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SELECTED AREAS IN COMMUNICATIONS

Series on Network Softwarization & Enablers

Series Topic

CALL FOR PAPERS 2nd Edition

The architectures of mobile networks (both core and radio access networks), fixed networks, and service delivery platforms are subject to an unprecedented techno-economic transformation. This trend, often referred to as Network Softwarization within an ever-growing community of researchers in both academia and industry, will yield significant benefits in terms of reducing expenditure and operational costs of next generation (5G and beyond) networks.

The key enablers are Network Function Virtualization, Software-Defined Networking, and Cloud, Fog, and (mobile/multi-access) Edge Computing. These technologies are still at their infancy. They introduce significant technical challenges that the research community is tackling. When they are integrated to enable fully programmable, flexible, service/vertical-tailored, and automated end-to-end networks (i.e., network slices), the challenges become more significant. The technical challenges pertain to the overall process, network slice instantiation and maintenance, slicing over multi-domains (i.e., both administrative and technology), orchestration and allocation of shared and isolated resources (i.e., computing and storage capacity, virtualized network functions, networking resources, and physical radio resources), and communication interfaces amongst different network slices along with supporting algorithms and mechanisms. The concept of network softwarization is expected to serve diverse services and verticals, including, but not limited to, Tactile Internet of Things, Pervasive Robotics, Self-driving, Immersive communications, Industry 4.0, and Augmented Reality.

We invite high-quality submissions to the IEEE JSAC series on network softwarization and enablers. The first issue of the series will be published in April 2018, followed by a number of other issues to be scheduled in the period of 2018 – 2020. We are seeking papers which have not been published before and are not currently under review by any journal. The scope of this series is papers in the general arena of network softwarization, specifically on, but not limited to, the

following topics:

- RAN slicing
- Mobile core networks and their slicing
- Fixed network slicing
- Slice programmability, modeling, composition algorithms and deployment
- System/service orchestration and management
- Network function decomposition
- Network function virtualization
- Service function chaining
- Resource sharing, isolation, and federation
- Software defined networking
- Cloud computing technologies
- Virtualization techniques
- (mobile/multi-access) edge and fog computing
- MEC-, SDN-, NFV-based network service enhancement
- Service, slice, and infrastructure monitoring
- Performance, interoperability, and scalability issues
- Security, trust, and privacy issues in virtualized environments
- Best practices from experimental testbeds, trials and deployment
- Verticals, new value chains and business models

SUBMISSION GUIDELINES

Prospective authors should prepare their submissions in accordance with the rules specified in the “Information for Authors” section of the **JSAC guidelines** . All manuscripts should be prepared in single-column double-spaced format with no longer than 30 pages, including figures, tables, and references. The papers should be compiled as a PDF file and submitted to EDAS. Prospective authors may search for the 2017 JSAC-SI-NETSOFT-ENABLERS on EDAS or submit their manuscripts using this URL http://edas.info/N23884.

IMPORTANT DATES

- **Manuscript Submission Deadline:** May 01, 2018
- **Notification Deadline:** July 15, 2018
- **Camera Ready Submission Deadline:** August 1, 2018
- **Publication Date:** September 1, 2018 (tentative)

GUEST EIC

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