



Workshop Call For Paper (CFP)

1. Title of workshop

Optimizing Heterogeneous Networking Technologies for the Internet of Things (On-IoT)

2. Length of workshop

Full-day Half-day

3. Organizers

- **Vangelis Angelakis**, Associate Professor, Linköping University, Sweden; vangelis.angelakis@liu.se

Dr. Vangelis Angelakis holds an MSc and a PhD in Computer Science from the University of Crete, Greece. In 2009 he joined as a Marie Curie fellow the Department of Science and Technology, at Linköping University, where he became Assistant Professor of Mobile Telecommunications in 2013. He has been a visiting researcher at the University of Maryland (2005), the Huazhong University of Science and Technology (2013), and at the Mobile and Pervasive Computing Institute at Lund University (2014 -). His research focuses on performance engineering of wireless networks with fundamental scope as well as having application on heterogeneous networking systems and the IoT. He has participated in numerous collaborative projects in the EU under the FP7 in a wide range of schemes and has notable industrial experience gained through secondments within MSCA IAPP projects. He is currently coordinating the SOrBet (Smart Objects for Intelligent Building Management) FP7 MSCA project and participates in other EU-Funded projects (notably, RERUM, ACT5G, and MESH-WISE), with a focus on the communication reliability and efficiency of large numbers of smart objects enabling the IoT. He is an editor in the IEEE/KICS JCN. He has been organizing the “RESONANT” special session in IEEE CAMAD since 2013, and has been multiple times in the organization committee of the SNOW Nordic Workshop. He has served as demo chair/ tutorial chair/ tpc member/ reviewer in numerous IEEE, ICST, FTRA conferences and as reviewer in top-tier journals.

- Elias Tragos, Researcher, FORTH-ICS, Greece - etragos@ics.forth.gr;

Dr. Elias Z. Tragos is a researcher in the Telecommunications and Networks Laboratory (TNL) of the Institute of Computer Science of the Foundation for Research and Technology, Hellas (FORTH-ICS). He received his Diploma, his Master's in Business Administration and his PhD in Telecommunications from the School of Electrical and Computer Engineering of the National Technical University of Athens in 2003, 2005 and 2008 respectively. He has been with FORTH-ICS since 2009, working as a researcher and project manager in many EU and nationally funded projects. He has been involved in several Cross Issues workgroups of the Wireless World Initiative (WWI) during his involvement in the WINNER and WINNER II projects. He is currently the technical coordinator of the EU-FP7-SMARTCITIES-RERUM project. Dr. Tragos has published more than 50 papers in peer-reviewed journals and conferences and has received more than 500 citations (h index = 11). His research interests are in the areas of wireless networks, radio resource and spectrum management, internet of things, security, privacy and trust in the IoT, software defined radios, and network optimization and heterogeneous networking. He has been involved in the organisation of various conferences, workshops and special sessions. He has served as a reviewer in top IEEE conferences. He is a Technical Committee member of Elsevier Computer Communications journal and he has been awarded with the outstanding reviewer status in the same journal.

4. Workshop description

The proliferation of new mobile services is driving QoS requirements spanning throughput, delays, network coverage & so on continuously higher. Multitudes of mobile devices battery-hungry are either already connected to the Internet or are about to be. At the same time, a much larger number of devices around us are getting connected as well to the Internet, or are about to be. This connection of physical objects to the Internet has infused immense doses of intelligence in our environment. This comes through ICT-enabled devices that are either directly attached to our objects, or monitoring and controlling them, shaping the Internet of Things (IoT). Taking on ever larger scales, buildings and whole cities embracing the IoT are becoming smarter, using a wide range of IoT supporting technologies to enhance and improve the quality of everyday living, contributing at the same time to the global target of reducing energy consumption.

The IoT enables the interconnection of heterogeneous devices (laptops, smartphones, tablets, sensors, actuators etc.) allowing them to communicate seamlessly to the user, exchanging information and data without human intervention. This type of communication is expected to be the key enabling part of the future communication landscape, since a large number of smart applications are based on large volumes of machine-generated data. By 2020 it is expected to have even billions of wireless devices connected to the global internet. This explosion in the number of wireless devices raises unprecedented requirements for the upcoming communication technologies (e.g. 5G, 802.11ah, etc.) that are being developed to support the interconnectivity of heterogeneous devices, the large amounts of devices and the new types of services that will be provided.

Furthermore, the interconnection of large amounts of heterogeneous devices raises new challenges regarding security of the communications, privacy of the users' data and trust of both the users and the devices. Having a large number of connected devices installed in various places of the daily life, e.g. in homes, offices, busses, on the street, monitoring the

everyday activities of citizens raises issues regarding the privacy of the citizens' personal data. The privacy issues exist not only when users are actively involved in IoT applications e.g. when sending data from their mobile phones, but also when they are subjects of monitoring by other devices, e.g. when they are being monitored by cameras on the streets. Devices that offer actuation capabilities, e.g. traffic lights, gates, allow cyber attacks to extend effects to the real world. Thus, only trusted devices should be allowed to affect the system decisions and only trusted users should be able to access sensitive devices/data. Indeed, trust in the IoT is also a very important issue that only lately has attracted the research community.

