

## Program-at-a-glance

### A. Wednesday, July 6

<b>09:00 - 09:20</b> Opening – Welcoming Address by: ICTF Chairman followed by the deputy of the University of Patras, followed by guest speakers.
<b>09:20 - 10:00</b> Keynote Speech ( <i>Prof. Kenichi Mase</i> )
<b>10:00 - 10:40</b> Keynote Speech ( <i>Prof. George Karagiannidis</i> )
<b>10:40 - 11:00</b> Coffee Break
<b>11:00 - 12:10</b> <a href="#">Session A1: Wireless Networks</a>
<b>12:10 - 13:20</b> <a href="#">Session A2: Security</a>
<b>13:20 - 14:30</b> Lunch
<b>14:30 - 15:10</b> Keynote Speech ( <i>Prof. Shigeo Shioda</i> )
<b>15:10 - 16:00</b> <a href="#">Session A3: Signal Processing</a>
<b>16:00 - 16:50</b> <a href="#">Session A4: Embedded Systems</a>
<b>16:50 - 17:10</b> Coffee Break
<b>17:10 - 17:30</b> Invited Talk 1 from Industry ( <i>Dr Anna Wielgoszewska, Bell Labs</i> )
<b>17:30 - 19:00</b> <a href="#">Session A5: Optical and Wireless Transmission</a>
<b>19:00 - 20:15</b> Welcome Party

### B. Thursday, July 7

<b>09:00 - 09:40</b> Keynote Speech ( <i>Prof. Fumiyuki Adachi</i> )
<b>09:40 - 10:20</b> Keynote Speech ( <i>Prof. Maciej Stasiak</i> )
<b>10:20 - 10:40</b> Coffee Break
<b>10:40 - 11:00</b> Invited Talk 2 on Teletraffic ( <i>Prof. Mariusz Glabowski</i> )
<b>11:00 - 12:30</b> <a href="#">Session B1: Teletraffic</a>
<b>12:30 - 13:20</b> <a href="#">Session B2: Network Planning</a>
<b>13:20 - 14:30</b> Lunch
<b>14:30 - 15:10</b> Keynote Speech ( <i>Prof. Masaki Aida</i> )
<b>15:10 - 16:00</b> <a href="#">Session B3: Algorithms and Systems</a>
<b>16:00 - 16:20</b> Invited Talk 3 from Industry ( <i>Dr George Agapiou, Hellenic Telecommunications Organization</i> )
<b>16:20 - 16:40</b> Coffee Break
<b>16:40 - 17:00</b> Invited Talk 4 from Industry ( <i>Dr Ioannis Papapanagiotou, Netflix</i> )
<b>17:00 - 18:30</b> <a href="#">Session B4: Communications and Information Processing for the Smart Grid</a>
<b>18:30 - 18:50</b> Invited Talk 5 on Power Line Communication ( <i>Dr Khaled Rabie, Manchester Metropolitan University</i> )
<b>20:15 - 22:15</b> Conference Dinner and Closing

### C. Friday, July 8

Optional: Excursion to the Bridge of Rion - Antirion, to Patras Archaeological Museum and to Ancient Olympia (Museums and Archaeological Site)
<b>08:45</b> Departure from University of Patras to Rion-Antirion Bridge
<b>09:45</b> Departure to Patras Archaeological Museum
<b>11:00</b> Departure to Ancient Olympia
<b>16:00</b> Departure from Ancient Olympia to University of Patras
Arrival to Patras before <b>18:00</b> (at the latest)

**Registration Desk:** Wednesday & Thursday: (08:30 - 11:00) and (14:00 - 18:30)

## Technical Program

A. Wednesday, July 6

### Keynote Speech

Chair: Prof. Michael Logothetis (*University of Patras, Greece*)

#### "Wide-Area Deployable Ad Hoc Networks"

by Prof. Kenichi Mase (*Niigata University, Japan*)

### Keynote Speech

Chair: Dr John Vardakas (*Iquadrat, Barcelona, Spain*)

#### "Robotics Facilitates Communications: Laser-Powered Drones with QoS Awareness"

by Prof. George Karagiannidis (*Aristotle University of Thessaloniki, Greece*)

