Welcome to

ANT 2015
The 6th International Conference on Ambient Systems, Networks and Technologies

SEIT 2015
The 5th International Conference on Sustainable Energy Information Technology

June 2 – 5, 2015
London, United Kingdom

With support of

VelocityRDT (United Kingdom)
Acadia University (Canada) & Hasselt University (Belgium)

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ANT / SEIT
SYMPOSIA AND WORKSHOPS

ANT	The 6th International Conference on Ambient Systems, Networks and Technologies
SEIT	The 5th International Conference on Sustainable Energy Information Technology
ABMTRANS	The 4th International Workshop on Agent-based Mobility, Traffic and Transportation Models, Methodologies and Applications
AgentCities	The 2nd International Workshop on Agent-based Modeling and Simulation of Cities
ANTIFRAGILE	The 2nd International Workshop "From Dependable to Resilient, from Resilient to Antifragile Ambients and Systems"
BASNet	The 4th International Workshop on Body Area Sensor Networks
BD2M	The 1st International Workshop on Big Data and Data Mining Challenges on IoT and Pervasive Systems
FAMS	The 5th International Symposium on Frontiers in Ambient and Mobile Systems
IUPT	The 5th International Symposium on Internet of Ubiquitous and Pervasive Things
IWSRON	The 3rd International Workshop on Survivable and Robust Optical Networks
MCSMS	International Workshop on Mobile Cloud Computing Systems, Management, and Security
MLDM-SN	The 2nd International Workshop on Machine Learning and Data Mining for Sensor Networks
WNTEST	International Workshop on Wireless Networks and Energy Saving Techniques
WTISG	International Workshop on Wireless Technology Innovations in Smart Grid

PROGRAM AT A GLANCE

	ANT 2015, SEIT 2015 and Workshops Program Time Slots					
Timing	**Tuesday 2 June 2015**					
16:00-18:00	*Registration*	*Registration room (Heritage Gallery (QA077), Queen Anne building*				
Timing	**Wednesday 3 June 2015**					
08:00-12:00	*Registration*	*Registration room (Heritage Gallery (QA077), Queen Anne Building*				
08:30-09:00	Opening Ceremony	*Howe* Lecture Theatre (QA LT080), Queen Anne Building				
09:00-10:00	*Keynote speaker I*	*Howe* Lecture Theatre (QA LT080), Queen Anne Building				
10:00-10:30	**Coffee Break**	Council Room (QA063), Queen Anne Building				
	Technical Sessions (1)	ANT-S1	ANT-S2	SEIT-S1	ABMTRANS-S1	ANT-S3
10:30-12:00	*Room*	*QA120*	*QA138*	*QA139*	*QA038*	*QA039*
12:00-13:15	**LUNCH**	Council Room (QA063), Queen Anne Building				
13:30-14:30	*Keynote speaker II*	*Howe* Lecture Theatre (QA LT080), Queen Anne Building				
	Technical Sessions (2)	ANT-S4	ANT-S5	SEIT-S2	ABMTRANS-S2	ANTFRAGILE
14:30-16:00	*Room*	*QA120*	*QA138*	*QA139*	*QA038*	*QA039*
16:00-16:30	**Coffee Break**	Council Room (QA063), Queen Anne Building				
	Technical Sessions (3)	ANT-S6	ANT-S7	SEIT-S3	ABMTRANS-S3	BD2M
16:30-18:30	*Room*	*QA120*	*QA138*	*QA139*	*QA038*	*QA039*
Timing	**Thursday 4 June 2015**	**Room**				
09:00-10:00	*Keynote speaker III*	*Howe* Lecture Theatre (QA LT080), Queen Anne Building				
10:00-10:30	**Coffee Break**	Council Room (QA063), Queen Anne Building				
	Technical Sessions (4)	ANT-S8	ANT-S9	SEIT-S4	ANT-S10	ABMTRANS-S4
10:30-12:00	*Room*	*QA120*	*QA138*	*QA139*	*QA038*	*QA039*
12:00-13:15	**LUNCH**	Council Room (QA063), Queen Anne Building				
	Technical Sessions (5)	ANT-S11	ANT-S12	SEIT-S5	ANT-S13	ANT-S14
13:30-15:00	*Room*	*QA120*	*QA138*	*QA139*	*QA038*	*QA039*
15:00-15:30	**Coffee Break**	Council Room (QA063), Queen Anne Building				
	Technical Sessions (6)	ANT-S15	ANT-S16	ANT-S17	FAMS	MCSMS
15:30-17:30	*Room*	*QA120*	*QA138*	*QA139*	*QA038*	*QA039*
18:00-19:00		***Old English Bus Tour - (Social Evening)***				
19:00-22:00	**Banquet & Award Ceremony**	**Restaurant in Downtown London - English Curry**				
Timing	**Friday 5 June 2015**	**Rooms**				
	Technical Sessions (7)	ANT-S18	ANT-S19	ANT-S20	IUPT	MLDM-SN
08:30-10:00	*Room*	*QA120*	*QA138*	*QA139*	*QA038*	*QA039*
10:00-10:30	**Coffee Break**	Council Room (QA063), Queen Anne Building				
	Technical Sessions (8)	ANT-S21	IWSRON/BAS	ANT-S20	WTISG	
10:30-12:00	*Room*	*QA120*	*QA138*	*QA139*	*QA038*	
		End of Event				

KEYNOTE I

Something Different about Networking: The Role of SDN & NFV in Building Future Networks

Dr. Nicholas Race

School of Computing and Communications
Lancaster University, United Kingdom

Abstract:

Software Defined Networking (SDN) is a new networking approach that facilitates the decoupling of the control plane in a network (the decision making entity) from the data plane (the underlying forwarding system). Coupled with the advent of Network Functions Virtualisation (NFV), there is now potential for unprecedented levels of flexibility and control within network infrastructures. This talk will highlight the recent trends in SDN & NFV from both a research and deployment perspective. It will look at how SDN & NFV can be used to support new types of networking applications, such as the use of SDN-enabled network caching functions to improve the delivery of video across the Internet. Finally, it will highlight emerging research challenges in this field – particularly with regard to the orchestration and control of next generation SDN & NFV infrastructures.

