

# 2018 International Conference on Sensors, Signal and Image Processing

(SSIP2018)

Prague, Czech

October 12-14, 2018

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Prof. Petr Kubicek, Masaryk University Brno, Czech Republic

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# Instructions for Presentation

## Oral Presentations

- Time: a maximum of 15 minutes in total, including speaking time and discussion. Please make sure your presentation is well timed. Please keep in mind that the program is full and that the speaker after you would like their allocated time available to them.
- You can use CD or USB flash drive (memory stick), make sure you scanned viruses in your own computer. Each speaker is required to meet her / his session chair in the corresponding session rooms 10 minutes before the session starts and copy the slide file (PPT or PDF) to the computer.
- It is suggested that you email a copy of your presentation to your personal in box as a backup. If for some reason the files can't be accessed from your flash drive, you will be able to download them to the computer from your email.
- Please note that each session room will be equipped with a LCD projector, screen, point device, microphone, and a laptop with general presentation software such as Microsoft Power Point and Adobe Reader. Please make sure that your files are compatible and readable with our operation system by using commonly used fronts and symbols.
- Movies: If your Power Point files contain movies please make sure that they are well formatted and connected to the main files.

## Poster Presentations

- Maximum poster size is 36 inches wide by 48 inches high (3ft.x4ft.)
- Posters are required to be condensed and attractive. The characters should be large enough so that they are visible from 1 meter apart.
- Please note that during your poster session, the author should stay by your poster paper to explain and discuss your paper with visiting delegates.

## Dress code

- Please wear formal clothes or national characteristics of clothing

## October 12, 2018 (Friday)

Location: 3rd Congress Floor

<b>10:00-15:00</b>	Participants Onsite Registration & Conference Materials Collection
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# SSIP 2018 Prague, Czech October 12-14, 2018.

## October 13, 2018 (Saturday Morning)

Location: Taurus

<b>8:30-8:50</b>	Registration & Sign in
<b>8:50-9:00</b>	<b>Opening Remarks</b>
<b>9:00-9:40</b>	<b>1<sup>st</sup> Keynote Speaker:</b> <b>Title: Sensing the Population Rhythmicity</b>  Prof. Petr Kubicek Nemoforum Vice-Chairman; Masaryk University Brno, Czech Republic
<b>9:40-10:20</b>	<b>2<sup>nd</sup> Keynote Speaker:</b>  Prof. Lena Halounova ISPRS Secretary General; Czech Technical University, Czech Republic
<b>10:20-10:50</b>	<b>Coffee Break &amp; Group Photo</b> Foyer in front of meeting room

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## October 13, 2018 (Saturday Morning)

Location: Taurus

<b>10:50-11:30</b>	<b>3<sup>rd</sup> Keynote Speaker:</b>  Prof. Ning Xiong, Mälardalen University, Sweden
<b>11:30-12:10</b>	<b>4<sup>th</sup> Keynote Speaker:</b> <b>Title: A New Fast Multi-Context Method for Lossless Image Coding</b>  Prof. Ryszard Stasiński, Poznan University of Technology, Poland
<b>12:10-13:30</b>	<b>Lunch Break</b>  Restaurant Veduta on 2nd floor

## October 13, 2018 (Saturday Afternoon)

Location: Taurus

<b>13:30-15:15</b>	<b>Session 1:</b> Pattern recognition and target detection
<b>15:15-16:00</b>	<b>Coffee Break</b>
<b>16:00-17:30</b>	<b>Session 2:</b> Computer science and image processing
<b>18:30-20:00</b>	<b>Dinner</b>  Restaurant Veduta on 2nd floor

## October 14, 2018 (Sunday)

One day tour: 9:00-19:00

# SSIP 2018

## Keynote Speaker

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Prof. Petr Kubicek

Masaryk University Brno,

Czech Republic



### Biography:

He received his master degree (1987) as well as Ph.D. (1992) at the Department of Geography, Faculty of Science Masaryk University in Brno. In 1988 - 2000, he worked as a lecturer of physical geography, geomorphology, and GIS at the same department and actively participated in EU projects dealing with transfer of GI/GIS technologies, cross-border cooperation and development of data warehouses (Panel GI, CREDO, Well GIS). At the beginning of the 21st century he left the academia and spent five years at the commercial sector working in telecommunications and as a business representative for INTERGRAPH. Since 2005, he has been working at the Institute of Geography of Masaryk University in Brno. He defended the habilitation thesis in 2012 (Selected aspects of geospatial data uncertainty visualization) and currently specializes in digital cartography and geoinformation infrastructure. Dr. Kubicek cooperates on the international level with International Cartographic Association commissions on Use, User and Usability Issues and Cognitive Issues in Geographic Information Visualization. He is also acting as a member of the national GeoInfo Strategy team preparing the document for the national government. He has over 90 publications focused on geoinformation and digital cartography.

