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Wednesday, 3 May

Registration/ Support Desk hours (08:00 - 12:30 & 13:30 - 17:00)		
08:25-08:30	Conference General Chairs Welcome	
08:30-09:30	Keynote 1 (Room: Panorama) Mohamed-Slim Alouini - Paving the way towards 5G Wireless Communication Networks	
09:30-10:30	Keynote 2 (Room: Panorama) Latif Ladid - Future Internet (IPv6-based IoT, CC, SDN-NFV and 5G)	
10:30-11:00	Coffee Break	
11:00-12:30	Panorama	Megaron B
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	<u>D2D Cooperative Communications for Disaster Management</u> 6 Zheng Chu (Middlesex University, London, United Kingdom); Huan X Nguyen, Tuan Anh Le and Mehmet Karamanoglu (Middlesex University, United Kingdom); Duc To (Cobham Wireless, United Kingdom); Enver Ever (Middle East Technical University, Turkey); Fadi M. Al-Turjman (Middle East Technical University, Turkey); Adnan Yazici (Middle East Technical University, Turkey)	<u>New Construction and Performance Analysis of Polar Codes over AWGN Channels</u> 30 Bashar Tahir and Markus Rupp (TU Wien, Austria)
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	<u>Fair Decentralized Data-Rate Congestion Control for V2V Communications</u> 16 Chetan Belagal Math (Technische Universiteit Eindhoven, The Netherlands); Hong Li (NXP Semiconductors, The Netherlands); Sonia De Groot (Eindhoven University of Technology, The Netherlands); Ignas Niemegeers (Eindhoven University of Technology, The Netherlands)	<u>Sequential Decoding for Simultaneous Wireless Information and Power Transfer</u> 40 Eleni Goudeli, Constantinos Psomas and Ioannis Krikidis (University of Cyprus, Cyprus)
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	<u>Two-Stage Opportunistic Interference Alignment for Downlink MU-MIMO Cellular Systems</u> 50 Ahmed Benaya (Egypt-Japan University of Science and Technology, Egypt); Maha Elsabrouty (Egypt-Japan University for Science and Technology, Egypt)	<u>WiFiMon App Measuring Wi-Fi Performance as Experienced by End-Users</u> 67 Kurt Baumann (SWITCH, Switzerland); Christos J Bouras (University of Patras CTI&P-Diophantus & University of Patras, Greece); Vasileios Kokkinos (University of Patras & Greek Research and Technology Network S.A., Greece); Nikolaos Papachristos (University of Patras, Greece); Kostas Stamos (University of Patras and CTI & Technological Educational Institute of Patras, Greece)