About the Speaker:

Dr. Race is a Senior Lecturer within the School of Computing and Communications at Lancaster University. Dr Race has published several refereed papers in the areas of wireless mesh networking, network security, mobile & ubiquitous computing and content distribution. He was responsible for establishing and developing research into Wireless Mesh Networks at Lancaster, and built the Wray Mesh Networking testbed in 2004 to investigate solutions to bridging the urban and rural connectivity divide. He is internationally recognised for his research into wireless mesh networks, and has given a series of invited talks and written book chapters about the technology. His work in Wray also contributed to the award of the Queen's Anniversary Prize for Lancaster University in 2005. He is a technical programme committee member for many international conferences and workshops, including IDMS, MIPS, MMNS, ICETE, WINSYS, GridNets, GOBS and MCCSIS. He has received both the University's Commercialisation Prize (for overseeing the development of the IPv6 protocol stack with Microsoft) and the Community Prize (for the ongoing work in Wray).

Dr. Race is an investigator at Lancaster on the EPSRC programme grant TOUCAN Towards Ultimate Convergence of All Networks. He is also the principal investigator at Lancaster of the EU FP7 projects FI-CONTENT2, STEER, Fed4FIRE and GN3plus, with work focusing on the development of socially-aware multimedia systems and experimentation across software-defined networks.

KEYNOTE II

Energy Sector in Transformation: Trends and Prospects

Dr. Gerrit Jan Schaeffer
Chairman of the Management Board
EnergyVille, Belgium

Abstract:

The global energy sector currently is in turmoil because of different and often conflicting drivers and reasons: growing energy demand from emerging economy countries, the global economic crises, climate change policies, peak oil phenomena, the sudden increase of shale oil and shale gas production in the United States, geopolitical tensions, the demise of nuclear energy and last but not least the plummeting costs of renewable energy technologies. Global energy scenarios from established organisations like the International Energy Agency (IEA), World Energy Council and the big oil firms however give comparable expectations about probable future energy systems. They have one thing in common: they will all lead to a higher global temperature increase than the 2 degrees Celsius seen as the acceptable limit by climate scientists and as a consequence are not environmentally sustainable. Normative scenarios from the IEA, but also from NGOs such as Greenpeace, that take the CO2-emissions reductions needed as a starting point, show that a clean energy future that fulfils expected global energy demand is technically and economically possible. However, except for power production from renewables, the development of the clean energy technologies needed is not (yet) on track. Starting from this observation the author develops guidelines for the development of a clean energy future which basically consists of a combination of an accelerated direct and indirect electrification of energy demand combined with an accelerated shift to power production from renewables against a background of continuing energy efficiency improvements, including efficient use of waste heat flows. Also the main consequences and challenges of this development are discussed, including the development needed of new control and management strategies which will need smart ICT solutions.

About the Speaker:

Dr. Gerrit Jan Schaeffer is the Director Research at VITO (the Flemish Institute of Technological Research). He received his education in Business Studies, Applied Physics and Philosophy of Science and Technology at the University of Twente in The Netherlands. Between 1994 until the end of 2006 he worked at the Energy Research Center of the Netherlands (ECN). In 1998 he received his PhD. Since 2007 he works at VITO, first as Research Leader Energy and since October 2007 as a Director. He is the Chairman of EnergyVille, the energy research cooperation between KULeuven, VITO and imec, Founder and Chairman of BERA (the Belgian Energy Research Alliance) and Member of the Executive Committee of the EERA (European Energy Research Alliance).

KEYNOTE III

Computational and Software Engineering Issues in Multi-Agent Transport Simulations

Dr. Kai Nagel

Berlin Institute of Technology (TU Berlin)

The Technische Universität Berlin, Germany

Abstract:

Multi-agent -- or microscopic behavioral -- traffic simulations treat entities of the real world -- persons, vehicles, traffic signals, etc. -- as entities in the simulation. This means keeping track of several millions of such entities in typical simulations of urban or regional systems.

Progress in programming languages, in particular the advent of object-oriented languages together with powerful container libraries, has considerably lowered the effort necessary to program and maintain such systems. Still, there are issues that languages (and hardware) could support better, such as object uniqueness, or pluggability of behavioral modules.

At the same time, progress in hardware has helped to compute such urban or regional systems at reasonable speed. Parallel/distributed computing is possible, but has in the past been hampered by the need to manually serialise/deserialise objects when they are migrated from one CPU to another. Multi-threading may be able to come to the rescue but poses some challenges.