### Session A1: Wireless Networks\*

Co-Chairs: Prof. Mariusz Glabowski (*Poznan University of Technology, Poland*)  
Dr Ioannis Moscholios (*University of Peloponnese, Greece*)

A1.1 **Scalable Bloom-Filter Based Content Dissemination in Community Networks using Information Centric Principles**

Vassilios Vassilakis, Liang Wang, Laura Carrea, Ioannis Moscholios, Michael Logothetis (*University of West London, U.K.*)

A1.2 **Opportunistic Routing Using Prioritized Forwarders with Retransmission Control**

Taku Yamazaki, Ryo Yamamoto, Takumi Miyoshi, Takuya Asaka, Yoshiaki Tanaka (*Waseda University, Tokyo, Japan*)

A1.3 **Autonomous Clustering Scheme for Removing the Effects of Heterogeneous Node Degrees in Ad Hoc Networks**

Ryosuke Morita, Chisa Takano, Masaki Aida (*Tokyo Metropolitan University, Japan*)

A1.4 **Consensus Problems in Wireless Networks for Keyhole Geometry**

Stojan Denic, Orestis Georgiou, William Thompson, Mohammud Zubeir Bocus (*Toshiba Telecommunications Research Laboratory, Bristol, U.K.*)

### Session A2: Security\*

Co-Chairs: Prof. Iwao Sasase (*Keio University, Japan*)  
Dr Vassilios Vassilakis (*University of West London, U.K.*)

A2.1 **On the Security of Software-Defined Next-Generation Cellular Networks.**

Vassilios Vassilakis, Ioannis Moscholios, Bander Alzahrani, Michael Logothetis (*University of West London, U.K.*)

A2.2 **Securing Practical Packing-based Privacy-preserving Biometric Authentication**

Takumi Matsunaga, Kentaroh Toyoda, Iwao Sasase (*Keio University, Yokohama, Japan*)

A2.3 **Vibration-based Key Exchange between Two Smart Devices on the Desk**

Alisa Arno, Kentaroh Toyoda, Yuji Watanabe, Iwao Sasase (*Keio University, Yokohama, Japan*)

A2.4 **Detecting Broadcaster Transmitted Earthquake Early Warning Signal with AC Parity for ISDB-T Digital Television Receivers**

Satoshi Takahashi (*Hiroshima City University, Japan*)

### Keynote Speech

Chair: Prof. Michael Logothetis (*University of Patras, Greece*)

#### "Localizing Sensors from their Responses to Targets"

by Prof. Shigeo Shioda (*Chiba University, Japan*)

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\* Affiliations are referred to the first author only.

### Session A3: Signal Processing\*

Co-Chairs: Prof. John Mourjopoulos (*University of Patras, Greece*)  
Prof. Athanasios Skodras (*University of Patras, Greece*)

- A3.1 **Extended Sub-sampling in OFDM Environment**  
Nikos Petrellis (*Technological Educational Institute of Thessaly, Larissa, Greece*)
- A3.2 **Linear Interpolation in Time Domain for Improved Audio or Image Signal Reconstruction**  
Nikos Petrellis (*Technological Educational Institute of Thessaly, Larissa, Greece*)
- A3.3 **A Hilbert-Based Approach to the ENF Extraction Problem**  
Andreas Triantafyllopoulos, Ioannis Krilis, Anastasis Foliadis, Athanassios Skodras (*University of Patras, Greece*)

### Session A4: Embedded Systems\*

Co-Chairs: Prof. Shigeo Shioda (*Chiba University, Japan*)  
Prof. Theodore Antonakopoulos (*University of Patras, Greece*)

- A4.1 **Indoor Location Estimation using a Pair of Wearable Devices**  
Anastasios Petropoulos, Theodore Antonakopoulos (*University of Patras, Greece*)
- A4.2 **An IMU-based Wearable Presentation Pointing Device**  
Dimitrios Sikeridis, Theodore Antonakopoulos (*University of Patras, Greece*)
- A4.3 **The Effect of Using Multiple Code Rates on NVM-based Storage Systems**  
Stelios Korkotsides, Theodore Antonakopoulos (*University of Patras, Greece*)

#### Invited Talk 1 from Industry

Chair: Prof. Mariusz Glabowski (*Poznan University of Technology, Poland*)

#### "Big Role of Small Cells in 5G Enterprise"

by Dr Anna Wielgoszewska (*Bell Labs, Republic of Ireland*)

