Welcome to

ANT 2017
The 8th International Conference on Ambient Systems, Networks and Technologies

SEIT 2017
The 7th International Conference on Sustainable Energy Information Technology

May 16 – 19, 2017
Madeira, Portugal

With support of

IPN Instituto Pedro Nunes (Portugal)
Acadia University (Canada) & Hasselt University (Belgium)

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ANT / SEIT 2017
SYMPOSIA AND WORKSHOPS

ANT	The 8th International Conference on Ambient Systems, Networks and Technologies
SEIT	The 7th International Conference on Sustainable Energy Information Technology
ABMTRANS	The 6th International Workshop on Agent-based Mobility, Traffic and Transportation Models, Methodologies and Applications
ANTIFRAGILE	The 4th International Workshop "From Dependable to Resilient, from Resilient to Antifragile Ambients and Systems"
FAMS	The 7th International Symposium on Frontiers in Ambient and Mobile Systems
IUPT	The 7th International Symposium on Internet of Ubiquitous and Pervasive Things
MLDM-SN	The 4th International Workshop on Machine Learning and Data Mining for Sensor Networks
PEHT	International Workshop on Piezoelectric-Based Energy Harvesting Technology
RAMCOM	The 3rd International Workshop on Recent Advances on Machine-to-Machine Communication
SARL	International Workshop on Agent-based Modeling and Applications with SARL
THPC	The 3rd International Workshop on Tasks on High Performance Computing
WAT	International Workshop on Adaptive Technology
WTISG	The 3rd International Workshop on Wireless Technology Innovations in Smart Grid

PROGRAM AT A GLANCE

ANT 2017, SEIT 2017 and Workshops
Program Time Slots

Timing		TUESDAY 16 May 2017						
16:00-18:00		*Registration*	*Registration Room*					
			ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5	ROOM 6
			Clube de Campo A	Clube de Campo B	Clube de Campo C	Albacora A	Albacora B	Albacora C

Timing		Wednesday 17 May 2017						
08:00-12:00		*Registration*	*Registration Room*					
08:45-10:00		Opening Ceremony and Keynote Speaker I	*Ericeira ROOM* **Javier Sanchez-Medina**					
10:00-10:25		**Coffee Break**	*Coffee Room / Foyer*					
10:30-12:00		Technical Sessions (1)	ANT-S1	ANT-S2	SEIT-S1	SCE-S1	WAT-1	ANT-S3
12:00-13:25		**LUNCH**	*Lunch Room (Restaurant)*					
13:30-15:00		Technical Sessions (2)	ANT-S4	ANT-S5	SEIT-S2	SCE-S2	WAT-2	ANT-S6
15:00-15:25		**Coffee Break**	*Coffee Room / Foyer*					
15:30-17:00		Technical Sessions (3)	ANT-S7	ANT-S8	SEIT-S3	FAMS-S1	WAT-3	ANT-S9
17:00-19:00			MATSim					

Timing		Thursday 18 May 2017						
			Ericeira ROOM					
09:00-10:00		*Keynote Speaker II*	**Carlos Lisboa Bento**					
10:00-10:25		**Coffee Break**	*Coffee Room / Foyer*					
10:30-12:00		Technical Sessions (4)	ANT-S10	ANT-S11	SEIT-S4	FAMS-S2	SARL	ANT-S12
12:00-13:25		**LUNCH**	*Lunch Room (Restaurant)*					
13:30-15:00		Technical Sessions (5)	ANT-S13	ANT-S14	FAMS-S3	FAMS-S4	ABMTRANS-S1	ANT-S15
15:00-15:25		**Coffee Break**	*Coffee Room / Foyer*					
15:30-17:00		Technical Sessions (6)	ANT-S16	ANT-S17	SEIT-S5	AIMRT	ABMTRANS-S2	ANT-S18
17:00-19:00								
19:00-21:00		Banquet and Award Ceremony	**Banquet ROOM**					

Timing		FRIDAY 19 May 2017						
08:30-10:00		Technical Sessions (7)	ANT-S19	ANT-S20			ABMTRANS-S3	ANT-S21
10:00-10:25		**Coffee Break**	*Coffee Room / Foyer*					
10:30-12:00		Technical Sessions (8)	ANT-S22	ANT-S23			ABMTRANS-S4	
12:00-14:00			**Complimentary City Tour**					
			End of Event					

KEYNOTE I

Using Opportunistic Data to Improve Urban Performance

Dr. Carlos Lisboa Bento
University of Coimbra, Portugal

Abstract:

Urban areas are at the center of modern global economy. Today more than half of the global population lives and works in cities and is responsible for around 80% of the global economy. The United Nations Environment Program estimates that cities are responsible for 75% of total CO2 emissions. Research on human activities, land use and mobility choice modeling, supported on opportunistic sensing, promises to contribute to improve these figures, add resilience, attractiveness and liveability, increasing quality of living in urban areas.

The development that occurred in the last years on deployment of sensor networks, the use of social platforms and smartphones, opened the way to large quantities of crowd-sourced and open data and the opportunity to understand cities as real-time control systems in which the human element is not a mere actuator. These sources of data also transform the web into a huge opportunistic sensor network.