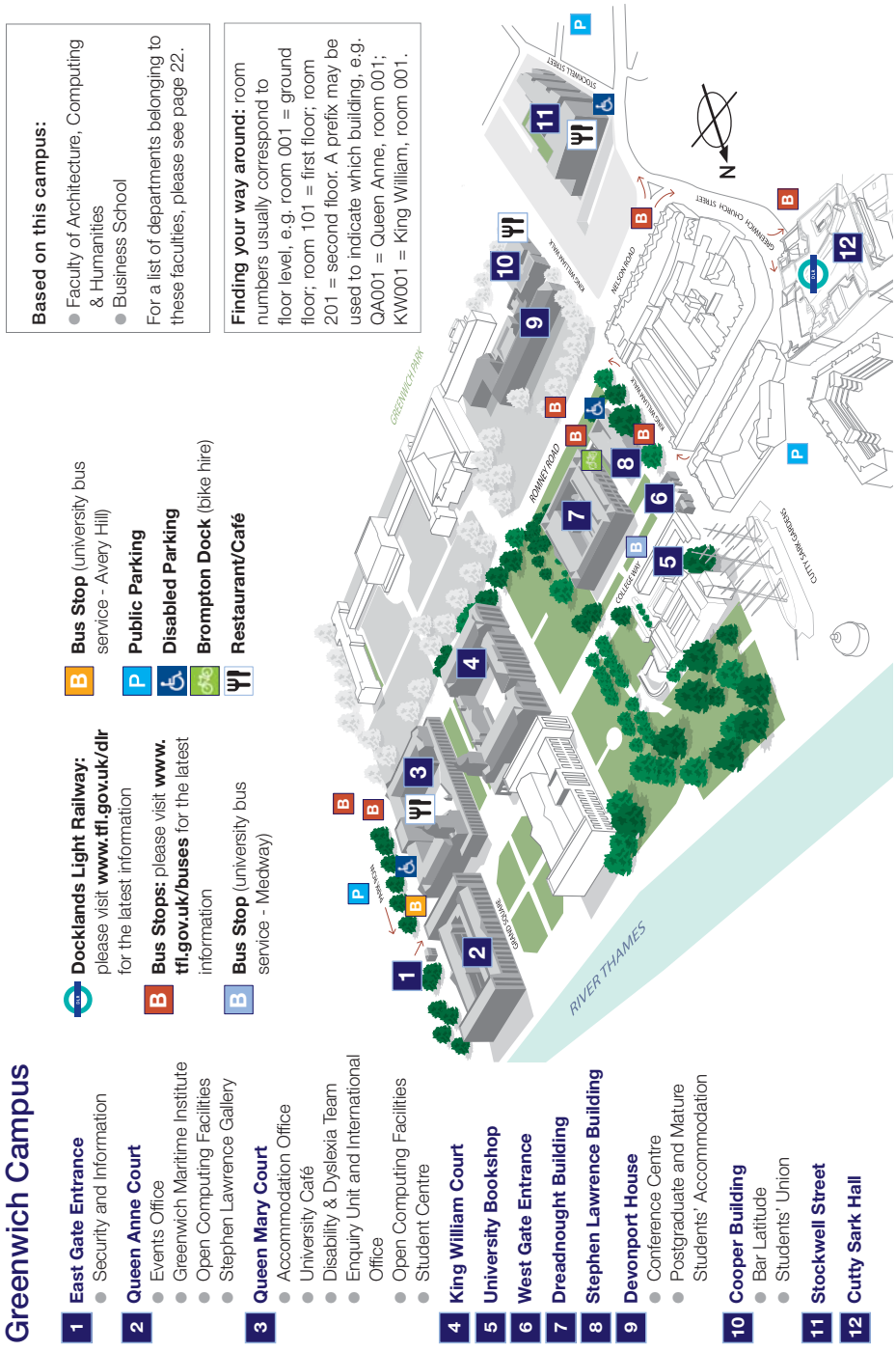
About the Speaker:

Dr. Nagel was born in Cologne/Germany. He did his bachelor degree in physics and meteorology at the University of Cologne and at the University of Paris 6 (Jussieu). In 1991-93, he was a research assistant of A. Bachem at the Center for Parallel Computing in Cologne. In 1993-94, he was a research associate at Los Alamos National Laboratory, and visiting scientist at Santa Fe Institute and Brookhaven National Laboratory. In 1994, Dr. Kai obtained his Ph.D. in Computer Science. During the period of 1995-1999, he worked at Los Alamos National Laboratory, latest position as a "team leader research team". During 1999-2004, he worked for Computer Science Department at ETH Zurich at the Institute for Scientific Computing. Since April 2004, he is a full professor for "Transport Systems Planning and Transport Telematics" at the Berlin Institute of Technology (TU Berlin).

Dr. Nagel research interests lies on large transportation simulations, modeling and simulation of socio-economic systems, and large-scale computing. He published numerous number of papers in international journals, conferences and workshops. He is an area editor for "Simulation" of "Networks and Spatial Economics" journal, area editor for "Traffic and Environmental Systems" journal "Advances in Complex Systems", editor of several special issues, referee for several international journals and holds many research funding.

CONFERENCE VENUE

Old Royal Naval College, 30 Park Row, London SE10 9LS



DETAILED PROGRAM

Tuesday, June 2, 2015

Registration 16:00-18:00

Room: Heritage Gallery (QA077), Ground Floor, Queen Anne Building

Wednesday, June 3, 2015

Registration 08:00 – 12:00

Room: Heritage Gallery (QA077), Ground Floor, Queen Anne Building

Opening 08:30 - 09:00

Opening Ceremony
Room: 'Howe' Lecture Theatre (QA LT080), Ground Floor, Queen Anne building

Keynote I 09:00 - 10:00

Something Different about Networking: The Role of SDN & NFV in Building Future Networks
Nicholas Race, Lancaster University, United Kingdom

Session Chair: Ansar-Ul-Haque Yasar, Hasselt University, Belgium
Room: 'Howe' Lecture Theatre (QA LT080), Ground Floor, Queen Anne building

Coffee Break 10:00 - 10:30

Room: Council Room (QA063), Ground Floor, Queen Anne Building

Technical Sessions 10:30 - 12:00

ANT Session S-1: Agent Systems, Intelligent Computing and Applications I
Session Chair: Brian Wolshon, Louisiana State University, USA
Room: QA120

Principles and experimentations of self-organizing embedded agents allowing learning from demonstration in ambient robotic
Nicolas Verstaevel, Regis Christine, Marie-Pierre Gleizes and Fabrice Robert
Dendritic Cell Algorithm for Mobile Phone Spam Filtering
El-Sayed M. El-Alfy
Modelling multi-agent systems with category theory
Olga Ormandjieva, Jamal Bentahar, Jinzi Huang and Heng Kuang
Multimodal Fusion, Fission and Virtual Reality Simulation for an Ambient Robotic Intelligence
Omar Adjali, Manolo Dulva Hina, Sebastien Dourlens and Amar Ramdane-Cherif

ANT Session S-2: Big Data and Analytics I
Session Chair: Francois Siewe, De Montfort University, UK
Room: QA138

Big Data Storage in the Cloud for Smart Environment Monitoring
Maria Fazio, Antonio Celesti, Massimo Villari and Antonio Puliafito
From mobile data towards a better customer knowledge: proposals for an information framework
Christian Colot and Isabelle Linden
TRIP/STOP Detection in GPS Traces to Feed Prompted Recall Survey
Glenn Cich, Luk Knapen, Tom Bellemans, Davy Janssens and Geert Wets
A linear programming approach for bitmap join indexes selection in data warehouses
Lyazid Toumi, Abdelouahab Moussaoui and Ahmet Ugur

SEIT Session S-1
Session Chair: Gerrit Jan Schaeffer, EnergyVille, Belgium
Room: QA139

