Simulation**

Professor Michael Pidd, Department of Management Science, Lancaster University, Lancaster, United Kingdom

Welcome

## Wednesday, 23<sup>rd</sup> October 2013

**10.00 - 10.30**

**COFFEE BREAK**

**10.30 – 12.30**

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**ROOM A - 10.30-12.00**

**TRAFFIC**

**VEHICLE ROUTING SIMULATION**

**Chair:** Rita Marques Brandão, University of the Azores, Portugal

**AI\_02\_LOGIS**

**Production Simulation of Decentralized Autonomous FMS and AGV's**

**Route Interference Avoidance using MIND**

Hidehiko Yamamoto and Takayoshi Yamada ..... 273

**AGENT\_05**

**An Agent-Based Vehicle Routing Simulation Tool for Road Networks**

**with Time Variant Data**

Bhakti S.S.Onggo, Michael Bažant and Jiří Popelka ..... 284

**AGENT\_07\_TRANS**

**Simulation of Localization Rolling Stock within The Railway Network Model**

**utilizing Agent Based Simulation**

Jan Fikejz and Emil Rezanina ..... 290

**ROOM B - 10.30-12.30**

**ENGIN**

**DATA DRIVEN SIMULATION IN ENGINEERING**

**Chair:** Paulo Sampaio, University of Madeira, Portugal

**AI\_03**

**Data-Driven Models for Uni-axial Compressive Strength Prediction applied**

**to Unseen Data**

Joaquim Tinoco, António Gomes Correia and Paulo Cortez ..... 183

**EDU\_03\_SIM\_OPT**

**Model Predictive Motion Cueing Algorithm for a Truck Simulator**

E. Thöndel ..... 188

# Wednesday, 23<sup>rd</sup> October 2013

## METH\_10

### A New Method of Event Handling for ODE Solvers and Application to a Benchmark

Thibaut-Hugues Gallois, Jean Brac and Thierry Soriano..... 193

## METH\_04

### Translation of Conditional Robot Action Planning to Linear Programming

Adam Galuszka ..... 201

**12.30 - 14.00**

**LUNCH BREAK**

**14.00 – 15.00**

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**INVITE**

**INVITED PRESENTATION**

**Chair:** Jose Evora, University Institute of Intelligent Systems, Spain

## INV\_03

### Vehicle Powertrain Simulation: a Useful and Cost Saving Methodology

Valerian Croitorescu ..... 5

**ROOM B - 14.00-15.00**

**NETWORK**

**ELECTRONIC DATA NETWORK SIMULATION**

**Chair:** Chrissanthi Angeli, Technological Institute of Piraeus, Greece

## TOOL\_04

### Visual Network Description: A Customizable GUI for the Creation of Software Defined Network Simulations

Ramon Fontes and Paulo N.M. Sampaio ..... 149

## TOOL\_05

### Blocking Probability Simulation at Broadband Handover with Three Level Priority Scheme

Svetla Radeva, Ekaterina Otsetova-Dudin and Dimitar Radev ..... 154

**15.00 - 15.30**

**COFFEE BREAK**

**Wednesday, 23<sup>rd</sup> October 2013****15.30 - 17.30****ROOM A - 15.30-18.00****LOGIS****HOSPITAL LOGISTICS AND TRAFFIC SIMULATION****Chair:** Henrikas Pranevicius, Kaunas Univ. of Technology, Lithuania**TRANS\_08\_HOS****Improving Material Logistics in a Hospital Environment using Discrete Event Simulation**Toni Ruohonen and Pentti Nakari..... 299**AGENT\_05****A Multi-Agent System for Intelligent Scheduling of Non-Emergency Medical Patients' Transportation**Anton Ivaschenko, Anton Dmitriev and Alina Vaisblat..... 304**WEB\_01****System Dynamics in Healthcare: A Web Based Approach**Konstantinos Domdouzis, Peter Lacey, Darren Lodge and Simon J.E.Taylor..... 