At the University of Coimbra, our research addresses machine learning and data analysis on opportunistic sensor data to model and act on the urban space with the goal of increasing quality of living in the urban space. With this motivation in mind we develop research on understanding people activities and land use from the semantic enrichment of points of interest (POIs); analysis of data from telecom operators and taxis for sustainable mobility; exploration of new visualization methods for analysis and monitoring of the city dynamics. We coordinate two large projects gathering 53 research institutes and enterprises for the development of a platform of services for the sustainable city.

In this talk we will go through these research projects, the main research questions they address, and the contributions for a more efficient use of urban infrastructures, and energy resources to improve urban performance.

About the Speaker:

Dr. Carlos Lisboa Bento, is a professor with habilitation at the University of Coimbra (www.uc.pt). His recent research addressed the use of data from taxis, ticketing, mobile communications and other heterogeneous sources for analysis and modeling of Social Life and Mobility in Urban Areas. These studies and research resulted into use cases in various metropolitan areas in Portugal. It also provided an innovative approach to understand mobility demand and supply in Senegal. He regularly collaborates with various international institutions, namely: MIT Senseable City Lab, Technical University of Delft, Amsterdam Metropolitan Studies Institute and Chiang May University.

He is the Director of the Ambient Intelligence Lab (AmILab) at CISUC, a research group that he founded in 2004. He is also the Director of the Laboratory on Informatics and Systems at Instituto Pedro Nunes (www.ipn.pt).

He coordinates and participates in various national and international projects, particularly within the MIT Portugal Program (projects citymotion and suscity), and the SOUL-FI initiative in FIWARE program (www.fiware.org). This program has a budget of 80M€ for SMEs and entrepreneurs developing for the Future Internet and has a track on optimization of urban life with future Internet.

KEYNOTE II

Data Stream Mining Applied to Intelligent Transportation Systems

Dr. Javier Sanchez-Medina
University of Las Palmas de Gran Canaria, Spain

Abstract:

Data mining or Knowledge Discovery in Databases is becoming a very active field. Many different organisations perceive the tremendous potential that lies within the massive amounts of data available deep down in their databases. That precious golden knowledge is waiting to be pumped out in the form of models, predictors, summaries, profiles, association rules and more. This would be a happy ending if we stopped here. However, the problem is that the data production volume is increasing exponentially, challenging the most advanced big data architectures and storage capacities. To this point, many researchers and practitioners are proposing different approaches. Instead of, or apart from storing all data produced, there should be imaginative ways of extracting useful knowledge right where/when such data is being collected. Instead of fishing in enormous ponds, it should be feasible to catch the fish as they arrive. However, most of the foundations of Data mining sit over the assumption of a large, complete enough dataset to substantiate accurate models, assuming stability on the "concepts" to be modelled. Data Stream Mining instead assumes a more realistic approach, where that "concepts" may change ("drift") with time. Therefore, a brand new race of learners, able to follow their "concept drift", is needed.

Intelligent Transportation Systems (ITS) is a field of Engineering focused on the application of Computer Science, Communications and others to make transportation more efficient, safe and environmentally friendly. Most of these systems are intrinsically dynamic and therefore susceptible of real-time managing, modelling and optimisation. In this talk, I will discuss how many applications are a perfect target for Data Stream Mining in ITS. I will also explore present and future applications, paying careful attention to the Threats and Opportunities of this new way of Knowledge Discovery in another dramatically evolving field like ITS.

About the Speaker:

Dr. Javier Sanchez-Medina is currently a Professor in the Computer Science Department at the University of Las Palmas de Gran Canaria (ULPGC), Spain. Dr. Sanchez-Medina earned his Engineering Master's Degree at the Telecommunications Faculty in 2002, and his PhD at the Computer Science Department in 2008.

His research interests mainly include the application of Evolutionary Computation, Data mining and Parallel Computing to Intelligent Transportation Systems. He has significant experience in the development of traffic models and simulation platforms.

Dr. Sanchez-Medina has been volunteering for several years at many international conferences related to Intelligent Transportation, Computer Science, Evolutionary Computation, etc. He is also very active as a volunteer in the IEEE ITS Society. Since 2010, he has served the IEEE ITS Society as an organizer of the TBMO 2010 Workshop at ITSC2010, co-organizer of the "Travel Behavior Research: Bounded Rationality and Behavioral Response" Special Session at ITSC2011. He also served as the Publications Chair of the IEEE FISTS2011, Registration Chair of the IEEE ITSC2012, Workshops and Tutorials Chair of the IEEE ITSC 2013, Panels Chair of the IEEE VTC2013-Fall, Program co-Chair of the IEEE ITSC2014, Program co-chair of the IEEE ITSC2016 and General Chair of the IEEE ITSC2015. Currently, he is also the Editor-in-Chief of the ITS Podcast, the ITS Newsletter and Vice-president of the IEEE ITSS's Spanish chapter.