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	<u>A Cost Efficient and Flexible Cyclostationary Feature Detector Based on Sliding Discrete Fourier Transform for Cognitive Spectrum Sensing</u> 101 Bin Han and Hans D. Schotten (University of Kaiserslautern, Germany)	<u>Practical Random Linear Coding for MultiPath TCP: MPC-TCP</u> 122 Paul-Louis Ageneau and Nadia Boukhatem (Telecom ParisTech, France); Mario Gerla (University of California at Los Angeles, USA)
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10:30-12:00	Panorama	Megaron B
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	An Intrusion Detection System for Wireless Sensor Networks 143 Christiana Ioannou, Vasos Vassiliou and Charalambos Sergiou (University of Cyprus, Cyprus)	Full-Duplex Spatial Modulation Systems under Imperfect Channel State Information 164 Asil Koc, İbrahim Altunbaş and Ertugrul Basar (Istanbul Technical University, Turkey)
	Intrusion Recovery in NLOS WSNs with a Varying Network Density 148 Eliana Stavrou (University of Central Lancashire, Cyprus); Stavros Stavrou (Open University of Cyprus, Cyprus)	Capacity-Based User Selection Algorithm for Downlink Beamforming Non-Orthogonal Multiple Access System 169 Abdelsalam Sayed Ahmed (Ejust, Egypt); Maha Elsabrouty (Egypt Japan University for Science and Technology, Egypt)
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	Choice of Suitable Identity and Access Management Standards for Mobile Computing and Communication 193 Nitin Naik and Paul Jenkins (Ministry of Defence, United Kingdom); David Newell (Bournemouth University, United Kingdom)	Impact of the Doppler Effect on the Capacity of Massive MIMO Uplink Systems: OFDM versus FBMC/OQAM 216 Alexis Bazin (INSA Rennes & Orange Labs, France); Bruno Jahan (France Telecom, France); Maryline H��lard (INSA Rennes & IETR Institute of Electronics and Telecommunications of Rennes, France)
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15:30-17:00	Panorama	Megaron B
	T1: Biological Computing: Building Chips with Living Organisms	T2: From Wireless Power Transfer to Wireless Powered Communications 324
	Speaker: Marcello Caleffi Over the last twenty years, a huge number of algorithms trying to mimic biological processes have been proposed for solving hard computational problems. Nevertheless, these bio-inspired algorithms represent only the very first step toward the design of smart adaptive computing devices. In fact, they model only a limited set of the rules underlying the biological processes, thus, omitting fundamental functionalities. Moreover, they are executed on traditional computer architectures, thus, failing to achieve the intrinsic parallelism exhibited by biological processes. To overcome these issues, very recently researchers worldwide started to work on biological computing, a novel paradigm in which the traditional inorganic chips are replaced by living organisms. Participants of this talk can obtain a wide view about biological computation and about the challenges arising in its development.	Speaker: Ioannis Krikidis This tutorial aims to familiarize the attendees with the new communication paradigm of wireless powered communications (WPC). Conventional energy-constrained wireless systems such as sensor networks are powered by batteries and have limited lifetime. Wireless power transfer is a promising technology for energy sustainable networks, where terminals can harvest energy from the ambient electromagnetic radiation through appropriate electronic circuits. Since radio signals carry both information and energy at the same time, a unified study on simultaneous wireless information and power transfer (SWIPT) is an emergent topic.
18:00-23:00	Tour& Conference Dinner	

Friday, 5 May

Registration/ Support Desk hours (08:00 - 12:30 & 13:30 - 17:00)		
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	<p><u>Quality of Fingerprint Radiomaps for Positioning Systems</u> 227</p> <p>Loizos Kanaris and Akis Kokkinis (Sigint Solutions Ltd, Cyprus); Antonio Liotta (Eindhoven University of Technology, The Netherlands); Stavros Stavrou (Open University of Cyprus, Cyprus)</p>	<p><u>Dynamic User-Centric Clustering Algorithm Based on Energy Efficiency in Cloud-RAN</u> 249</p> <p>Ruxuan Jiao, Xiangming Wen and Zhaoming Lu (BUPT, P.R. China); Yawen Chen (Beijing University of Posts and Telecommunications, P.R. China); Hua Shao (Beijing University of Posts and Telecommunications, P.R. China); Wenpeng Jing (Beijing University of Posts and Telecommunications, P.R. China)</p>
	<p><u>Multi-hop Relays for High Frequency Next Generation Wireless Systems</u> 232</p> <p>Alexander Sayenko (Samsung Electronics, Finland); Mikhail Zolotukhin and Timo Hämäläinen (University of Jyväskylä, Finland)</p>	<p><u>Per-packet Based Energy Aware Segment Routing Approach for Data Center Networks with SDN</u> 256</p> <p>Karanjot Singh Ghuman (University of Ottawa, Canada); Amiya Nayak (SITE, University of Ottawa, Canada)</p>
	<p><u>Unified Outage Performance Analysis of Two-Way/One-Way Full-Duplex/Half-Duplex Fixed-Gain AF Relay Systems</u> 239</p> <p>Asil Koc and İbrahim Altunbaş (Istanbul Technical University, Turkey); Burhaneddin Yaman (University of Minnesota, USA)</p>	<p><u>Load-Aware Power Efficiency Maximization in Heterogeneous Wireless Networks</u> 262</p> <p>Mohamad Zalgout (INSA de Rennes & Institute of Electronics and Telecommunication of Rennes (IETR), France); Jean-François Hélard (IETR, France); Ayman Khalil (Institute of Electronics and Telecommunications of Rennes - IETR & INSA, France); Samih Abdul-Nabi (Lebanese International University, Lebanon); Matthieu Crussière (IETR - Electronics and Telecommunications Research Institute of Rennes (IETR) & INSA - National Institute of Applied Sciences, France)</p>
10:30-11:00	Coffee Break	
11:00-12:30	Panorama	Megaron B
	S13: Optical Communications	S14: Mobile Communications
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	<p><u>Extended Receive Antenna Shift Keying</u> 274</p> <p>Ali Mokh (Institut National des Sciences Appliquées de Rennes, France); Maryline Hélard (INSA Rennes & IETR Institute of Electronics and Telecommunications of Rennes, France); Matthieu Crussière (IETR - Electronics and Telecommunications Research Institute of Rennes (IETR) & INSA - National Institute of Applied Sciences, France)</p>	<p><u>Ultra Long Range LTE Ocean Coverage Solution</u> 291</p> <p>Hyoungwon Seo and Junho Jeong (Korea Telecom, Korea)</p>