Active control of the vertical axis wind turbine by the association of flapping wings to their blades
Mohamed Taher Bouzaher and Mohamed Hadid
Parametric Quantification of Low GWP Refrigerant for Thermosyphon Driven Solar Water Heating System
Naeem Abas, Rab Nawaz and Nasrullah Khan
A Two-Stage Comparative Life Cycle Assessment of Paper-Based and Software-Based Business Cards
Areg Karapetyan, Waheeb Yaqub, Aram Kirakosyan and Sgouris Sgouridis
LabVIEW Based PV Panel Online Characteristics And Parameters Estimation
Chokri Belhadj Ahmed, Mahmoud Kassas and Syed Essamuddin Ahmed

ABMTRANS Workshop: Session S-I
Session Chair: Ansar-Ul-Haque Yasar and Luk Knapen, Hasselt University, Belgium
Room: QA038

Simulating opinion dynamics on stakeholder networks through agent-based modelling for collective transport decisions
Michela Le Pira, Giuseppe Inturri, Matteo Ignaccolo, Alessandro Pluchino and Andrea Rapisarda
Seepage of Smaller Vehicles under Heterogeneous Traffic Conditions
Amit Agarwal and Gregor Lämmel
Why closing an airport may not matter -- The impact of the relocation of TXL airport on the bus network of Berlin
Andreas Neumann
Agent Based Modeling for Simulating Taxi Services: Case Study in Barcelona
Josep Maria Salanova Grau and Miquel Angel Estrada Romeu

ANT Session S-3: Emerging Networking, Tracking and Sensing Technologies I
Session Chair: Shinsuke Hara, Osaka City University, Japan
Room: QA039

Reflective network tomography based on compressed sensing
Kensuke Nakanishi, Shinsuke Hara, Takahiro Matsuda, Kenichi Takizawa, Fumie Ono and Ryu Miura
On-Demand Customizable Wireless Sensor Network
Toshiaki Miyazaki, Peng Li, Song Guo, Junji Kitamichi, Takafumi Hayashi and Tsuneo Tsukahara
LEATCH: Low Energy Adaptive Tier Clustering Hierarchy
Wafa Akkari, Badiaa Bouhdid and Abdelfettah Belghith
A Comparative Study of MAC protocols for Linear WSNs
Radosveta Sokullu and Eren Demir

Lunch 12:00 - 13:15

Room: Council Room (QA063), Ground Floor, Queen Anne Building

Keynote II 13:30 - 14:30

Energy Sector in Transformation: Trends and Prospects
Gerrit Jan Schaeffer, EnergyVille, Belgium

Session Chair: Simon Poyser, Velocity RDT, United Kingdom
Room: 'Howe' Lecture Theatre (QA LT080), Ground Floor, Queen Anne building

Technical Sessions 14:30 - 16:00

ANT Session S-4: Internet of Things I
Session Chair: Luiz Angelo Steffenel, Université de Reims Champagne-Ardenne, France
Room: QA120

IOTCollab, Access Control Model
Mehdi Adda, Jabril Abdelaziz, Hamid Mcheick and Rabeb Saad
The Programmable City
Pedro Martins and Julie A. McCann
Ad-ATMA: An Efficient MAC protocol for Wireless Sensor and Ad Hoc Networks
Md. Kowsar Hossain, Suprakash Datta and Jeff Edmonds
Deployment and configuration of applications for ambient intelligence systems
Ferdinand Piette, Cédric Dinont, Amal El Fallah Seghrouchni and Patrick Taillibert

ANT Session S-5: Mobile Networks, Protocols and Applications I
Session Chair: Radosveta Sokullu, Ege University, Turkey
Room: QA138

Minimizing Communication Interference for Stable Position-Based Routing in Mobile Ad Hoc Networks
Abedalmotaleb Zadin and Thomas Fevens
SEDG: Scalable and Efficient Data Gathering Routing Protocol for Underwater WSNs
Naveed Ilyas, Nadeem Javaid, Mariam Akbar, Zahoor Ali Khan and Umar Qasim
DSM: Dynamic Sink Mobility equipped DBR
Ayesha Hussain Khan, Zahoor Ali Khan, Umar Qasim and Nadeem Javaid
Novel Data Link Layer Encoding scheme for Multi-hop Wireless Mesh Network
Kishwer Abdul Khaliq and Sajjad Hussain

SEIT Session S-2
Session Chair: Jūlija Gušča, Riga Technical University, Latvia
Room: QA139

The design, development and performance evaluation of thermoelectric generator (TEG) integrated forced draft biomass cookstove
Risha Mal
Modeling of the Anaerobic Digestion of Organic Waste for Biogas Production
Maamar Fedailaine, Karima Moussi, Mohamed Khitous, Sabah Abada, Meryem Saber and Nassima Tirichine
A Standard Design Process for Sustainable Design
Francisco Farias
Thermochemical Depolymerization of Biomass
Bilal Akash

ABMTRANS Workshop: Session S-2
Session Chair: Ansar-Ul-Haque Yasar and Luk Knapen, Hasselt University, Belgium
Room: QA038

Agent-Based Modeling for Evacuation Traffic Analysis in Megaregion Road Networks
Brian Wolshon, Zhao Zhang, Scott Parr, Brant Mitchell and John Pardue
Agent-Based Simultaneous Optimization of Congestion and Air Pollution: A Real-World Case Study
Amit Agarwal and Benjamin Kickhöfer
The Effect of Countdown Timer on the Approach Speed at Signalised Intersections
Jeevitha Devalla, Sabyasachi Biswas and Indrajit Ghosh
Passenger Car Unit of Vehicles on Undivided Intercity Roads in India
Mohammad Mardani Nokandeh, Satish Chandra and Indrajit Ghosh

ANTIFRAGILE Workshop
Session Chair: Vincenzo De Florio, University of Antwerp, Belgium
Room: QA039

Automatic Resource Allocation for High Availability Cloud Services
Stefano Marrone and Roberto Nardone
Software Theory Change for resilient near-complete specifications
Giuseppe Primiero and Franco Raimondi
A framework for trustworthiness assessment based on fidelity in cyber and physical domains
Vincenzo De Florio and Giuseppe Primiero

Coffee Break 1600 - 16:30

Room: Council Room (QA063), Ground Floor, Queen Anne Building

Technical Sessions 16:30 - 18:30

ANT Session S-6: Modeling and Simulation in Transportation Sciences I
Session Chair: Olga Ormandjieva, Concordia University, Canada
Room: QA120