### Session A5: Optical and Wireless Transmission\*

Co-Chairs: Prof. Grigorios Kalivas (*University of Patras, Greece*)  
Dr Konstantinos Yiannopoulos (*University of Peloponnese, Greece*)

- A5.1 **Improvement of a Transmission Rate for a Multiple-Input Single-Output Visible Light Communication System**  
Aki Kaizu, Masataka Imao and Satoko Miki (*Mitsubishi Electric Corporation, Japan*)
- A5.2 **Optimal Combiners in Pre-Amplified Optical Wireless Systems: Operation under Strong Atmospheric Turbulence**  
Nikolaos Sagias, Anthony Boucouvalas, Konstantinos Yiannopoulos, Murat Uysal, Zabih Ghassemlooy (*University of Peloponnese, Tripolis, Greece*)
- A5.3 **Performance of Wireless Communication System in the Presence of Rician Short Term Fading, Gamma Long Term Fading and Cochanel Interference**  
Dragana Krstic, Mihajlo Stefanovic, Vladeta Milenkovic, Dragan Radenkovic, Hristo Ivanov, Erich Leitgeb (*University of Nis, Serbia*)
- A5.4 **Performance of Wireless System in the Presence of k- $\mu$  Multipath Fading, Gamma Shadowing and k- $\mu$  Cochanel Interference**  
Dragana Krstic, Mihajlo Stefanovic, Vladeta Milenkovic, Dragan Radenkovic, Hristo Ivanov, Erich Leitgeb (*University of Nis, Serbia*)
- A5.5 **60 GHz Front-end Components in 130 nm CMOS Technology For Broadband Wireless Communication**  
Vasilis Kolios, Konstantinos Giannakidis, Grigorios Kalivas (*University of Patras, Greece*)

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B. Thursday, July 7

*Keynote Speech*

Chair: Prof. Mariusz Glabowski (*Poznan University of Technology, Poland*)

**"Effective exploitation of spatial domain for 5G small-cell structured mobile networks"**

by Prof. Fumiyuki Adachi (*Tohoku University, Sendai, Japan*)

*Keynote Speech*

Chair: Prof. Michael Logothetis (*University of Patras, Greece*)

**"Application of non full-availability models in the analysis of multi-service network systems"**

by Prof. Maciej Stasiak (*Poznan University of Technology, Poland*)

*Invited Talk 2 on Teletraffic*

Chair: Dr Ioannis Moscholios (*University of Peloponnese, Greece*)

**"Analytical Modelling of Overflow Systems with Elastic Traffic"**

by Prof. Mariusz Glabowski (*Poznan University of Technology, Poland*)

**Session B1: Teletraffic\***

Co-Chairs: Prof. Piotr Zwierzykowski (*Poznan University of Technology, Poland*)

Dr Vassilios Vassilakis (*University of West London, U.K.*)

**B1.1 Modelling of the Wireless Access System**

Slawomir Hanczewski, Maciej Stasiak, Piotr Zwierzykowski (*Poznan University of Technology, Poland*)

**B1.2 Efficient Call-level Assessment of Multirate Loss Systems Including Cooperative Users**

Ioannis Moscholios, Michael Logothetis (*University of Peloponnese, Tripolis, Greece*)

**B1.3 A Multirate Loss Model for Quasi-Random Traffic under the Multiple Fractional Channel Reservation Policy**

Ioannis Moscholios (*University of Peloponnese, Tripolis, Greece*)

**B1.4 Call Blocking Probabilities in an Erlang Multirate Loss Model under a State-dependent Threshold Policy**

Ioannis Moscholios (*University of Peloponnese, Tripolis, Greece*)

**B1.5 Evaluation of Multirate Loss Models for the X2 Link of LTE Networks**

Panagiotis Panagoulas, Ioannis Moscholios (*University of Peloponnese, Tripolis, Greece*)

**Session B2: Network Planning\***

Co-Chairs: Prof. Masaki Aida (*Tokyo Metropolitan University, Japan*)

Prof. Vassilis Stylianakis (*University of Patras, Greece*)

**B2.1 Forecasting of the Broadband Penetration with Genetic Programming method and diffusion models- A Short Research in OECD countries**