DETAILED PROGRAM

Tuesday, May 16, 2017

Registration **16:00-18:00**

Location: Registration Location

Wednesday, May 17, 2017

Registration **08:00 – 12:00**

Location: Registration Location

Opening **08:45 - 09:00**

Opening Ceremony
Location: Plenary Room

Keynote I **09:00 - 10:00**

Data Stream Mining Applied to Intelligent Transportation Systems
Javier Sanchez-Medina, University of Las Palmas de Gran Canaria, Spain

Session Chair: Haroon Malik, Marshall University, USA
Location: Ericeira Room

Coffee Break **10:00 - 10:25**

Location: Coffee Room / Foyer

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

ANT Session (ANT-S1): Modeling and Simulation in Transportation Sciences I
Session Chair: Javier J. Sanchez Medina, ULPGC, Spain
Location: Room 1

Methodology for identifying activities from GPS data streams
Vlad Usyukov
Agent-based modelling of Pedestrian Illegal Crossing Behavior
Khaled Shaaban and Karim Abdel-Warith
The Effect of Travel Time Information, Reliability, and Level of Service on Driver Behavior Using a Driving Simulator
Zohreh Rashidi Moghaddam and Mansoureh Jeihani
GTFS Bus Stop Mapping to the OSM Network
Jan Vuurstaek, Glenn Cich, Luk Knapen, Ansar-Ul-Haque Yasar, Tom Bellemans and Davy Janssens

ANT Session (ANT-S2): Internet of Things I
Session Chair: Carlos Lisboa Bento, University of Coimbra, Portugal
Location: Room 2

IoT for Environmental Variables in Urban Areas
Jorge Gomez, Fabricio Marcillo, Freddy Triana, Victor Gallo, Byron Oviedo and Velssy Hernández
Indoor Localisation of Wireless Sensor Nodes Towards Internet of Things
Prosper Sotenga, Karim Djouani, Anish Kurien and Martin Mwila
Analysis of CoAP Implementations for Industrial Internet of Things: A Survey
Markel Iglesias, Adrián Orive and Aitor Urbieta
Combining of NFC, BLE and Physical Web Technologies for Objects Authentication on IoT Scenarios
Irene Luque Ruiz and Miguel Ángel Gómez-Nieto

SEIT Session: SEIT-S1
Session Chair: Jesus Fraile Ardanuy, UPM, Spain
Location: Room 3

Conceptualization of smart solutions in oil and gas industry
Yury Redutskiy
Holism, collective intelligence, climate change and sustainable cities
Monika Dos Santos
Energetic Investigation of Organic Rankine Cycles (ORCs) for the Exploitation of Low-Temperature Geothermal Sources – A possible application in Slovakia
Angelo Algieri and Juraj Šebo

SCE Workshop: SCE-S1
Session Chair: Olga Ormandjieva, Concordia University, Canada
Location: Room 4

Architecture for embedded software in microcontrollers for Internet of Things (IoT) in fog water collection
Hugo Ordoñes and Armando Ordoñez
BusMe: Automatic Bus Localization System and Route Registration
Willian Miranda, Allef Silva, Ricardo Mendonça, André Curvello, Henrique Silva and Flávio Souza
A flood warning system to critical region
Alisson Silva Souza, Andre Marcio L. Curvello, Flavio Luiz S. Santos and Henrique J. Silva
Cyber Security Attacks on Smart Cities and Associated Mobile Technologies
Anwar Dairi and Lo'Ai Tawalbeh

WAT Workshop: WAT-S1
Session Chair: Ítalo Santiago Vega, Pontifical Catholic University of São Paulo, Brazil and João José Neto, University of São Paulo, Brazil
Location: Room 5

Hierarchical Design of Adaptive Automata Models
Ricardo Luis De Azevedo Da Rocha
An Adaptive Implementation of epsilon-Greedy in Reinforcement Learning
Alexandre Dos Santos Mignon and Ricardo Luis De Azevedo Da Rocha
Adaptive Automata Applied to Natural Language Processing
Djalma Padovani and Joao Jose Neto

ANT Session (ANT-S3): Vehicular Networks and Applications
Session Chair: K. Vidyasankar, Memorial University, Canada
Location: Room 6

DBSMA Approach for Congestion Mitigation in VANETs
Etienne Alain Feukeu and Tranos Zuva
ResVMAC: A Novel Medium Access Control protocol for Vehicular Ad hoc Networks
Md. Kowsar Hossain, Suprakash Datta, Sk Imran Hossain and Jeff Edmonds
An Automotive Signal-Layer Security and Trust-Boundary Identification Approach
Georg Macher, Harald Sporer, Eugen Brenner and Christian Kreiner
Vulnerability in Transport Network during Critical Infrastructure Renewal: Lessons Learned from a Dynamic Traffic Microsimulation Model
Md Jahedul Alam, Muhammad Ahsanul Habib and Kevin Quigley

Lunch **12:00 - 13:25**

Location: Lunch Room

Technical Sessions 13:30 - 15:00

ANT Session (ANT-S4): Modeling and Simulation in Transportation Sciences II
Session Chair: Luk Knapen, Hasselt University, Belgium
Location: Room 1

Triangular intuitionistic fuzzy number theory for driver-pedestrians interactions and risk exposure modeling
Mandar Meriem, Karim Lamia, Boulmakoul Azedine and Ahmed Lbath
Dynaski, an agent-based model to simulate skiers in a ski-area
Alexis Poulhes and Paul Mirial
Economic Impact on Surrounding Businesses due to Bridge Construction
Funda Yavuz, Upul Attanayake and Haluk Aktan
Evaluation of Large Signalized Intersection with New Pedestrians Twice Crossing
Chaoqun Song, Inhi Kim and Qiaojun Xiang