Modelling the Weekly Electricity Demand Caused by Electric Cars
Nicolai Mallig, Michael Heilig, Christine Weiss, Bastian Chlond and Peter Vortisch
Large-scale microscopic simulation of taxi services
Michal Maciejewski and Joschka Bischoff
Agent-based Simulation Model for Long-term Carpooling: Effect of Activity Planning Constraints
Iftikhar Hussain, Luk Knapen, Stéphane Galland, Tom Bellemans, Davy Janssens and Geert Wets

On the Use of a Pedestrian Simulation Model with Natural Behavior Representation in Metro Stations
W.L. Wang, S.M. Lo, S.B. Liu and J. Ma
Detecting public transportation with large-scale cell phone data
Christopher Horn and Roman Kern

ANT Session S-7: Smart Environments and Applications I
Session Chair: Nadeem Javaid, COMSATS Institute of IT, Islamabad, Pakistan
Room: QA138

Middleware to Integrate Mobile Devices, Sensors and Cloud Computing
Thinh Le Vinh, Samia Bouzefrane, Jean-Marc Farinone, Amir Attar and Brian Kennedy
A Privacy Type System for Context-aware Mobile Ambients
Francois Siewe
BlindeDroid: An Information Tracking System for Real-time Guiding of Blind People
José Cecílio, Karen Duarte and Pedro Furtado
USSAP : Universal Smart Social Adaptation Platform
Alti Adel, Laborie Sébastien and Roose Philippe
Descriptive Modeling of Social Networks
Erick Stattner and Martine Collard

SEIT Session S-3
Session Chair: Kai Nagel, TU Berlin, Germany
Room: QA139

A review of optimal control techniques applied to the energy management and control of microgrids
Luis Ismael Minchala-Avila, Luis Eduardo Garza-Castañon, Adriana Vargas-Martinez and Youmin Zhang
A test device for optimize PMU-based Islanding detection technology
Furong Liu, Xianbing Chen, Donghua Zhang, Guorong Zhu and Wei Chen
An experimental study on the dehumidification performance of a low-flow falling-film liquid desiccant air-conditioner
Saliha Bouzenada, Chris McNevin, Stephen Harrison and Abdenacer Kaabi
Definition of Heat Pump Capacity to Forecast Electricity Consumption
Dace Lauka, Julija Gusca and Dagnija Blumberga

ABMTRANS Workshop: Session S-3
Session Chair: Ansar-Ul-Haque Yasar and Luk Knapen, Hasselt University, Belgium
Room: QA038

Derivation of spatiotemporal data for cyclists (from video) to enable agent-based model calibration
Chris Osowski and Ben Waterson
Modeling Car Passenger Trips in mobiTopp
Nicolai Mallig and Peter Vortisch
Analysis of complex dataset obtained from simulator to examine the effects of wireless telephone use on driving performance
Emilio Moreno and Manuel Romana
A CA model for bidirectional pedestrian streams
Gregor Lämmel and Gunnar Flötteröd

BD2M Workshop
Session Chair: Luiz Angelo Steffenel, Université de Reims Champagne-Ardenne, France
Room: QA039

An Outlier Detect Algorithm using Big Data Processing and Internet of Things Architecture
Alberto Messias Da Costa Souza, José Roberto de Almeida Amazonas
Pattern Detection in Cyber-Physical Systems
Giandomenico Spezzano, Andrea Vinci
servIoTicy and iServe: a Scalable Platform for Mining the IoT
Alvaro Villalba, Juan Luis Pérez, David Carrera, Carlos Pedrinaci and Luca Panziera
New Security Architecture for IoT Network
Olivier Flauzac, Carlos Gonzalez and Florent Nolot
Leveraging Data Intensive Applications on a Pervasive Computing Platform: the case of MapReduce
Luiz Angelo Steffenel and Manuele Kirsch-Pinheiro
Refinement Strategies for Correlating Context and User Behavior in Pervasive Information Systems
Benedicte Le Grand, Ali Jaffal and Manuele Kirsch-Pinheiro

Thursday, June 4, 2015

Keynote III **09:00 - 10:00**

Computational and Software Engineering Issues in Multi-Agent Transport Simulations
Kai Nagel, The Technische Universität Berlin, Germany

Session Chair: Elhadi Shakshuki, Acadia University, Canada
Room: 'Howe' Lecture Theatre (QA LT080), Ground Floor, Queen Anne building

Coffee Break **10:00 - 10:30**

Room: Council Room (QA063), Ground Floor, Queen Anne Building

Technical Sessions **10:30 - 12:00**

ANT Session S-8: Modeling and Simulation in Transportation Sciences II
Session Chair: Inhi Kim, Monash University, Australia
Room: QA120

An Empirical Study on the Relationship between Urban Railway Ridership and Socio-economic Characteristics
Kwang Sub Lee, Jin Ki Eom, So Young You, Jae Hong Min and Keun Yul Yang
A simulation-based approach for constructing all-day travel chains from mobile phone data
Michael Zilske and Kai Nagel
Diary Survey Quality Assessment Using GPS Traces
Ali Raza, Luk Knapen, Katrien Declercq, Tom Bellemans, Davy Janssens and Geert Wets
An Agent Based Simulated Goods Exchange Market; A Prerequisite For Freight Transport Modeling
Omar Abed, Tom Bellemans, Gerrit K. Janssens, Davy Janssens, Ansar-Ul-Haque Yasar and Geert Wets

ANT Session S-9: Systems Security and Privacy
Session Chair: Khaled Shuaib, UAE University, Al Ain, UAE
Room: QA138

SEA: A Secure and Efficient Authentication and Authorization Architecture for IoT-Based Healthcare Using Smart Gateways
Sanaz Rahimi Moosavi, Tuan Nguyen Gia, Amirmohammad Rahmanisane, Ethiopia Nigussie, Seppo Virtanen, Jouni Isoaho and Hannu Tenhunen
Resiliency of Smart Power Meters to Common Security Attacks
Khaled Shuaib, Zouheir Trabelsi, Mohammad Abed-Hafez, Ahmed Gaouda and Mahmoud Alahmad
Secure Chaotic Map-based User Authentication and User Anonymity Scheme with Smart Cards for the Integrated EPR Information System
Chun-Ta Li, Chi-Yao Weng, Cheng-Chi Lee and Chun-Cheng Wang
Multidimensional Approach Towards a Quantitative Assessment of Security Threats
Jouini Mouna, Latifa Ben Arfa Rabai and Ridha Khedri

