

# 1<sup>st</sup> International Workshop on Edge Network Softwarization

\*\*\* ENS 2022 \*\*\*

*co-hosted at*

**8<sup>th</sup> IEEE International Conference on Network Softwarization (NetSoft 2022)**

*supported by*

**IEEE Network Intelligence Emerging Technologies initiative (IEEE NI ETI)**

<http://ni.committees.comsoc.org>

Website: <https://sites.google.com/view/ens2022>

## Aim and Scope

The *1st International Workshop on Edge Network Softwarization* (ENS 2022) will be co-hosted at the *8<sup>th</sup> IEEE International Conference on Network Softwarization* (NetSoft 2022) that will be held from June 27th to July 1st, 2022 in Milan, Italy.

Network Function Virtualization (NFV) along with Software-Defined Networking (SDN) are playing a fundamental role in the softwarization of the network infrastructure. In particular, both technologies have revolutionized the way network functions and services are offered, which are often (partially) pushed towards the edge for enhanced performance, improved privacy, better agility and significant cost reduction.

Accordingly, this workshop aims at providing an overview of the softwarization process that has started occurring in recent years and is involving the network edge, with focus on future-proof approaches that will be part of the advanced 5G&B and 6G network solutions.

Edge network softwarization is a fundamental topic that has to be thoroughly investigated and pushed by the research community. ENS 2022 has the goal to meet together researchers and practitioners from academia and industry that are actively involved in network edge softwarization related research projects.

## Topics of Interest

The topics of interest for ENS 2022 include, but are not limited to:

- SDN and NFV distributed solutions for the network edge;
- 5G network softwarization and beyond;
- Software-Defined Wide Area Network (SD-WAN) solutions for network edge (e.g. orchestration strategies, uCPE monitoring, traffic engineering);
- Service and network orchestration at the edge;
- Novel solutions for data-plane programmable (e.g. P4, eBPF, XDP) edge devices;

- Artificial Intelligence and Machine Learning at the edge;
- Serverless computing and Function-as-a-Service in edge network architectures;
- Network-aware resource provisioning in Fog Computing;
- Inter-data center networking;
- Advances to end-to-end tunnelling technologies (e.g. VxLAN, IPSEC/GRE);
- Edge computing energy efficiency and resource optimisation;
- Support for low latency applications at the edge (e.g. Tactile Internet);
- Edge-driven use cases (e.g. Agriculture 4.0, Industry 4.0, etc.);
- Privacy and security for the network edge (e.g. zero trust networks);
- Multi-tenancy of edge networks;
- Network edge availability and protection;
- Open Hardware and Software solutions;
- Converged optical and wireless architectures at the edge.

### Important Dates

Paper Submission: ~~February 28, 2022~~ March 21, 2022 (Extended, Firm)

Notification of Acceptance: April 21, 2022

Camera-ready Submission: May 5, 2022

Workshop Date: TBD (either Monday June 27th, 2022 or Friday July 1st, 2022)

### Paper Submission

Authors are invited to submit original contributions for presentation at the workshop. All submissions must be written in English. Papers should be up to 6 pages, including references and all other material. They must use the standard IEEE two-column conference template, which can be downloaded from [www.ieee.org/conferences/publishing/templates.html](http://www.ieee.org/conferences/publishing/templates.html). Accepted and presented papers will be included in the NetSoft 2022 Proceedings and published on IEEE Xplore.

Only PDF files will be accepted for the review process and all manuscripts must be electronically submitted through EDAS: <https://www.edas.info/newPaper.php?c=29258>

### Workshop Organizers

- Marco Savi, University of Milano-Bicocca, Italy – *General Chair*
- Sebastian Troia, Politecnico di Milano, Italy – *TPC Co-Chair*
- Christian Grasso, University of Catania, Italy – *TPC Co-Chair*
- Sajad Khorsandroo, North Carolina A&T State University, USA – *Keynote Chair*
- Nabeel Akhtar, Akamai Technologies Inc, USA – *Publicity Co-Chair*
- Frank Slyne, Trinity College Dublin, Ireland – *Publicity Co-Chair*
- Elisa Rojas, University of Alcalá, Spain – *Web Chair*
- Bo Cheng, Beijing University of Posts and Telecommunications, China
- Ryota Kawashima, Nagoya Institute Technology, Japan