309**METH\_02****A Metamodeling Approach to the Behavior of the Variance in Nonstationary Simulations**Rita Marques Brandão and Acacio M. O. Porta Nova..... 319**TRANS\_07\_ENV****Reducing Emissions of Taxiing at Airports**Mark B. Duinkerken, Ted Selderbeek and Gabriel Lodewijks..... 331**ROOM B - 15.30-17.30****ENGIN****ENGINEERING SIMULATION****Chair:** Adam Galuszka, Silesian Technical University, Poland**TOOL\_06****Tafat: A Framework for Developing Simulators based on Model Driven Engineering**Jose Evora, Jose Juan Hernandez and Mario Hernandez..... 207**METH\_07****Vibration Suppression using Piezoelectric Elements: Model Development for Control Applications**Roxana Mutu, Marius Valentin Bataus and Valerian Croitorescu ..... 212



## Wednesday, 23<sup>rd</sup> October 2013

### EDU\_05

#### **3D Explicit Simulation of Impact Response of the Protective Shell during Flywheel Failure**

Jiang Lei, Zhang Xiao-Zhang, Wang Liming, Wu Lei, Su Shenjian,  
Duan Changcheng and Wang Xia ..... 217

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#### **Sizing and Tuning Speed Governors for Turbines by AMESIM**

Constantin Calinoiu, Daniela Vasiliu, Puhalschi Radu, Nicolae Vasiliu  
and Irimia Petru Cristinel ..... 220

**18.00 - .....**

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**FREE EVENING**

**Thursday, 24<sup>th</sup> October 2013**

**HALLWAY**

**Registration**

**08.30 - 17.00**

**09.00 – 10.00**

**ROOM A- 09.00-10.00**

**INVITED**

**INVITED PRESENTATION**

**Chair:** Roger J. Brooks, Lancaster University, United Kingdom



**INV\_02**

**Understanding the big picture: how modeling and simulation BAE Systems an edge**

Suzanne Harrison, Head of Service Delivery, CORDA, BAE Systems, United Kingdom

**ROOM B - 09.00-10.00**

**PAR**

**GRID SIMULATION**

**Chair:** Antonin Kavicka, University of Pardubice, Czech Republic

**AGENT\_02**

**Asynchronous approach to simulations in Smart Grid**

Jose Evora, Jose Juan Hernandez and Mario Hernandez..... 137

**HPCN\_02**

**Simulation of Processes of Electricity Generation Integrated in Smart Grid Model Management**

Eugeniusz M. Sroczan and Andrzej Urbaniak ..... 142

**10.00 - 10.30**

**COFFEE BREAK**

Thursday, 24<sup>th</sup> October 2013

10.30 - 12.30

**ROOM A - 10.30-12.30**

**DYNAMICS**

**POPULATION DYNAMICS SIMULATION**

**Chair:** Konstantinos Domdouzis, Whole System Partnership, UK

**METH\_05**

**Hybrid Continuous Time Monte Carlo Simulation of Disperse Systems**

Béla G. Lakatos, Ágnes Bárkányi and Sándor Németh ..... 13

**AGENT\_03\_ENV**

**Automatic Generation of Global Agent Based Model of Migratory Waterfowl for Epidemiological Analysis of Avian Influenza and other Zoonotic Diseases**

Dhananjai M. Rao and Alexander Chernyakhovsky ..... 21

**BIO\_01**

**Simulation Driven Detection of the Increased Risk Periods during Fentanyl Analgesia**

Henrikas Pranevicius, Vytautas Pilkauskas, Mindaugas Pranevicius, Isaac P.Lowenwirt and Osvaldas Pranevicius ..... 29

**BIO\_02**

**Fentanyl Delivery Optimization using Markov Chain Multi Compartmental Model**

Henrikas Pranevicius, Mindaugas Pranevicius, Osvaldas Pranevicius and Mindaugas Snipas ..... 34