SEIT Session S-4
Session Chair: Mahmoud Kassas, King Fahd University of Petroleum and Minerals, Saudi Arabia
Room: QA139

Modeling and Simulation of Residential HVAC Systems Energy Consumption
Mahmoud Kassas
Mobile Persuasive Design for HEMS Adaptation
Patricia Morreale, Jeremy McAllister, Shruti Mishra and Thejasri Dowluri
Relationship between spatio-temporal electricity cost variability and e-mobility
Muhammad Usman, Jesús Fraile-Ardanuy, Luk Knapen, Tom Bellemans, Davy Janssens and Geert Wets
Modelling Domestic Lighting Energy Consumption in Romania by Integrating Consumers Behavior
Adriana Reveiu, Ion Smeureanu, Marian Dardala and Roman Kanala

ANT Session S-10: Internet of Things II
Session Chair: Pedro M. N. Martins, Imperial College London, UK
Room: QA038

LISA: Lightweight Internet of Things Service Bus Architecture
Behailu Negash, Amir-Mohammad Rahmani, Tomi Westerlund, Pasi Liljeberg and Hannu Tenhunen
Using accuracy analysis to find the best classifier for a Intelligent Personal Assistant
Ricardo Ponciano, Sebastião Pais and João Casal

Privacy in Internet of Things: A Model and Protection Framework
Afshan Samani, Hamada Ghenniwa and Abdulmutalib Wahaishi
Supporting distance vector routing over device discovery flows in the pervasive middleware PalCom
Amr Ergawy and Boris Magnusson

ABMTRANS/AgentCities Workshop: Session S-4
Session Chair: Luk Knapen, Hasselt University, Belgium and Stéphane Galland, IRTES-SET, France
Room: QA039

Parallel Reinforcement Learning for Traffic Signal Control
Patrick Mannion, Jim Duggan and Enda Howley
An Elegant and Computationally Efficient Approach for Heterogeneous Traffic Modelling using Agent Based Simulation
Amit Agarwal, Michael Zilske, K. Ramachandra Rao and Kai Nagel
Agent-Based Approach and Dynamic Graphs to Model Logistic Corridor
Thibaut Démare, Cyrille Bertelle, Antoine Dutot and Laurent Lévêque
Modelling Cities as a collection of TeraSystems – Computational challenges in Multi-Agent Approach
Mariam Kiran

Lunch 12:00 - 13:15

Room: Council Room (QA063), Ground Floor, Queen Anne Building

Technical Sessions 13:30 - 15:00

ANT Session S-11: Modeling and Simulation in Transportation Sciences III
Session Chair: Nicolai Mallig, Karlsruhe Institute of Technology, Germany
Room: QA120

Comparison of SimTraffic and VISSIM Microscopic Traffic Simulation Tools in Modeling Roundabouts
Khaled Shaaban and Inhi Kim
A data mining based method for route and freight estimation
Shoaib Bakhtyar and Johan Holmgren
Project Coordination Model
Alexander Galenko, Tonya Scheinberg and Eric Perrone
Validation of Activity-Based Travel Demand Model using Smart-Card Data in Seoul, South Korea
Sungjin Cho, Won Do Lee, Jeong Hwan Hwang, Bruno Kochan, Luk Knapen, Tom Bellemans, Keechoo Choi and Chang-Hyeon Joh

ANT Session S-12: Emerging Networking, Tracking and Sensing Technologies II
Session Chair: Wamberto Vasconcelos, University of Aberdeen, UK
Room: QA138

Effects of knowledge base quality on peer-to-peer information propagation
Michael Gibson and Wamberto Vasconcelos
Ferry-Based Data Gathering in Wireless Sensor Networks with Path Selection
Mariam Alnuaimi, Khaled Shuaib, Klaithem Alnuaimi and Mohammed Abed-Hafez
Urban Security System Based On Quadrants
Jorge Gomez, Velssy Hernandez RiaÑo and Luis Cobo
Flexible and Modular Low Power Wireless Networks
Martin Roth, Ralf Hasler, Tobias Goblirsch and Bogdan Franczyk

SEIT Session S-5
Session Chair: Adriana Reveiu, Bucharest University of Economic Studies, Romania
Room: QA139

Insights into congestion costs and financial risk management: the electricity market
Enrico Maria Mosconi, Stefano Poponi and Cecilia Silvestri
A review of optimal control techniques applied to the energy management and control of microgrids
Luis Ismael Minchala-Avila, Luis Eduardo Garza-Castañon, Adriana Vargas-Martinez and Youmin Zhang
A Review on Demand Response: Pricing, Optimization, and Appliance Scheduling
Ijaz Hussain, Sajjad Mohsin, Nadeem Javaid, Umar Qasim and Zahoor Ali Khan
An Incentive-based Optimal Energy Consumption Scheduling Algorithm for Residential Users
Ihsan Ullah, Umar Qasim, Zahoor Ali Khan, Nadeem Javaid and Sahibzada Ali Mahmud
Overload Management in Transmission System Using Particle Swarm Optimization
Muhammad Awais, Abdul Basit, Ijaz Hussain, Zahoor Ali Khan, Umar Qasim and Nadeem Javaid

ANT Session S-13: Big Data and Analytics II
Session Chair: Mariam Akbar COMSATS Institute of IT, Islamabad, Pakistan
Room: QA038

Fast Emulation of Self-Organizing Maps for Large Datasets
Macario II Cordel and Arnulfo Azcarraga
A New Middleware for Distributed Data Processing in CUBRID DBMS
Hyeong-Il Kim, Min Yoon, Munchul Choi and Jae-Woo Chang
Public Transportation Service Evaluations Utilizing Seoul Transportation Card Data
Ji-Young Song, Jin Ki Eom, Kwang Sub Lee, Jae Hong Min and Keun Yul Yang

ANT Session S-14: Service Oriented Computing for Systems & Applications
Session Chair: Karim Hammoudi, ESIGELEC School of Engineering, IRSEEM, Rouen, France
Room: QA039