	<u>Technologies and Architectures for Broadband Digital Divide Elimination</u> 280 Spyros Polykalas (TEI of Ionian Islands, Greece); Kyriakos Vlachos (University of Patras, Greece); Georgios Ellinas (University of Cyprus, Cyprus)	<u>Jointly Optimal Downlink/Uplink Design for Wireless Powered Networks</u> 296 Panagiotis D. Diamantoulakis (Aristotle University of Thessaloniki, Greece); Koralia N. Pappi (Aristotle University of Thessaloniki & Intracom S.A. Telecom Solutions, Greece); George K. Karagiannidis (Aristotle University of Thessaloniki, Greece)
		<u>A Novel Reliable Routing Scheme for Tactile-oriented Internet Traffic</u> 302 Mohammad Farhoudi (King's College London, United Kingdom); Panagiotis Palantas (King's College London, UK); Benyamin Abrishamchi, Andrej Mihailovic and Hamid Aghvami (King's College London, United Kingdom)
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14:00-15:30	Panorama	
	Workshop International Workshop on 5G Networks for Public Safety and Disaster Management Keynote: Panayiotis Kolios - Disaster Resilient Telematics in Public Safety Networks <u>A SWIPT-based Device-to-Device Cooperative Network</u> 309 Rafay Iqbal Ansari ¹ , Syed Ali Hassan ² , and Chrysostomos Chrysostomou ¹ ¹ Department of Computer Science and Engineering, Frederick University, Nicosia, Cyprus. ² School of Electrical Engineering and Computer Science, (SECS), National University of Sciences and Technology, (NUST), Islamabad, Pakistan <u>On Context-Aware Proxy in Mobile Cloud Computing for Emergency Services</u> 314 Manfred Sneps-Sneppe ¹ and Dmitry Namiot ² ¹ Ventspils International Radioastronomy Centre, Ventspils University College ² Faculty of Computational Mathematics and Cybernetics, Lomonosov Moscow State University <u>D2D Multi-hop relaying Services Towards Disaster Communication System</u> 319 Kamran Ali ¹ , Huan X. Nguyen ¹ , Purav Shah ¹ , Quoc-Tuan Vien ¹ and Enver Ever ² ¹ Faculty of Science and Technology, Middlesex University London, United Kingdom ² Department of Computer Engineering, Middle East Technical University, Turkey	
15:30-16:00	Coffee Break	
	Panorama	Megaron B
	<u>T3: Flexible Radio Access beyond 5G: A Future Projection</u> 381	<u>T4: Wireless Coded Caching: A Paradigm Shift in Communications</u> 402

<p>16:00-18:00</p>	<p>Speaker: Huseyin Arslan</p> <p>In this tutorial, we will discuss the potential directions to achieve further flexibility in RATs beyond 5G. In this context, a framework for developing flexible waveform, numerology, and frame design strategies will be discussed along with sample methods in this direction. We will also discuss their potential role to handle various issues in the upper system layers</p>	<p>Speaker: Petros Elia</p> <p>This tutorial is about a new way of seeing caching, and it is about the recently discovered deep connections between memory/caching and the fundamentals of communication theory. The tutorial will about a new technology that – at first indications – has the potential to approach the long sought holy grail of wireless communications, which is to serve an ever increasing number of users, with a fixed amount of bandwidth resources. The material spans theory and practice, as well as spans the PHY-part of ICT and the networking part of ICT. Finally this is a "hot" emerging topic: the last best paper award for the Transactions on Information Theory was for this general topic, and so was the EURASIP-JWCN Best Paper Award for 2017</p>
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