ANT Session (ANT-S5): Emerging Networking, Tracking and Sensing Technologies I
Session Chair: Stephane Galland, UTBM, France
Location: Room 2

Curved - free-form interaction using capacitive proximity sensors
Andreas Braun, Sebastian Zander-Walz, Martin Majewski and Arjan Kuijper
UltraSense: A Self-Calibrating Ultrasound-Based Room Occupancy Sensing System
Abbass Hammoud, Michel Deriaz and Dimitri Konstantas
A Design of Self-biased Cross Coupled Rectifier with Integrated Dual Threshold Voltage for RF Energy Harvesting Application
Mark Eric Andam, Charlene Mae Canja and Mycel A. Capilayan
On the design of coding framework for energy efficient and reliable multi-hop sensor networks
Imad Ez-Zazi, Mounir Arioua and Ahmed El Oualkadi

SEIT Session: SEIT-S2
Session Chair: Monika dos Santos, University of South Africa, South Africa
Location: Room 3

Connecting small, private & independent hydro power plants to increase the overall power generating efficiency
Markus Jäger and Josef Kueng
Coupling High Resonant Frequency Piezoelectrics to Human-Scale Frequencies for Energy Harvesting
Euiyoung Park, Ilan Stern and Nazanin Bassiri-Gharb
Effects of tooth-crack-induced mesh stiffness on fault signals of a planetary gear train
Xianzeng Liu, Yuhu Yang and Jun Zhang

SCE Workshop: SCE-S2
Session Chair: Michal Maciejewski, Poznan University of Technology, Poland
Location: Room 4

Beacon-based context-aware architecture for crowd sensing public transportation scheduling and user habits
Danilo Cianciulli, Gerardo Canfora and Eugenio Zimeo
Quality of Service requirements and Challenges in Generic WSN infrastructures
Loai Tawalbeh, Sonia Hashish and Hala Tawalbeh
Enabling Next Generation Logistics and Planning for Smart Societies
Sugimiyanto Suma, Rashid Mehmood, Nasser Albugami, Iyad Katib and Aiiad Albeshri
Enabling Smarter Societies through Mobile Big Data Fogs and Clouds
Yasir Arafat, Muhammad Aqib, Rashid Mehmood, Nasser Albogami, Aiiad Albeshri and Iyad Katib

WAT Workshop: WAT-S2
Session Chair: Ítalo Santiago Vega, Pontifical Catholic University of São Paulo, Brazil and João José Neto, University of São Paulo, Brazil
Location: Room 5

A middleware architecture for adaptive devices
Paulo Roberto Massa Cereda and João José Neto
DInAton: A Didactic and Interative Language for Learning Adaptive Automata by Construction
Italo Vega, João Neto and Francisco Marcondes
Adaptive traffic signal control based on bio-neural network
Guilherme Castro, André Hirakawa and José Martini

ANT Session (ANT-S6): Distributed Systems, Networks and Applications
Session Chair: K. Vidyasankar, Memorial University, Canada
Location: Room 6

Route selection algorithms utilizing the property of the ZDD for compressed sensing-based transmissive network tomography
Shinsuke Hara and Teruhito Naka
API mashups: How well do they support the travellers' information needs?
Bill Karakostas and Zannis Kalamboukis
Sparse Data Recovery using Optimized Orthogonal Matching Pursuit for WSNs
Vishal Krishna Singh, Ankur Kumar Rai and Manish Kumar
Planning for Heterogeneous IoT with Time Guaranties
José Cecílio, Pedro Martins and Pedro Furtado

Coffee Break 1500 - 15:25

Location: Coffee Room / Foyer

Technical Sessions 15:30 - 17:00

ANT Session (ANT-S7): Modeling and Simulation in Transportation Sciences III
Session Chair: Eran Ben-Elia, BGU, Israel
Location: Room 1

Safest and shortest itineraries for transporting hazardous materials using split points of Voronoï spatial diagrams based on spatial modeling of vulnerable zones
Aziz Mabrouk, Azedine Boulmakoul, Lamia Karim and Ahmed Lbath
Galois's algebraic structure and bipartite graph spatio-structural analytics for urban public transportation system assessment
Badredine Boulmakoul, Zineb Besri, Lamia Karim, Azedine Boulmakoul and Ahmed Lbath
Enumerating minimum path decompositions to support route choice set generation
Irith Hartman, Luk Knapen and Tom Bellemans

ANT Session (ANT-S8): Cloud Computing
Session Chair: Bill Karakostas, VLTN GCV, Belgium
Location: Room 2

Cloudification of my.eskwela for e-Governance in Philippine Education
Orven Llantos
Data Replica Placement Mechanism for Open Heterogeneous Storage Systems
Xiaolong Xu, Chunchun Yang and Jun Shao
On Participatory Service Provision at the Network Edge with Community Home Gateways
Felix Freitag and Amin Khan
Performance Evaluation of Virtual Identity Approaches for Anonymous Communication in Distributed Environments
Ibrahim Gomaa, Adel Mounir, Emad Abd-Elrahman, Alaa Hamdy and Elsayed M. Saad
Design of Cloud Monitoring Systems via DAGGTAX: a Case Study
Simin Cai, Barbara Gallina, Dag Nyström, Cristina Seceleanu and Alf Larsson