Set-partition and trace based verification of Web service composition
Gopal N. Rai and Gangadharan G.R.
Decentralised Service Composition using Potential Fields in Internet of Things Applications
Elli Rapti, Anthony Karageorgos, Vassilis C. Gerogiannis
Developing vision-based and cooperative vehicular embedded systems for enhancing road monitoring services
Karim Hammoudi, Halim Benhabiles, Mohamed Kasraoui, Nabil Ajam, Fadi Dornaika, Karan Radhakrishnan, Karthik Bandi, Qing Cai and Sai Liu
Algebraic modeling and verification of Web service composition
Gopal N. Rai, Gangadharan G.R. and Vineet Padmanabhan

Coffee Break 15:00 - 15:30

Room: Council Room (QA063), Ground Floor, Queen Anne Building

Technical Sessions 15:30 - 17:30

ANT Session S-15: Agent Systems, Intelligent Computing and Applications II
Session Chair: Juan Carlos Nieves, Umea University, Sweden
Room: QA120

tATAmI: A Platform for the Development and Deployment of Agent-Based AmI Applications
Andrei Olaru, Marius-Tudor Benea, Amal El Fallah Seghrouchni and Adina Magda Florea
A Probabilistic Non-Monotonic Activity Qualifier
Juan Carlos Nieves, Saeed Partonia, Esteban Guerrero and Helena Lindgren
Policy-Carrying Data: A Step Towards Transparent Data Sharing
Julian Padget and Wamberto Vasconcelos
A Symbolic-Based Indoor Navigation System with Direction-Based Navigation Instruction
Gridaphat Sriharee
Emergent Intelligence Based QoS Routing in MANET
Suresh Chavhan and Venkataram Pallapa

ANT Session S-16: Distributed Systems, Networks and Applications II
Session Chair: Feras, Al-Obeidat, IBM, Canada
Room: QA138

Context-Aware Scheduling for Apache Hadoop over Pervasive Environments
Guilherme W. Cassales, Andrea S. Charão, Manuele Kirsch Pinheiro, Carine Souveyet and Luiz Angelo Steffenel
Calvin - Merging Cloud and IoT
Per Persson and Ola Angelsmark
ARCUN: Analytical approach towards Reliability with Cooperation for Underwater sensor Networks
Sheraz Ahmed, Nadeem Javaid, Mariam Akbar, Umar Qasim and Zahoor Ali Khan
A Distributed and Safe Weighted Clustering Algorithm for Mobile Wireless Sensor Networks
Amine Dahane, Nassreddine Berrached and Loukil Abdelhamid
Ubiquitous Tele-health System for Elderly Patients with Alzheimer's
Muhammad Wasim Raad, Tarek Sheltami and Elhadi Shakshuki

ANT Session S-17: Multimodal Interfaces/ Multimedia and Social Computing
Session Chair: Patricia Morreale, Kean University, USA
Room: QA139

Web-Adapted Supervised Segmentation to Improve a New Tactile Vision Sensory Substitution (TVSS) Technology
Waseem Safi, Fabrice Maurel, Jean-Marc Routoure, Pierre Beust, Gaël Dias
Multimodal Fusion engine for an intelligent assistance robot using Ontology
Nadia Djaid, Nadia Saadia and Amar Ramdane-Cherif
Turning leaf: eco-visualization for mobile user engagement
Patricia Morreale, Jeremy McAllister, Shruti Mishra and Thejasri Dowluri
A Multi-Population Cultural Algorithm for Community Detection in Social Networks
Pooya Moradian Zadeh and Ziad Kobti

FAMS Symposium
Session Chair: Luk Knapen, Hasselt University, Belgium
Room: QA038

Lightweight Hybrid Intrusion Detection System for Wireless Sensor Networks
Yassine Maleh, Abdellah Ezzati and Qasmaoui Youssef
Organic Interactive Displays: A Bridge from History
Sara Nabil and Atef Ghalwash
Energy-Efficient Inter-Domain Routing Protocol for MANETs
Ziane Sara and Mekki Rachida
A Study of Anonymous Delivery Based on Blind Signature Scheme
Jieling Wu and Chenglian Liu
An Adaptive Transmission Range for Electromagnetic-based Broadcasting in Nanonetworks
Olimjon Yalgashev, Mohamed Bakhouya and Jaafar Gaber
Health, Food and User's Profile Ontologies for Personalized Information Retrieval
Tarek Helmy, Ahmed Al-Nazer, Saeed Al-Bukhitan, Ali Iqbal

MCSMS Workshop
Session Chair: Elhadj Benkhelifa, Staordshire University, UK and Muhannad Quwaider, Jordan University of Science and Technology, Jordan
Room: QA039

A Secure Cloud Computing Model based on Data Classification
Loai Tawalbeh, Raad Al-Qassas, Nour Darwazeh and Fahd Aldosari
Issues in adopting Agile Development Principles for Mobile Cloud Computing Applications
Fahad Almudarra and Basit Qureshi
Experimental Framework for Mobile Cloud Computing System
Muhannad Quwaider, Yaser Jararweh and Mahmoud Al-Ayyoub
User Profiling for Energy Optimisation in Mobile Cloud Computing
Elhadj Benkhelifa, Thomas Welsh, Loai Tawalbeh, Yaser Jararweh and Anas Mohammad Basalamah
Verification of Smart Sensory Systems on Cloud Computing Frameworks
Mohammed Al Zamil
A Data Predication Model for Integrating Wireless Sensor Networks and Cloud Computing
Samer Samarah

Old English Bus Tour 18:00-19:00

Social Evening - Ask for details from reception

Banquet and Award Ceremony 19:00-22:00

Restaurant in Downtown London - English Curry

Friday, June 5, 2015

Technical Sessions 08:30 – 10:00

ANT Session S-18: Vehicular Networks and Protocols
Session Chair: Soumaya Cherkaoui, Universite de Sherbrooke, Canada
Room: QA120

Investigating the Use of Message Reneging in Multi-hop 802.11p VANETs
Omar Chakroun and Soumaya Cherkaoui
Doppler Shift Mitigation in a VANET using an IDDM approach
Etienne Alain Feukeu, Karim Djouani and Anish Kurien
A Study on Lane Operation Restriction (LOR) Policy at On-Ramps Junctions
H. Joon Park and Roger Roess
Cluster connectivity assurance metrics in vehicular ad hoc network
Mohamed Aissa and Abdelfettah Belghith

