



FACULTY OF
TRANSPORTATION
SCIENCES
CTU IN PRAGUE

4TH IEEE SMART CITIES SYMPOSIUM

MAY 24-25, 2018 PRAGUE, CZECH REPUBLIC

CONFERENCE PROGRAMME



SCSP2018, MAY 24-25, 2018, Prague, Minorite Monastery

scsp2018@fd.cvut.cz

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IEEE Smart Cities Symposium Prague 2018

**organized by the Czech Technical University in Prague, Faculty of
Transportation Sciences**

Conference topics and objectives:

The Smart Cities Symposium Prague 2018 (the fourth annual conference) aims on exchange of ideas and best practices in the field of Smart cities. It covers whole range of topics, from the system point of view, through data mining and data processing, smart grids, up to multi-agent systems and other soft computing approaches. The objective of this conference is to define the future applications for the field of smart cities. The results should be based on the theoretical backgrounds, but aim on usage of best practices for real world applications.

The Symposium covers the following key areas:

- ❖ System approach to Smart Cities transformation
- ❖ Information and data processing, algorithms, agents, simulation and prediction
- ❖ Technologies for Smart Cities
- ❖ Human Factors in Smart Technologies
- ❖ Social aspects of Smart Cities
- ❖ Energy efficient buildings
- ❖ Best practices for Smart Cities transformation

All accepted papers are expected to be included in IEEE Xplore and will be indexed by EI.

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KEYNOTE SPEAKERS

Porie Saikia-Eapen

Metropolitan Transportation Authority, New York City

Ms. Saikia-Eapen, based in New York City, is a strategic solution provider for a sustainable built environment, internationally. Porie Saikia-Eapen's contributions to the design and construction industry have included architectural design, project development, program management, and construction management on a wide range of projects in the public and private sectors. She is the Founder and previous Managing Director of PRIA Global Inc., New York (www.priaglobal.com)



Porie is currently the Director of Environmental Sustainability & Compliance at the Metropolitan Transportation Authority of NY and has previously worked as Vice President and Area Manager for CH2MHILL establishing its NY business, as the Executive Director of Asian University of Women Support Foundation working in the Bangladesh design and construction industry; Chief Architect at MTA New York City Transit leading the post 9/11 transit design projects for MTA; Senior Associate at the LiRo Group, Program Manager for NYC Department of Design and Construction, Design Architect at NYC Department of Environmental Protection.

Pratish Menon **CISCO**



Mr. Menon is leading EMEAR-wide Strategic Partnerships and Business Development in Smart Cities and IoT at CISCO. He is responsible for the profitable growth and market leadership for CISCO in the Smart Cities domain, identifying and executing strategic partnerships for long term growth and scale, training and enabling local country teams and partners to position and sell CISCO Smart Cities solutions and identifying and partnering with non-traditional organizations as relevant to Smart Cities. He has

successfully conceptualized and executed Smart City pilots in major European cities, developed and executed strategic partnerships with leading telecom and infrastructure service providers and in an advisory capacity on Smart Cities vision and implementation.

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Juan Bosco Molina Navarro, Ph.D.
Technical University of Madrid

Dr. Navarro is a licensed architect and a professor of construction management at the Technical University of Madrid.

Tomáš Prouza
EU Politics Advisory

Mr. Prouza was the Czech State Secretary for European Union Affairs & Digital Coordinator from 2014 to 2016. The issue of Czech entry into Eurozone is his special hobby (and not only because he became the first Czech „Mr. Euro“ in 2005). After leaving the Czech government he founded a consulting company EU Politics Advisory, focusing on issues related to the European Union and digital economy. In 2016 he received the supreme French state decoration, the National Order of the Legion of Honour (Ordre national de la Légion d'honneur), for his work in support of European integration.