SEIT Session: SEIT-S3
Session Chair: Feras Al-Obeidat, Zayed University, UAE
Location: Room 3

Algorithm development for night charging electric vehicles optimization in big data applications
Roberto Alvaro-Hermana, Jesus Fraile-Ardanuy and Julia Merino
Type Synthesis of Gear-box in Wind Turbine
Jun Qiu, Boxing Liu, Huimin Dong and Delun Wang
Experimental investigation on vapor pressure of desiccant for air conditioning application
Saliha Bouzenada, Laurent Frainkin and Angélique Léonard

FAMS Symposium: FAMS-S1
Session Chair: Carlos Lisboa Bento, University of Coimbra, Portugal
Location: Room 4

Smart-X: an Adaptive Multi-Agent Platform for Smart-Topics
Jocelyn Aubert, Christophe Feltus, Andrea Kostakis and Djamel Khadraoui
Towards Agent Based Modeling for Mobility Behavior Shift
Samar El-Amine, Stéphane Galland, Ansar-Ul-Haque Yasar, Abderraffiaa Koukam
Multimodal System for Fall Detection and Location of person in an Intelligent Habitat
Amina Makhlouf, Nadia Saadia and Amar Ramdane-Cherif.
Integrity constraints in graph databases
Jaroslav Pokorný, Michal Valenta and Jiří Kovačič

WAT Workshop: WAT-S3
Session Chair: Ítalo Santiago Vega, Pontifical Catholic University of São Paulo, Brazil and João José Neto, University of São Paulo, Brazil
Location: Room 5

Towards performance-focused implementations of adaptive devices
Paulo Roberto Massa Cereda and João José Neto.
On the adaptive instantiation of type-specific collections
Bruno Sofiato and Ricardo Luis De Azevedo Da Rocha.
Learning Decision Rules using Adaptive Technologies: A Hybrid Approach Based to Sequential Covering
Renata L. Stange and João J. Neto.

ANT Session (ANT-S9): Internet of Things II
Session Chair: Olga Ormandjieva, Concordia University, Canada
Location: Room 6

An IoT-based continuous glucose monitoring system: A feasibility study
Tuan Nguyen Gia, Mai Ali, Imed Ben Dhaou, Amir M. Rahmani, Tomi Westerlund, Pasi Liljeberg, Hannu Tenhunen
Multi-Modal Context-Aware reasoNer (CAN) at the Edge of IoT
Hasibur Rahman, Rahim Rahmani and Theo Kanter
DoS-IL: A Domain Specific Internet of Things Language for Resource Constrained Devices
Behailu Shiferaw Negash, Tomi Westerlund, Pasi Liljeberg, Amir M. Rahmani and Hannu Tenhunen
Design and implementation of an IoT gateway to create smart environments
André Glória, Francisco Cercas and Nuno Souto
On Continuous Queries in Stream Processing
Krishnamurthy Vidyasankar

Tutorial Session 17:00 - 19:00

MATSim Tutorial
Managed by: Dominik Ziemke and Theresa Thunig, TU Berlin, Germany
Location: Room 1

Thursday, May 18, 2017

Keynote II **09:00 - 10:00**

Using Opportunistic Data to Improve Urban Performance
Carlos Lisboa Bento, University of Coimbra, Portugal

Session Chair: Ansar-Ul-Haque Yasar, IMOB – Hasselt University, Belgium
Location: Ericeira Room

Coffee Break **10:00 - 10:25**

Location: Coffee Room / Foyer

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

ANT Session (ANT-S10): Modeling and Simulation in Transportation Sciences IV
Session Chair: Manish Kumar, IIITA, India
Location: Room 1

An extended TAPAS-Z model and a case study of the transport of forest products
Johan Holmgren and Linda Ramstedt
Robust routing based on urban traffic congestion patterns
Karim Lamia, Daissaoui Abdellah and Boulmakoul Azedine
Zipf's power law in activity schedules and the effect of aggregation
Wim Ectors, Bruno Kochan, Davy Janssens, Tom Bellemans and Geert Wets

ANT Session (ANT-S11): Big Data and Analytics
Session Chair: Nafaa Jabeur, GUTech Oman
Location: Room 2

Deploying Real Time Big Data Analytics in Cloud Ecosystem for Hazmat Stochastic Risk Trajectories
Lamia Karim, Azedine Boulmakoul, Aziz Mabrouk and Ahmed Lbath
Automating the Extraction of Static Content and Dynamic Behaviour from e-Commerce Websites
João Pedro Dias and Hugo Sereno Ferreira
Hidden content of passenger data in public transport
Viktor Nagy and Balázs Horváth
STEAM: A Platform for Scalable Spatiotemporal Analytics
Bersant Deva, Philip Raschke, Sandro Rodriguez Garzon and Axel Küpper

SEIT/PEHT Session: SEIT-S4
Session Chair: Michal Maciejewski, Poznan University of Technology, Poland
Location: Room 3

