# 2022 IEEE - SPS/EURASIP SUMMER SCHOOL

# DATA AND GRAPH DRIVEN LEARNING FOR COMMUNICATIONS AND SIGNAL PROCESSING

Banja Luka, Bosnia and Herzegovina, September 5-9, 2022

**IEEE** · **IEEE Signal Processing Society** · **EURASIP** EUROPEAN ASSOCIATION FOR SIGNAL PROCESSING · **INTERNATIONAL NEURAL NETWORK SOCIETY**

## CALL FOR PARTICIPATION

The 2022 IEEE - SPS/EURASIP Summer School on "Data and Graph Driven Learning for Communications and Signal Processing" will take place in Banja Luka, Bosnia and Herzegovina, a city with a long history going back to Roman times. Set in a 'paradise valley,' the city is renowned for its picturesque architecture, sprawling parks and tree-lined alleys, gastronomy, and truly hospitable inhabitants. It is well connected with Belgrade, the venue of EUSIPCO 2022, being held the previous week, as well as with other European cities.


**Kastel Fortress**

The School will bring together world-renowned researchers from academia and industry who will share their expert knowledge on the latest theoretical and algorithmic advances in machine learning and signal processing as applied to communications. We encourage participation of a spectrum of researchers, including students and industry practitioners. Attendees will benefit from networking opportunities in a friendly and stimulating environment, and will have the option of presenting their work in a poster session.

This summer school will focus on topics in network and data sciences, ranging from learning graph representations of complex signals, mobile edge computing, to learning efficient signal representations via state-of-the-art deep learning architectures. The concepts covered will be demonstrated through diverse applications.

### Fundamental Tools

- Statistical analysis of network data
- Deep learning for semantic communications
- Machine learning for mobile edge computing
- Topological signal processing over networks
- Inference of graph topologies and network processes
- Representation, generative, and meta-learning models
- Graph convolutional neural networks

### Application Domains

- Internet of Things
- Artificial intelligence enabled networks for 6G
- Mobile networks and edge computing
- Ultra-reliable wireless communications
- mmWave communications
- Semantic communications

### General Chairs

**Gordana Gardašević,** University of Banja Luka
**Danilo P. Mandić,** Imperial College, London
**Petar M. Đurić**, Stony Brook University

### Lecturers

**Paolo Banelli,** University of Perugia
**Sergio Barbarossa,** University of Rome
**Merouane Debbah,** Tech. Innovation Inst., Abu Dhabi
**Georgios B. Giannakis,** University of Minnesota
**Robert Heath,** North Carolina State University
**Geert Leus,** TU Delft
**Geoffrey Li,** Imperial College London
**Gonzalo Mateos,** University of Rochester
**Petar Popovski,** Aalborg University
**Ljubiša Stanković,** University of Montenegro
**Andrea Tonello,** University of Klagenfurt
**Dejan Vukobratović**, University of Novi Sad
**Thomas Watteyne,** Inria, Paris


**Banja Luka**

## REGISTRATION FEES

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|---|---|
| **Student SPS/EURASIP Member** | **300 EUR** |
| **Student IEEE Member** | **330 EUR** |
| **Student Non-Member** | **360 EUR** |
| **SPS Member** | **390 EUR** |
| **IEEE/EURASIP Member** | **420 EUR** |
| **Non-Member** | **470 EUR** |

**Registration includes all lectures, materials and lecture notes, lunches and coffee breaks for all five days, and a social dinner.**

**APPLICATION DEADLINE:   June 20, 2022**
**www.banjaluka2022school.ba**