**ROOM B - 10.30-12.00**

**TRAIN**

**TRAINING SIMULATION**

**Chair:** John Geraghty, Dublin City University, Ireland

**AI\_01**

**Simulated Learner Models of Human Skills in Programming**

Eleandro Maschio and Alexandre Direne ..... 101

**WEB\_02**

**Web-Based Simulation in Teaching**

Jan Hrídel and Štěpán Karták..... 109

## Thursday, 24<sup>th</sup> October 2013

### EDU\_01

#### "Virtual Surgeon" Training Suite for Laparoscopy, Endovascular and Open Surgery Simulation

Anton Ivaschenko, Anton Dmitriev, Alexey Cherepanov, Alina Vaisblat and Aleksander Kolsanov ..... 114

**12.30 - 14.00**

**LUNCH BREAK**

**14.00 - 15.00**

**ROOM A - 14.00-15.00**

**INVITED**

**INVITED PRESENTATION**

**Chair:** Stephan Onggo, Lancaster University, United Kingdom



### INV\_01

#### Simple Models for a Complex World

Stewart Robinson, School of Business and Economics, Loughborough University United Kingdom

**ROOM B - 14.00-15.00**

**PAR**

**DISTRIBUTED SIMULATION**

**Chair:** Andrzej Urbaniak, Poznan University of Technology, Poland

### AGENT\_08\_HPCN

#### Distributed Agent Based Simulation Framework

Carlos Bragança de Oliveira and António Carvalho Brito ..... 121

### HPCN\_01

#### Graphical Specification of Distributed Simulation Models

Jirí Pénzeš and Antonín Kavicka ..... 128

# Thursday, 24<sup>th</sup> October 2013

**15.00 - 15.30**

**COFFEE BREAK**

**15.30 – 18.00**

**ROOM A - 15.30-18.00**

**FLUID**

**FLUID FLOW SIMULATION**

**Chair:** Jan Studzinski, Systems Research Institute, Poland

**FLUID\_05**

**Simulation-Based Fault Detection for Fluid Power Actuators**

C. Angeli and A. Chatzinikolaou ..... 229

**FLUID\_03**

**Numerical Simulation of Flow Field in Centrifuge Rotor**

Lingling Hu, Zhiheng Qiu, Xiuzhen Jiang and Jiangcheng Gong ..... 234

**FLUID\_01**

**Pressure Drop Modeling of a Two Phase Flow for a CANDU 6 Fuel Bundle using CFD**

Alis Musa, Ilie Prisecaru and Gheorghe (Nicolici) Claudia ..... 238

**FLUID\_02**

**Development of a Finite Element Model for PHWR Pressure Tube Sagging Simulation**

Stefan Nicolici, Daniel Dupleac and Ilie Prisecaru ..... 243

**INTEL\_01\_FLUID**

**Multi-Pole Modelling and Intelligent Simulation Environment for Fluid Power Systems**

Mait Harf and Gunnar Grossschmidt ..... 247

**ROOM B - 15.30-17.30**

**MGMT**

**DATA MANAGEMENT SIMULATION**

**Chair:** Valerian Croitorescu, University POLITEHNICA, Romania

**EMER\_02\_TRANS**

**Modelling, Simulation and Information Systems as a Tool to Support Decision Making Process in Crisis Management**

Jozef Ristvej, Adam Zagorecki, Katarína Hollá, Ladislav Šimák and Michal Titko ..... 71

**Thursday, 24<sup>th</sup> October 2013**

**METH\_01**

**A Pilot Survey on Data Identification and Collection in Simulation Projects**

Bhakti S. S. Onggo, James Hill and Roger J. Brooks ..... 77

**TOOL\_01**

**A Prototype Integration of MANPY with CMSD**

Panos Barlas, Georgios Dagkakis and Cathal Heavey ..... 85

**TRANS\_05**

**Shortest Route Problem with Soft Time Windows**

Kris Braekers and Gerrit K. Janssens ..... 279

**CONFERENCE DINNER – 19.30 -22.30**


All participants are invited to the conference dinner which will be held from 19.30 to 22.30 at The Midland