Ordering Sensors in Smart Buildings for Cost and Benefit Analysis
Bruce Spencer, Feras Al-Obeidat and Omar Alfandi
Dynamic characteristics of gear box with PGT for wind turbine
Huimin Dong, Chu Zhang, Delun Wang, Shangkun Xu and Jun Qiu
Modeling and Characterization of a Curved Piezoelectric Energy Harvester for Smart Paver Tiles
Bharat Kathpalia, David Tan, Ilan Stern, Alper Erturk

FAMS Symposium: FAMS-S2
Session Chair: Suprakash Datta, York University, Canada
Location: Room 4

Control Flow Ambiguous-Type Inter-Procedural Semantic Analysis for Dynamic Language Compilation
Jakub Misek and Filip Zavoral
Real-Time HazMat Environmental Information System: A micro-service based architecture
Ghyzlane Cherradi, Adil El Bouziri, Azedine Boulmakoul and Karine Zeitouni
A Context Broker for Better Access to Quality and Cost-Effective Healthcare
Christophe Boris Tokpo Ovengalt, Karim Djouani and Anish Matthew Kurien
A Fast Genetic based Evacuation Plan Generator
Alaa Al Qhtani, Alaa Al Shammari and Heba Kurdi

SARL Workshop
Session Chair: Stephane Galland, UTBM, France
Location: Room 5

Building a HARMS Implementation Model Using SARL
Eric Matson
Modeling Demand Responsive Transport using SARL and MATSim
Glenn Cich, Luk Knapen, Michał Maciejewski, Ansar-Ul-Haque Yasar, Tom Bellemans and Davy Janssens
First Comparison of SARL to Other Agent-Programming Languages and Frameworks
Maxime Feraud and Stéphane Galland

ANT Session (ANT-S12): Distributed Systems, Networks and Applications I
Session Chair: Mansoureh Jeihani, Morgan State University, USA
Location: Room 6

Aegis: Reliable Application Execution Over the Mobile Cloud
Shubhabrata Sen and Jorn W Janneck
Adaptive Goal Selection for improving Situation Awareness: the Fleet Management case study
Giuseppe D'Aniello, Vincenzo Loia and Francesco Orciuoli
Future Impacts of the Reforestation Policy on the amospheric parameters: a sensitivity study over Ireland
Arianna Valmassoi, Salem Gharbia, Santa Stibe, Silvana Di Sabatino and Francesco Pilla
Semantic-based Approach to Context Management in Ubiquitous Environment
Ahmed Bali and Abdelouahed Gherbi

Lunch 12:00 - 13:25

Location: Lunch Room

Technical Sessions 13:30 - 15:00

ANT Session (ANT-S13): Modeling and Simulation in Transportation Sciences V
Session Chair: Stephane Galland, UTBM, France
Location: Room 1

Analysis of the Effects of Lane-Drops on the Traffic Conditions near Bus Stops using Bus GPS Data
Ilgin Gokasar and Yigit Cetinel
Adaptive Traffic Signal Control : Exploring Reward Definition For Reinforcement Learning
Saad Touhbi, Mohamed Ait Babram, Tri Nguyen-Huu, Nicolas Marilleau, Moulay L. Hbid, Christophe Cambier and Serge Stinckwich
A new time-dependent shortest path algorithm for multimodal transportation network
Abdelfattah Idri, Mariyem Oukarfi, Azedine Boulmakoul and Karine Zeitouni

ANT Session (ANT-S14): Emerging Networking, Tracking and Sensing Technologies II
Session Chair: Latifa Rabai, University of Tunis, Tunis
Location: Room 2

Investigating Security for Ubiquitous Sensor Networks
Alfredo Perez, Sherali Zeadally and Nafaa Jabeur
Reputation evaluation of georeferenced data for crowd-sensed applications
Marco Gusmini, Nafaa Jabeur, Roula Karam, Michele Melchiori and Chiara Renso
Towards a Three-Level Framework for IoT Redundancy Control through an Explicit Spatio-Temporal Data Model
Hedi Haddad, Zied Bouyahia and Nafaa Jabeur
Toward Leveraging Smart Logistics Collaboration with a Multi-Agent System Based Solution
Mohamed Mbarki, Taiseera Al-Belushi and Hana Gharrad

FAMS Symposium: FAMS-S3
Session Chair: Haroon Malik, Marshall University USA
Location: Room 3

A Semantic Web Service Architecture for Supply Chain Management
Kamalendu Pal
The analysis of advantages and disadvantages of use of social media in European Union
Martina Drahošová and Peter Balco
Concept of Dynamic Advertisement Composition Model Tailored to Customer Needs Based on Interactive Customer Input
Monika Davidekova and Michal Gregus
Cloud market analysis from customer perspective
Peter Balco, Jehuda Law and Martina Drahošová

FAMS Symposium: FAMS-S4
Session Chair: Stephane Galland, UTBM France
Location: Room 4

Toward a Framework Using Recurrent Neuron Network - Long Short Term Memory for Mood Prediction in Daily Context
Hoang Huu Son
Snapchat Analysis to Discover Digital Forensic Artifacts on Android Smartphone
Tadani Alyahya and Firdous Kausar
Impact of Mobile Applications on Big Data Cloud
Fayyaz Ahmed