Konstantinos Salpasaranis, Vassilis Stylianakis (*University of Patras, Greece*)

**B2.2 Examining the Cost Efficiency of Future Heterogeneous Optical Networks**

Filippos Balasis, Sugang Xu, Yoshiaki Tanaka (*Waseda University, Tokyo, Japan*)

**B2.3 Experimental Study on Relationship between Indices of Network Structure and Spectral Distribution of Graphs**

Ryosuke Sawada, Yusuke Sakumoto, Chisa Takano, Masaki Aida (*Tokyo Metropolitan University, Japan*)

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### Keynote Speech

Chair: Prof. Piotr Zwierzykowski (*Poznan University of Technology, Poland*)

#### **"Oscillation Model for Describing Propagation of Activities on Network Caused by Asymmetric Node Interactions"**

by Prof. Masaki Aida (*Tokyo Metropolitan University, Japan*)

### **Session B3: Algorithms and Systems\***

Co-Chairs: Prof. Nikos Fakotakis (*University of Patras, Greece*)  
Dr Konstantinos Moustakas (*University of Patras, Greece*)

- B3.1 **A proposed mHealth system for Parkinson's disease evaluation using Smartphone test data**  
Aggeliki Anastasiou, John Lakoumentas, Konstantinos Moustakas (*University of Patras, Greece*)
- B3.2 **Fusion of Multiple Features for Land Cover Classification**  
Wenzhi Liao, Hongyan Zhang, Jie Li, Shaoguang Huang, Rui Wang, Renbo Luo, Xingzhe Xie, Aleksandra Pizurica (*Ghent University, Belgium*)
- B3.3 **Evaluation of Classification Algorithms for Text Dependent and Text Independent Speaker Identification**  
Iosif Mporas, Saeid Safavi, Hock Chye Gan, Reza Sotudeh (*University of Hertfordshire, U.K.*)

#### *Invited Talk 3 from Industry*

Chair: Dr Ioannis Moscholios (*University of Peloponnese, Tripolis, Greece*)

#### **"SDN and NFV for satellite infrastructures"**

by Dr George Agapiou (*Hellenic Telecommunications Organization, Greece*)

#### *Invited Talk 4 from Industry*

Chair: Prof. Spyros Denazis (*University of Patras, Greece*)

#### **"Internet of Things (IoT): Micro-location and Smart Buildings"**

by Dr Ioannis Papapanagiotou (*Netflix, USA*)

### **Session B4: Communications and Information Processing for the Smart Grid\***

Co-Chairs: Dr Nikos Passas (*University of Athens, Greece*)  
Dr John Vardakas (*Iquadrat, Barcelona, Spain*)

- B4.1 **A Virtual Microgrid Aggregator Platform for Distributed and Small-Scale RES Prosumers' Management**  
Ioannis Mamounakis, Dimitrios J. Vergados, Prodromos Makris, Emmanouel Varvarigos (*University of Patras, Greece*)
- B4.2 **Design and characterization of an integrated Remote Access Unit for wireless communication**  
Katrín Rylander, Sylwester Latkowski, Erwin Bente, Ronald Broeke, Dimitris Tsiokos, Nikos Pleros, Andres Sosa, Tolga Tekin, Arjen Bakker (*PhoeniX Software, Enschede, Netherlands*)
- B4.3 **A System Level Simulator for Reliable Smart Energy Networks**  
Stefano Tennina, Dionysis Xenakis, Mattia Boschi, Andrea Colarieti, Nikos Passas, Dimitris Tsolkas (*WEST Aquila S.r.l., Italy*)
- B4.4 **Jamming and Black Hole Attacks in the Smart Grid with Perfect Detection of Malicious Nodes**  
Dionysis Xenakis, Anastasia Tsiota, Nikos Passas (*University of Athens, Greece*)
- B4.5 **Peak Demand Reduction Through Demand Control: A Mathematical Analysis**  
John Vardakas, Ioannis Zenginīs, Maria Oikonomakou (*Iquadrat, Barcelona, Spain*)

#### *Invited Talk 5 on Power Line Communication*

Chair: Prof. Vassilis Stylianakis (*University of Patras, Greece*)

#### **"On the Energy Efficiency Performance of Power Line Communication Systems"**

by Dr Khaled Rabie (*Manchester Metropolitan University, U.K.*)

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