**Marine Road West**

**Morecambe**

**Lancashire, LA4 4BU**

 **Tel: +44(0)1524 424000**

**email: [themidland@englishlakes.co.uk](mailto:themidland@englishlakes.co.uk)**

**The participants be taken by bus from  
Lancaster University Conference  
Centre to the dinner location**

**Bus: departure 18.30 p.m.**

**Bus departure after dinner at 22.30 p.m.**

Friday, 25<sup>th</sup> October 2013

**HALLWAY**

**Registration**

**08.30 - 09.00**

**09.00 – 10.15**

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**ROOM A - 09.00-10.15**

**TUT**

**TUTORIAL**

**Chair:** Stephan Onggo, Lancaster University, United Kingdom

**Decision Support using Business Process Model and Notation (BPMN) and Agent-Based Simulation**

Peer Olaf Siebers, Nottingham University, Nottingham, United Kingdom

**ROOM B - 09.00-10.00**

**ECON**

**ECONOMICS AND PRODUCTION SIMULATION I**

**Chair:** Gerrit Janssens, Hasselt University, Belgium

**AI\_04**

**A Probabilistic Analysis of Transactions Success Ratio in Real-Time Databases**

Mourad Kaddes, Laurent Amanton, Alexandre Berred, Bruno Sadeg, Majed Abdouli and Rafik Bouaziz .....

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**TRANS\_01**

**Employment Effects of Ports and Cost Benefit Analyses**

Torsten Marner and Matthias Klumpp.....

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**10.00 - 10.30**

**COFFEE BREAK**

**10.30 - 12.30**

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**ROOM A - 10.30-12.30**

**PAR**

**WATER DISTRIBUTION SYSTEMS**

**Chair:** Peer Olaf Siebers, Nottingham University, United Kingdom

Parallel Sessions - Friday

## Friday, 25<sup>th</sup> October 2013

### AGENT\_01

#### Multi-Agent Simulation to support Water Distribution Network Partitioning

Saeed Hajebi, Stephen Barrett, Aidan Clarke and Siobhán Clarke ..... 163

### ENV\_01

#### Energy cost reducing in a water pumping station - modeling and simulation

Rafal Brodziak, Tomasz Kaźmierski and Andrzej Urbaniak..... 169

### AI\_06

#### Detection and Localization of Water Leaks in Water Nets by Means of a Monitoring System, Hydraulic Model and Neuronal Networks