Carlos Ferregut, Ph.D.
The University of Texas at El Paso



Dr. Ferregut is the Associate Dean for the Strategic Initiatives and Global Programs at the College of Engineering of the University of Texas at El Paso. He was the Interim Dean of the College from 2015 to 2017. His expertise lies in the fields of engineering risk analysis, reliability-based design and stochastic modeling. He also has had extended experience on Nondestructive evaluation of engineering systems. Key aspects of his research include the development of dedicated probabilistic models, the study of the effects of statistical and model uncertainties, and the application of both classical (statistical) reliability theory, as well as structural (model-based) reliability analysis. The practical applications of his research are mostly related to civil and aerospace engineering systems, marked by a need to manage, assess, and/or minimize risks. To date, particular emphasis has been given to buildings, pavements, bridges, foundations, aircraft structures and aerospace structures, gas pipelines, ship structures and stochastic modeling of environmental risks, environmental problems, and a probabilistic treatment of the robustness and durability of engineering systems.

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8:00	9:00	Registration Entrance	
9:00	9:15	Opening Session Hall of John of Bohemia	
		Miroslav Svítek (SCSP Chair, Czech Technical University in Prague) Vojtěch Petráček (Rector of CTU) Martina Děvřová (Chief Executive, City of Prague) Pavel Hrubeš (Dean of FTS) Ondřej Přibyl (SCSP Program Chair, Czech Technical University in Prague)	
9:15	10:50	Session 1: Keynote Speakers Chairman: Miroslav Svítek Hall of John of Bohemia	
9:15	9:35	Urban sustainability	Porie Saikia-Eapen (MTA New York)
9:35	9:50	Urban sustainability	Juan Bosco Molina Navarro (Technical University of Madrid)
9:50	10:10	Why cities should become more digital - from existing challenges to future benefits	Pratish Menon (CISCO)
10:10	10:30	Smart Danube region	Tomáš Prouza (EU Politics Advisory, Former State Secretary for EU Affairs & Digital Coordinator, Czech Republic)
10:30	10:50	International Dual Master Degrees Program in Smart Cities	Carlos Ferregut (The University of Texas at El Paso)
10:50	11:20	Coffee Break	
11:20	12:50	Session 2: System Approach to Smart Cities Transformation Chairman: Ondřej Přibyl Hall of John of Bohemia	
11:20	11:30	Virtual model of Prague	ICT Operator
11:30	11:50	How are smart cities perceived by project leaders and participants in an ongoing project: the challenge of evaluating smart cities	Thomas Bjørner (Aalborg University)
11:50	12:10	Routing pedestrians in smart city networks	Leon Rothkrantz (TU Delft)
12:10	12:30	Personal emergency system for elderly and disabled people in metropolitan network	Vít Janovský (CTU, UCEEB)
12:30	12:50	Smart Planning for Transportation Energy Efficient Region	Tomáš Peltan (Czech University of Life Sciences)
12:50	13:50	Business Lunch	
13:50	15:20	Session 3a: Technologies for Smart Cities Chairman: Petr Bouchner Hall of John of Bohemia	
13:50	14:00	Symposium Partner Presentation	ELTODO
14:00	14:20	Regulation of the Tourist Buses in Highly Urbanized Areas	Marko Šošarić (University of Zagreb)
14:20	14:40	Implementing large scale electromobility infrastructure as a profitable virtual electricity storage plant: a case study, system ALISE	Václav Novotný (CTU, UCEEB)
14:40	15:00	Impacts of lacks in design of control systems in rail transportation	Tomáš Kertis (CTU, FTS)
15:00	15:20	The e-mobility Analysis with Respect to the Transmission and Distribution Grid and its Effects on Stability of Power Delivery	Václav Mužík (University of West Bohemia)
13:50	15:20	Session 3b: Information and Data Processing Chairman: Michal Matowicki Hall B	
13:50	14:00	MindSphere – the Open IoT Operating System for Smart Cities	Siemens
14:00	14:20	Real-Time Driver Advisory System for improving energy economy based on Advance Driver Assistant Systems Interface	Dmitry Rozhdestvenskiy (CTU, FTS)
14:20	14:40	Smart Cities and Critical Infrastructure	Dana Procházková (CTU, FTS)
14:40	15:00	Data-driven Management of Dynamic Public Transport	Patrik Horažďovský (CTU, FTS)
15:00	15:20	Analysis of red light violation - a case study in Białystok	Robert Ziolkowski (Białystok University of Technology)
15:20	15:50	Coffee Break	
15:50	17:20	Session 4a: Information and Data Processing Chairman: Vladimir Bataev Hall of John of Bohemia	
15:50	16:00	Symposium Partner Presentation	EON
16:00	16:20	Increasing efficiency of ground stations scheduling to sustainably provide satellite based services for smart cities	Boris Kucherov (University of Technology)
16:20	16:40	Macroscopic simulation model of a multi-stage, dynamic cargo bike-based logistics system in the supply of shopping malls in Budapest	Dávid Lajos Sárdi (Budapest University of Technology and Economics)
16:40	17:00	Economic aspects of micro-cogeneration systems – insight into investors' approaches	Václav Novotný (CTU, UCEEB)
17:00	17:20	Data Analysis with Empirical Probability Functions as a Data Mining Method: Employing CF-Miner and Pattern Difference Quantifiers	Krzysztof Urbaniec (CTU, FTS)
15:50	17:20	Session 4b: Best Practices for Smart Cities Transformation Chairman: Jakub Vorel Hall B	
15:50	16:00	Smart parking	UBER
16:00	16:20	Energy sufficiency of an administrative building based on real data from one year of operation	Nikolaos Skandalos (CTU, UCEEB)
16:20	16:40	Smart parking in the Smart City application	Jan Šilar (CTU, FTS)
16:40	17:00	Regular Translation within Alliances	Vít Fábera (CTU, FTS)
17:00	17:20	Hydrometeorological measurements to assess the effect of vegetation on urban microclimate	Jakub Jura (CTU, FCE)
19:00	Symposium Social Event & Gala Dinner (by invitation only) - Vltava River Cruise		