ABMTRANS Workshop: ABMTRANS-S1
Session Chair: Luk Knapen and Ansar-Ul-Haque Yasar, Hasselt University, Belgium
Location: Room 5

Simulating transit priority: Continuous median lane roundabouts
Erlend Aakre and Arvid Aakre
Sebastian Buck, Peter Vortisch, Ben Strasser, Tobias Zündorf and Dorothea Wagner. Integrating public transport into mobiTopp
Lars Briem, Nicolai Mallig, H
MacroSim - A macroscopic Mobsim for MATSim 2(5) 2.0 ACCEPT
Patrick M. Bösch and Francesco Ciari

ANT Session (ANT-S15): Service Oriented Computing for Systems & Applications
Session Chair: Khalil Drira, LAAS, France
Location: Room 6

Strategies for Detecting Loss-of-Contact in Mobile Pervasive Systems using Dynamic Keep-Alive Messaging
Björn A. Johnsson, Boris Magnusson and Mattias Nordahl
Transformation of compound SOA Design Patterns
Imen Tounsi, Mohamed Hadj Kacem, Ahmed Hadj Kacem and Khalil Drira
A Knowledge Oriented Approach for Composing Ambient Intelligence Services
Dalal Toudji, Mohamed Hilia, Karim Djouani and Abdelgahni Chibani
Social media, diffusion under influence of parameters: survey and perspectives
Didier Henry, Erick Stattner, Martine Collard

Coffee Break **15:00 - 15:25**

Location: Lunch Room

Technical Sessions **15:30 - 17:00**

ANT Session (ANT-S16): Modeling and Simulation in Transportation Sciences VI
Session Chair: Luk Knapen, Hasselt University, Belgium
Location: Room 1

Analysis of the adaptive algorithms behaviour applied to the railway optimization problems
Fedor Pashchenko, Ekaterina Zakharova, Alexander Pashchenko, Inna Minashina and Nikolay Kuznetsov
Modeling a bus network for passengers transportation management using colored Petri nets and (max, +) algebra
Yassine Idel Mahjoub, El Houcine Chakir El-Alaoui and Ahmed Nait-Sidi-Moh
An overview of pedestrian signal setting and implementation in the State of Qatar
Deepti Muley, Wael Alhajyaseen and Mohamed Kharbeche

ANT Session (ANT-S17): Mobile Networks, Protocols and Applications
Session Chair: Ilan Stern, Georgia Tech Research Institute, USA
Location: Room 2

An efficient HCCA scheduler for video streaming with QoS support
Mohammed A. Al-Maqri and Mohamed Othman
A MAC Protocol for Full Duplex Cellular Networks
Sammy Chan
New threshold-based Relay Selection Algorithm in Dual Hop Cooperative Network
Takwa Bouallegue and Kaouther Sethom
Iterative Receiver Combining IB-DFE with MRC for Massive MIMO Schemes
Daniel Fernandes, Francisco Cercas and Rui Dinis
BFAN: A Bloom Filter Based Authentication in Wireless Sensor Networks
Bacem Mbarek, Aref Meddeb, Wafa Ben Jaballah and Mohamed Mosbah

SEIT/WTISG Session: SEIT-S5
Session Chair: Hui Hou, Wuhan University of Technology, China
Location: Room 3

Research on Insulator Fault Diagnosis and Remote Monitoring System Based on Infrared Images
Zhou Shenpei, LEI Xi,
Review on risk assessment of power system under typhoon disaster
Hou Hui, Hao Geng, Shiwen Yu

AIMRT Workshops: AIMRT
Session Chair: Floriano Scioscia, Polytechnic University of Bari, Italy
Location: Room 4

A CoAP-based framework for collaborative sensing in the Semantic Web of Things
Michele Ruta, Floriano Scioscia, Agnese Pinto, Filippo Gramegna, Saverio Ieva, Giuseppe Loseto, Eugenio Di Sciascio
Multi-Criteria Classification To Analyze Students' Performance
Anoud Bani-Hani, Munir Majdalawieh, Feras Al-Obeidat
Producer Mobility support in Named Data Internet of Things Network
Maroua Meddeb, Amine Dhraief, Abdelfettah Belghith, Theirry Monteil, Khalil Drira
IoT Data Provenance Implementation Challenges
Adel Alkhalila and Rabie A. Ramadan
Towards Antifragile Architectures
Daniel Russoa, Paolo Ciancarinia

ABMTRANS Workshop: ABMTRANS-S2
Session Chair: Luk Knapen and Ansar-Ul-Haque Yasar, Hasselt University, Belgium
Location: Room 5

Multi-agent model of route choice when vehicles are sensitive to road grade
Johan W. Joubert
Modeling cooperation in unsignalized intersections
Erlend Aakre and Arvid Aakre
Integrating explicit parking search into a transport simulation
Joschka Bischoff and Kai Nagel
Towards an Multilevel Agent-based Model for Traffic Simulation
Tchappi Haman Igor, Kamla Vivient Corneille, Stéphane Galland and Kamgang Jean Claude