Jan Studzinski and Izabela Rojek..... 172

### ANA\_01

#### Fuzzy Model Predictive Control for Energy Consumption Optimization by Heating and Cooling Systems in Buildings

Mariusz Nowak and Andrzej Urbaniak..... 176

### ROOM B - 10.30-12.30

### ECON

#### ECONOMICS AND PRODUCTION SIMULATION II

Chair: Matthias Klumpp, FOM Essen, Germany

### METH\_08

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**BEST PAPER**

**CLOSING SESSION AND BEST PAPER AWARD**

**Chair:** Stephan Onggo, Lancaster University, United Kingdom

**EUROSIS**

**Philippe Geril**, EUROSIS, Ostend, Belgium

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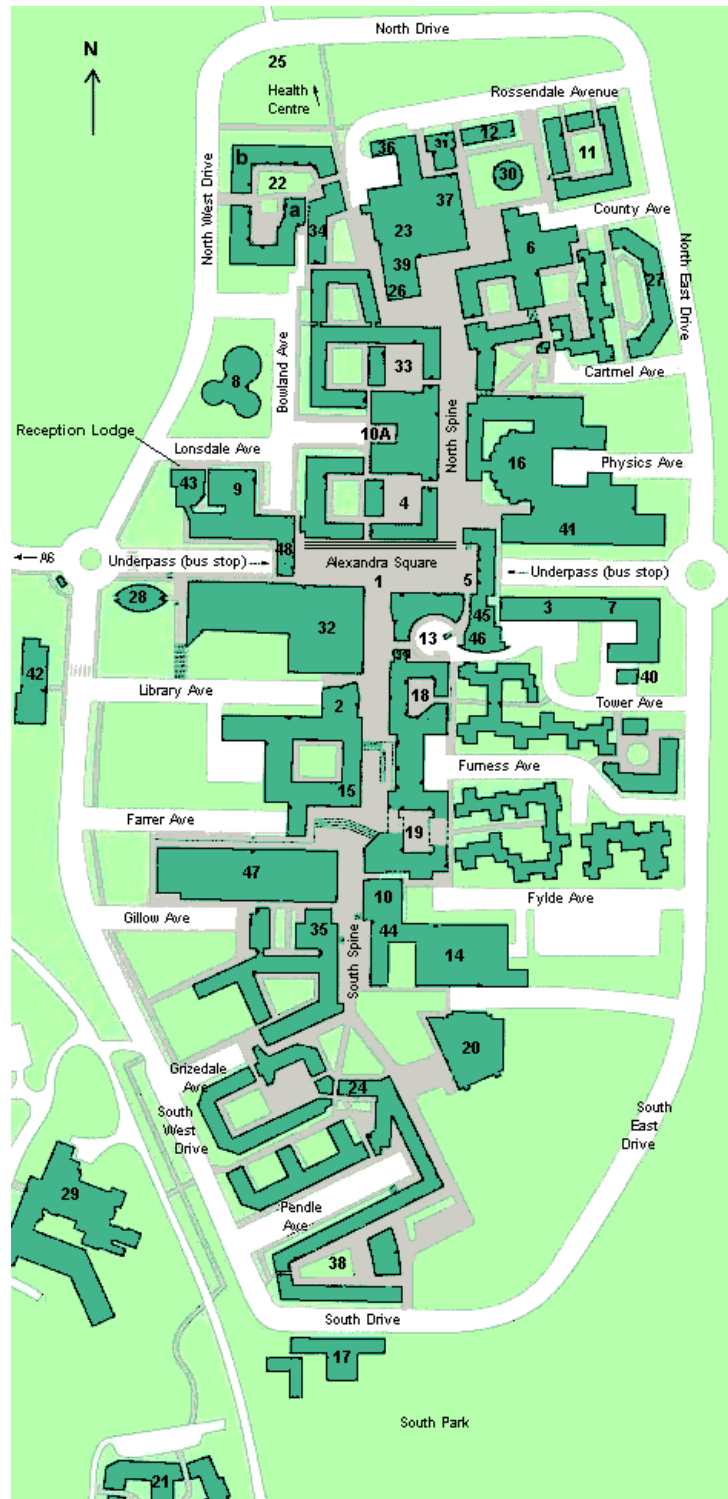
**Track proposals and tutorial proposals can be sent in by  
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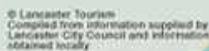
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# Conference Site Maps

## LANCASTER UNIVERSITY LOCATION MAP



Conference Site Map



# eurosis

EUROSIS was borne out of discussions with the European Community to set up a new kind of Society, which would be project-driven instead of driven by pure membership and conferences.

The aim of the Society is to set up and manage topic related Technical Committees which will link directly to European Projects in the field of computer simulation and related areas and to act as a knowledge pool for future European Networks of Excellence, like MOSAIC.

If you would like to receive more information about EUROSIS, please contact

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(Above registration fees include, one copy of the PROCEEDINGS, all midday meals, cocktail, refreshments, coffees and social program,) One Day Participants and Non-Author Students cannot participate in the conference dinner.		
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