Smart Cities Symposium Prague 2018

Day 2 - May 25, 2018

8:30	9:00	Registration Entrance	
9:00	11:00	Poster Session Chairman: Tomáš Horák Gothic Arcade Corridor	
9:00	11:00	Session 5: Social Aspects in Smart Technologies Chairman: Csaba Csiszár Hall of John of Bohemia	
9:00	9:20	Making Innovation in Elderly Care Possible Using Participatory Design: The Smart Home-care Project in Prague	Tomáš Vácha (CTU, UCEEB)
9:20	9:40	An International Interdisciplinary Study Abroad Program on Smart Cities	Ruey Long Cheu (The University of Texas at El Paso)
9:40	10:00	Roadway Sustainability for Smart Cities	Dimitrios Goulias (University of Maryland)
10:00	10:20	How to support planning and implementation of climate adaptation measures in urban areas? Case study of Brno-Nový Lískovec	Jan Macháček (J. E. Purkyně University)
10:20	10:40	Student Perception of Smart Campus: A case study of Czech Republic and Thailand	Sathaporn Opasanon (Thammasat University)
10:40	11:00	Smart Urban Transport	Vít Janoš (CTU, FTS)
11:00	11:30	<i>Coffee Break</i>	
11:30	12:30	Session 6: Cooperative and Autonomous driving Chairman: Tomáš Horák Hall of John of Bohemia	
11:30	11:50	Framework for planning the mobility service based on autonomous vehicles	Dávid Földes (Budapest University of Technology and Economics)
11:50	12:10	Traffic Signal Control for Connected and Non-Connected Vehicles	André Maia Pereira (CTU, FTS)
12:10	12:30	Communication for cooperative vehicles	Tomáš Zelinka
12:30	13:30	<i>Business Lunch</i>	
13:30	15:20	Workshop: Autonomous Vehicles for Smart Cities Chairman: Zdeněk Lokaj Hall of John of Bohemia	
13:30	13:40	Welcome, objectives and agenda	Ondřej Příbyl (CTU, FTS)
13:40	13:55	State of the art in autonomous driving	DLR
13:55	14:10	Autonomous driving and traffic management	Dynniq
14:10	15:00	Workshop	Moderator: Zdeněk Lokaj (CTU, FTS)
15:00	15:20	Summary and discussion	All
15:20	15:40	<i>Coffee Break</i>	
15:40	16:00	Round Table and Symposium Closing Moderator: Ondřej Příbyl Hall of John of Bohemia	
		Summary of Chairmen of Particular Sessions	All chairmen
		Discussion	All participants
		Concluding Remarks	Miroslav Svítek / Ondřej Příbyl
16:00		Symposium Social Event - Wine, Beer, Canapes & Networking Hall of John of Bohemia	
		<i>Please, accept our invitation for an informal discussion on Smart Cities and new ideas that have emerged during the Symposium. There might be a musical intermezzo.</i>	