ANT Session (ANT-S18): Systems Software Engineering
Session Chair: Nafaa Jabeur, German University of Technology, Oman
Location: Room 6

Exploring Relationships between Syntax and Semantics of a Process-Oriented Language by Category Theory
Ming Zhu, Peter Grogono, Olga Ormandjieva and Jing Li
SaVeSoC - Safety Aware Virtual Prototype Generation and Evaluation of a System on Chip
Ralph Weissnegger, Martin Schachner, Christian Kreiner and Christian Steger
Model consistency for multi-scale architectures applied to smart systems
Ilhem Khlif, Mohamed Hadj Kacem, Marwa Kallel, Khalil Drira and Ahmed Hadj Kacem
Applying Design Patterns to Remove Software Performance Antipatterns: A Preliminary Approach
Davide Arcelli and Daniele Di Pompeo
Towards a New Framework of Software Reliability Measurement Based on Software Metrics
Dalila Amara and Latifa Rabai

Banquet and Award Ceremony 19:00 - 21:00

Location: Banquet Room

Friday, May 19, 2017

Technical Sessions **08:30 – 10:00**

ANT Session (ANT-S-19): Modeling and Simulation in Transportation Sciences VII
Session Chair: Shinsuke Hara, Osaka City University, Japan
Location: Room 1

Baseline Synthesis and Microsimulation of Life-stage Transitions within an Agent-based Integrated Urban Model
Mahmudur Fatmi and Muhammad Habib
Modelling Active Safety System Performance using Event Data Recorders
Hampton Gabler
The structure of user equilibria: Dynamic coevolutionary simulations vs. cyclically expanded networks
Theresa Thunig and Kai Nagel

ANT Session (ANT-S20): Distributed Systems, Networks and Applications II
Session Chair: Carlos Lisboa Bento, University of Coimbra, Portugal
Location: Room 2

Using Case-Based Reasoning for Phishing Detection
Hassan Y. A. Abutair and Abdelfettah Belghith
Hybrid Resource Discovery Algorithms for Unstructured Peer to Peer Networks
Laila Bashmal, Asma Almulifi and Heba Kurdi
Electing a Leader in Dynamic Networks using Mobile Agents and Local Computations
Mouna Ktari, Mohamed Mosbah and Ahmed Hadj Kacem

ABMTRANS Workshop: ABMTRANS-S3
Session Chair: Luk Knapen and Ansar-Ul-Haque Yasar, Hasselt University, Belgium
Location: Room 5

An Agent-Based Model of a System-Optimal ATIS
Ido Klein, Nadav Levy and Eran Ben-Elia
Agent-based simulation of autonomous taxi services with dynamic demand responses
Sebastian Hörl
An Agent-Based Simulation Model of Air Travel Itinerary Choice
Roger Parker

ANT Session (ANT-S21): Smart Environments and Applications
Session Chair: Ansar Yasar, Hasselt University, Belgium
Location: Room 6

Silhouette-Based Gender Recognition in Smart Environments Using Fuzzy Local Binary Patterns and Support Vector Machines
El-Sayed M. El-Alfy and Amer Binsaadoon
An Object-Oriented Model for Object Orchestration in Smart Environments
Luca Bergesio, Ana M. Bernardos and José R. Casar
Dynamic and Constraint-based building of Ambient Applications with Self-Reflective Smart Objects
Daniel Burmeister, Nicolai Petter and Andreas Schrader

Coffee Break **10:00 – 10:25**

Location: Coffee Room / Foyer

Technical Sessions **10:30 – 12:00**

ANT Session (ANT-S22): Systems Security and Privacy
Session Chair: Irith Hartman, NYU Shanghai, China
Location: Room 1

Control yourself: on user control of privacy settings using personalization and privacy panel on smartphones
Yun Zhou, Marta Piekarska, Alexander Raake, Tao Xu and Xiaojun Wu
Semantic Based Authorization Framework For Multi-Domain Collaborative Cloud Environments
Mohamed Hilia, Abdelghani Chibani, Thierry Winter and Karim Djouani

ANT Session (ANT-S23): Agent Systems, Intelligent Computing and Applications
Session Chair: Elhadi Shakshuki, Acadia University, Canada
Location: Room 2

Using Word Embedding and Ensemble for Highly Imbalanced Data Sentiment Analysis in Short Arabic Text
Sadam Al-Azani and El-Sayed M. El-Alfy
Improving contactless heart rate variability measurement by IR and 3D depth sensor with respiratory sinus arrhythmia
Kaveh Bakhtiyari, Nils Beckmann and Jürgen Ziegler
A Semantic Multi-Agent system to Exchange Information between Hospitals
Naseebah Alkahtani and Hebah Kurdi

ABMTRANS Workshop: ABMTRANS-S4
Session Chair: Luk Knapen and Ansar-Ul-Haque Yasar, Hasselt University, Belgium
Location: Room 5

Simulating parking for establishing parking prices
Nir Fulman and Itzhak Benenson
Modeling the Efficiency of a Port
Elnaz Irannezhad, Mark Hickman and Carlo G.Prato
Modeling bicycle traffic in an agent-based transport simulation
Dominik Ziemke, Simon Metzler and Kai Nagel

12:00 – 14:00

Complimentary City Tour

END of Event