



## CALL FOR WORKSHOP PAPERS

### 1st Workshop on Emerging Technologies in Edge Computing and Networking

The global evolution of the Internet is experiencing a notable and inevitable change towards a convergent scenario known as the Internet of Things (IoT) where a large number of devices with heterogeneous characteristics and requirements have to be interconnected to serve to different verticals such as smart cities, Intelligent Transportation Systems (ITS) or e-health. In order to satisfy the strict requirements on end-to-end latency and scalability of new services, as well as the processing of the massive volume of data that they generate, it is necessary to design and deploy a decentralized service platform architecture based on MEC (Multi-Access Edge Computing) and/or fog computing with the aim of reducing the distance between the source of data and the processing resources. 5G, and especially 6G, have been proposed to fulfil the strict latency and scalability constraints providing cell-less multiaccess networks controlled by efficient artificial intelligence techniques and supported by MEC. All these elements are forcing a holistic redesign of communication networks and distributed computing and storage architectures to maximize the performance/cost ratio, meeting the demanding challenges of latency, scalability, bandwidth, availability and flexibility that future services will require. The softwarization and virtualization of networks using SDN and NFV paradigms are essential technologies for that convergence. The implementation of an open control layer based on them will facilitate the management of the multiple computing and networking technologies that will coexist and will make possible to face the needs and requirements of 5G/6G associated with future applications and services. Moreover, they eliminate the so-called vendor lock-in in favor of a vendor-independent programmable network environment that allows the assembly of different devices (white-boxes) manufactured by multiple providers.

Researchers from edge computing and networking communities are encouraged to submit complete unpublished papers with their contributions, exploring emerging technologies that allow the integration of future edge computing and networks.

Topics of interest include, but are not limited to, the following:

- 5G/6G networks for the deployment of edge computing applications.
- Distributed computing architectures for edge-to-cloud hierarchy
- Orchestration and management of edge computing and 5G/6G networks.
- Dimensioning and planning of future networks MEC-enabled networks.
- Control and planning of optical networks.
- Efficient convergence of wireless and optical infrastructures.
- Network virtualization over edge computing architectures.
- Software-defined networking to deploy edge computing architectures.
- Network slicing in Edge Computing environments.
- Computation offloading on edge-to-cloud hierarchy.
- Artificial intelligence for efficient planning and/or control of networks and edge resources.
- Power consumption models of edge computing and networks.
- Techno-economic models for networks and distributed computing resources.
- Life cycle model for data in edge-to-cloud hierarchy.
- Artificial Intelligence for IoT (AIoT).
- Industrial IoT (IIoT).
- Security and/or privacy on edge computing scenarios.
- Applications, testbed and experiments of emerging edge computing and networking

### IMPORTANT DATES

Deadline for workshop paper submission	Acceptance/rejection announcement	Final workshop papers due
July 31, 2021	September 15, 2021	November 15, 2021

### WORKSHOP FORMAT

The workshop follows a novel format that pursues two objectives:

- To identify new challenges and share new solutions for the convergence of edge computing and networking from the perspective of academia as well as industrial partners involved in that evolution: network operators, service providers and manufacturers.
- To encourage strong interaction between presenters and attendees.

Firstly, a keynote session with two speakers from industry followed by an industrial panel will be held. Then, in the afternoon, two scientific sessions will take place. For these scientific sessions, we encourage researchers from edge computing and networking communities to submit complete unpublished papers. Scientific session follows hybrid oral and poster format. Each accepted refereed paper will have just 3 minutes to orally present the key points of that work and, after this round, the session will change its format to a poster session where authors will expose and explain their complete work using a poster. The 3-minute talks will help the attendees to quickly learn about all the different contributions presented in the session. Then, during the poster session attendees can focus their attention on the most interesting papers from their point of view and discuss their questions/opinions/suggestions with the authors. Both presentation and poster are mandatory to consider a paper as presented.

A tentative schedule of the workshop is:

Tuesday, 7 <sup>th</sup> December 2021	
Morning session 1	Welcome from workshop organizers & Keynote talks
Coffee break	
Morning session 1	Industrial panel "Emerging technologies and challenges for Edge Computing and Networking Convergence"
Lunch break	
Afternoon session 1	Scientific session 1
Coffee Break	
Afternoon session 2	Scientific session 2 & Closure

### WORKSHOP ORGANIZERS

Dr. Ramón J. Durán Barroso  
Universidad de Valladolid

Dr. Javier Prieto  
Universidad de Salamanca

Prof. Joel J. P. C. Rodrigues  
Federal University of Piauí

### KEYNOTE SPEAKERS

Dr. Alice Li, Huawei  
Vice Chairman of MEC ETSI

Dr. Óscar González de Dios  
Telefónica I+D

### INDUSTRIAL PANEL

- Dr. Pouria Sayyad Khodashenas, Huawei Technologies Sweden AB
- Dr. Óscar González de Dios, Telefónica I+D
- Dr. Dominique Verchere, Nokia Bell Labs
- Dr. Daniel Lucani, Chocolate Cloud ApS
- Víctor Pascual, ZTE Corporation

### TECHNICAL PROGRAM COMMITTEE CHAIRS

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