This workshop aims to bring together experts from the research community, the industry and standardisation bodies and discuss in the context of heterogeneous networking technologies for the Internet of Things, aiming to identify solutions for addressing the key challenges that IoT brings to the networking domain.

We highly encourage novel and innovative previously unpublished work. Topics include, but are not limited to:

<ul style="list-style-type: none"> • Architectures and protocols optimization for IoT • Cellular IoT • Performance modeling of future networks • Resource management mechanisms for heterogeneous networks • Quality of service in future heterogeneous wireless IoT networks • Optimized and robust dynamic spectrum access on IoT • Scalability, robustness and energy efficiency • Co-existence issues of future heterogeneous networks for the IoT • Heterogeneous network simulation models and techniques 	<ul style="list-style-type: none"> • Data processing, mining, fusion, storage, and management techniques • Case studies, prototypes, and test-beds of on smart services and applications, including: • Smart City applications based on IoT • Smart City heterogeneous networking deployments • Intelligent Building Management • Intelligent Transportation Systems • Smart metering, and multiservice metering • Security and privacy in heterogeneous IoT networks • Trust management schemes for heterogeneous IoT deployments
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5. Important Information

When: half-day on Thursday, December 10, 2015
Where: San Diego, CA, USA
Paper Submission: by July 1, 2015
Notification of Acceptance: by September 1, 2015
Camera-ready Paper Due: by October 1, 2015

Posters and Demo co-chairs:

- Stefanos Papadakis, FORTH, Greece
- Emma Fitzgerald, Lund University, Sweden;

TPC Chair:

- Ilaria Malancini, Alcatel Lucent, Germany
- Nikolaos Pappas, Linköping University, Sweden

Technical Program Committee (TPC) Members:

- Antonio Capone, Politecnico di Milano, Italy;
- Benjamin Aziz, University of Portsmouth, UK
- Charalampos Doukas, CREATE-NET, Italy
- Christos Verikoukis, CTTC, Spain;
- Di Yuan, Linköping University, Sweden;
- Dong Min Kim, Aalborg University, Denmark;
- Enzo Mingozzi, University of Pisa
- George Oikonomou, University of Bristol, UK
- Gianmarco Baldini, Joint Research Centre , Belgium
- Henrich Poehls, University of Passau, Germany
- Malancini Ilaria, Alcatel-Lucent Bell Labs, Germany;
- Marian Codreanu, University of Oulu, Finland;
- Marios Kountouris, Huawei Technologies, France
- Martin Serrano, NUI Galway, Ireland
- Mehmet Karaca, Lund University, Sweden;
- Michal Piore, Warsaw University of Technology, Poland;
- Nikolaos Pappas, Linköping University, Sweden
- Nikolaos Pappas, Linköping University, Sweden;
- Panagiotis Vlacheas, University of Piraeus, Greece
- Ricardo Neisse, Ispra, Italy.
- Saeed Bastani, Lund University, Sweden;
- Septimiu Nehifor, Siemens Srl, Romania
- Sherali Zeadally, University of Kentucky, USA;
- Symeon Chatzinotas, University of Luxembourg
- Vasilios A. Siris, Athens University of Economics and Business, Greece

6. Planned Format of the Workshop

Table below shows the initial agenda of On-IoT 2015.

Time	Schedule
8:30 am	Introduction to the workshop Workshop goals and process Introduction of invited speaker
8:45 am	Session 1 (5 presentations)
10:30 am	Coffee break
11:00 am	Session 2 (5 presentations)
12:30 pm	Closing comments from organizers
12:10 pm	Adjournment

7. Workshop web address

<http://www.ics.forth.gr/tnl/Glob15-IoT/>

8. Submission Guidelines

All final submissions should be written in English with a maximum paper length of six (6) printed pages (10-point font) including figures without incurring additional page charges (maximum 1 additional page with over length page charge of USD100 if accepted). Papers exceeding 7 pages will not be accepted at EDAS.

Standard IEEE conference templates for LaTeX formats are found at here: http://www.ieee.org/conferences_events/conferences/publishing/templates.html.

You may also use one of the following templates for Microsoft Word: A4, US letter. Only PDF files will be accepted for the review process, and all submissions must be done through EDAS.

Important IEEE Policy Announcement: The IEEE reserves the right to exclude a paper from distribution after the conference (including its removal from IEEE Explore) if the paper is not presented at the conference.

Papers must not contain plagiarized material and have not been submitted to any other conference/workshop at the same time (double submission). These matters are taken very seriously and the IEEE Communications society will take action against any author who engages in either practice. Follow the link to learn more:

http://www.ieee.org/publications_standards/publications/rights/Multi_Sub_Guidelines_Intro.html.

PLEASE NOTE: To be published in the IEEE GLOBECOM 2015 Conference Proceedings and to be eligible for publication in IEEE Xplore, an author of an accepted paper is required to register for the workshop at the FULL (member or non-member) rate and the paper must be presented by an author of that paper at the workshop unless the TPC Chair grants permission for a substitute presenter in advance of the event and who is qualified both to present and answer questions. Non-refundable registration fees must be paid prior to uploading the final IEEE formatted, publication-ready version of the paper. For authors with multiple accepted papers, one FULL or LIMITED registration is valid for up to 3 papers. Accepted and presented papers will be published in the IEEE GLOBECOM 2015 Conference Proceedings and submitted to IEEE Xplore®.