Accurate Road Safety Level Assessment for Effective Road Safety Inspection

Josef Kocourek (CTU, FTS)

Aided Decision Making for Hybrid Energy Systems Planning in Micro-Grids

Florina Scarlatache (Gheorghe Asachi Technical University of Iași)

Methodology for Selection of Telecommunication Technology in Smart Applications and Networks

Jiří Vodrážka (CTU, FEE)

Methods of traffic surveys in cities for comparison of traffic control systems – a case study

Jiří Růžička (CTU, FTS)

Optimal coverage of rDSLAM devices in the electronic communication network

Denisa Mocková (CTU, FTS)

Probabilistic Analysis of Sky Clearness Index for Solar Energy Systems Planning

Ciprian Nemes (Gheorghe Asachi Technical University of Iași)

Reliability Data for Smart Grids: Where the Real Data Can be Found

Tomáš Pitner (Masaryk University)

PARTNERS



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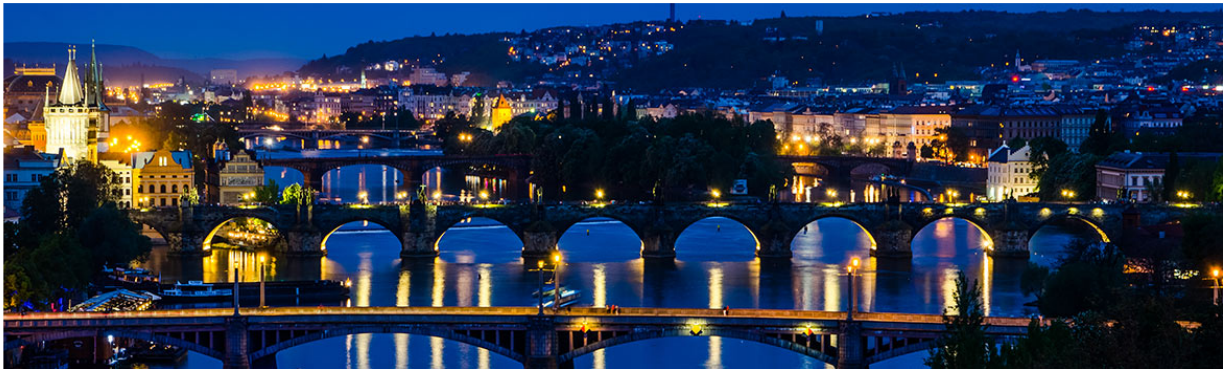




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VLTAVA RIVER CRUISE – 24TH OF MAY

LET US INVITE YOU TO SPEND A PLEASANT EVENING ON THE BOAT WITH THE DINNER AND MUSIC



WE HAVE PREPARED FOR YOU SPECIAL **EVENING – GALA DINNER** ON THE HISTORIC PADDLE STEAMER **VLTAVA** THAT WAS CEREMONIOUSLY ADDED TO THE LIST OF CZECH CULTURAL MONUMENTS IN 2013

OUR PADDLE STEAMER CALLED
VLTAVA

DEPARTS FROM **PIER NO. 4**
RAŠÍNOVO EMBANKMENT
(CLOSED TO PALACKÉHO
BRIDGE)
AT 7:00 PM SHARP!!!



THE CRUISE IS SCHEDULED FOR THREE HOURS, HOWEVER AFTER ONE AND HALF HOURS IT WILL BE POSSIBLE TO DISEMBARK AT PIER NO.4 AT THE RAŠÍN EMBANKMENT.



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