ANT Session S-19: Cloud Computing
Session Chair: Muhammad Raza, Dalhousie University Canada
Room: QA139

Towards the Certification of Covert Channel Freeness in Cloud-Based Systems
Jason Jaskolka and Ridha Khedri
A Novel Approach for Improving Security and Storage Efficiency on HDFS
Yannan Ma, Yu Zhou, Yao Yu, Chenglei Peng, Ziqiang Wang and Sidan Du
A Signature-based Data Authentication Method with Bitmap-based Transformed Data in Database Outsourcing
Miyoung Jang, Min Yoon, Youngho Song and Jae-Woo Chang
A contactless identification system based on hand shape features
Ana M. Bernardos, Jose María Sánchez, Javier Ignacio Portillo, Juan Besada and Jose Casar

ANT Session S-20: Mobile Networks, Protocols and Applications/Autonomic Networks and Communications
Session Chair: Mohamed Othman, Universiti Putra Malaysia, Malaysia
Room: QA139

Energy Efficient Partition-Lightpath Scheme for IP over WDM Core Networks
Mohd Nazri Bin Mohd Warip, Ivan Andonovic, Ivan Glesk, R. Badlishah Ahmad, Phaklen Ehkan, Latifah Munirah Kamarudin and Mohamed Elshaikh Elobaid Said Ahmed
An Enhanced Mobility State Estimation Based Handover Optimization Algorithm in LTE-A Self-organizing Network
Shiwen Nie, Di Wu, Ming Zhao, Xinyu Gu, Lin Zhang and Liyang Lu
Reliable and Energy Efficient Incremental Cooperative Communication for WBANs
Sidrah Yousuf, Zahoor Ali Khan, Umar Qasim, Muhammad Imran, Nadeem Javaid and Mohsin Iftikhar
Adopting Acknowledgment Bitmap as an implicit indicator of the IEEE802.11n wireless network state
Anwar Saif and Mohamed Othman
Simulation of Bi-static Radar System Based on Reflected GPS L5 signals
Salma Sakhawat, Muhammad Usman, Basharat Mahmood and Nadeem Javaid
AEDG: AUV-aided Efficient Data Gathering Routing Protocol for Underwater Wireless Sensor Networks
Naveed Ilyas, Zahoor Ali Khan, Umar Qasim, Turki Ali Alghamdi and Nadeem Javaid

IUPT Workshop
Session Chair: Elhadi Shakshuki, Acadia University, Canada
Room: QA038

Measuring a distance between Things with improved accuracy
Hosik Cho, Jianxun Ji, Zili Chen, Hyuncheol Park, Wonsuk Lee
Smart City Architecture and its Applications based on Future Internet of Things (IOT)
Aditya Gaur, Bryan Scotney, Gerard Parr, Sally McClean
Constructing Context-centric Data Objects to Enhance Logical Associations for IoT Entities
Bin Xiao, Theo Kanter and Rahim Rahmani
Mobility Management for sensor networks
Amel Achour, Laurent Deru and Jean-Christophe Deprez
Lifetime Bounds of Wi-Fi Enabled Sensor Nodes
Martin Bor, Alex King, Utz Roedig

MLDM-SN Workshop
Session Chair: Feras, Al-Obeidat, IBM, Canada
Room: QA039

Embedded Transient Shock Signal Storage Test Technique under High Overload
Zhang Yi, Zhang Rong, Zhou Jikun, Chen Ying
Research on the Artillery Shell Motion Parameters Automatic Detection Technology Based on Image Processing
Zhang Rong,Zhang Yi,Zhou Jikun,Huang Haiying
Ontology model for wellness contents recommendation based on risk ratio EM
Yuchae Jung, Yongik Yoon
A Framework for Distributed Cleaning of Data Streams
Saul Gill, Brian Lee
A Fuzzy Decision Tree for Processing Satellite Images and Landsat Data
Feras Al-Obeidat, Ahmad T. Al-Taani, Nabil Belacel, Leo Feltrin, Neil Banerjee

Coffee Break 10:00 – 10:30

Room: Council Room (QA063), Ground Floor, Queen Anne Building

Technical Sessions 10:30 – 12:00

ANT Session S-21: Internet of Things III
Session Chair: El-Sayed M. El-Alfy, KFUPM, Saudi Arabia
Room: QA120

Computations on the Edge in the Internet of Things
Andreas Moregård Haubenwaller and Konstantinos Vandikas
Probabilistic Prediction based Scheduling for Delay Sensitive Traffic in Internet of Things
Reema Sharma, Navin Kumar, Namratha Bg and Srinivas T
Analysis on Effect of Adopting Green SLA on Optical WDM Networks
Yashar Fazili, Alireza Nafarieh, Muhammad Raza, Bill Robertson and William J. Phillips
Anonymous connections based on onion routing: A review and visualization tool
El-Sayed M. El-Alfy

IWSRON/ BASNet Workshops
Session Chair: Muhammad Raza and Ali Nafarieh, Dalhousie University Canada
Room: QA138

The Slow Adoption of Cloud Computing and the Lack of Trained IT Workforce
Muhammad Raza, Adenola Femi, Ali Nafarieh, and William Robertson
Application of Network Tomography in Load Balancing
Muhammad Raza, Ali Nafarieh, and William Robertson
Stream processing of healthcare sensor data: studying user traces to identify challenges from a big data perspective
Rudyar Cort´es, Xavier Bonnaire, Olivier Marin, and Pierre Sens

WTISG Workshop
Session Chair: Wei Chen, Wuhan University of Technology, China
Room: QA038

ZigBee Technology Applicationin Wireless Communication Mesh Networkof Ice Disaster
Zefeng Yi, Chengzhi Wang, Hui Hou, Zhaoyang Dong, Zeyan Lv, Pengyu Wang, Xiongkai He
Survey on Application of Wireless Sensor Network in Smart grid
Pengyu Wang, Hui Hou, Chengzhi Wang, Zhaoyang Dong, Zefeng Yi, Tianqi Xu, Yan Li
The Effect of Three-Phase Voltage Imbalance at PCC on Solar Panel Output Power
Tianqi Xu, Yan Li, Jishu Pan, Yanbo Jiang, Hui Hou

END of Event