### Speech Title:

#### Sensing the Population Rhythmicity

### Abstract:

Spatio-temporal distribution, movements, and behaviour of population within the city environment derived from the mobile phone data play a key role in decision making for urban developers. Human presence and rhythmicity play both active and passive role also in the emerging (geo) smart city concept. In this talk, I will further discuss the role of citizens as sensors, methodology for multilevel spatio-temporal human presence patterns recognition and visualization. Several pilot studies combining the spatial patterns with other data sources will be introduced in the end.

# SSIP 2018

## Keynote Speaker

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Prof. Lena Halounova

Czech Technical University

Czech Republic



### Biography:

Dr Lena Halounová received her Ing. (civil engineer) at the Faculty of Civil Engineering, Czech Technical University Prague, branch Water Constructions and Water Management in 1980 and PhD. (Three-dimensional nonstationary flow in open channels) at the same faculty in 1989. She has been employed in the Remote Sensing Laboratory, Fac. of CE, CTU in Prague since 1985.

She defended her habilitation on the topic of automated classification of black and white aerial photographs and radar data at CTU in Prague in 2005.

Lena Halounová is a head of the Remote Sensing Laboratory (RSL) of the department of mapping and cartography at the Faculty of Civil Engineering of the Czech Technical University in Prague, and education background includes: Geographical information systems; Digital image data processing; remote sensing.

Prof. Lena serves as a reviewer for many conferences and gave many invited lectures. She published more than 75 conference papers in international conferences.



# SSIP 2018

## Keynote Speaker

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Prof. Ning Xiong

Mälardalen University

Sweden



### Biography:

Ning Xiong obtained the Ph.D. with outstanding distinction from the University of Kaiserslautern (Germany) in 2000. His research addresses various aspects of computational intelligence techniques, including machine learning and big data analytics, evolutionary computing, fuzzy systems, uncertainty management, as well as multi-sensor data fusion, for building self-learning and adaptive systems in industrial and medical domains. He is serving as editorial board members for three international journals. He has been lead guest editor for a special issue in the journal "Neural Processing Letters" (Springer). He also has been program committee members for a number of conferences and invited referee for many leading international journals.

# SSIP 2018

## Keynote Speaker

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Prof. Ryszard Stasiński

Poznan University of  
Technology

Poland



### Biography:

Ryszard Stasiński was born in Poznan, Poland, in 1953. He received the B.S. and M.S. degrees in control engineering, and Ph.D. degree in communications from the Poznan University of Technology, Poland, in 1977 and 1985.

His career has been linked with Poznan University of Technology, where he is now full professor and the head of Chair of Communication Systems and Optoelectronics. He is the author of approximately 200 articles in the domain of digital signal processing. His current research interests are linked mainly with image processing, and in particular with image coding

### Speech Title:

**A New Fast Multi-Context Method for Lossless Image Coding**

### Abstract:

A new efficient and fast context lossless image coding method is presented in the paper, named Multi-ctx. High performance is obtained due to the fact that predictors are chosen from a very large database. On the other hand, simple rules determining contexts result in low computational complexity of the method. The technique can be easily adapted to specific class of applications, as the algorithm can be trained on a set of exemplary images. For the purpose of proving its potential it has been trained on a set of 45 images of various type, then its performance compared to that of some widely used fast techniques. Indeed, the new method appears to be the best, even better than CALIC approach.

# Conference Venue



## **Clarion Congress Hotel Prague**

Prague, Czech Republic

Add: Freyova 33, 190 00 Praha 9 – Vysočany

### **How to make reservation:**

E-mail: [reservation@cchp.cz](mailto:reservation@cchp.cz)

Tel: +420 211 131 119

Web: [www.clarion-hotels.cz](http://www.clarion-hotels.cz)

### **How to get to the Hotel:**

1. Transport from the Vaclav Havel Airport by taxi takes about 30-45 min. (19.5 km/ 12 miles).
2. The hotel offers taxi service at the rate of CZK 980. For reservation please contact [concierge.cchp@clarion-hotels.cz](mailto:concierge.cchp@clarion-hotels.cz), + 420 211 131 137. Please book at least 24 hours in advance.