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Special Issue on

Special Issue on Integrating Network Softwarization Techniques into 6G Communications Systems and Applications

AIM & SCOPE:

The softwarization of networks is enabled by the SDN, NV (Network Virtualization), and NFV paradigms, and offers many advantages and convenience for network operators. Hence, network softwarization technologies are widely regarded as the key enablers of 6G communications systems and networks in the 2030s. By introducing network softwarization techniques, 6G communications elements and their specific hardware can be fully softwarized and virtualized. Consequently, more various services and novel applications can be developed.

Therefore, network softwarization technologies offer 6G communications systems with huge application potential. For example, massive Machine Type of Communication (mMTC) application scenario, one crucial scenario in 5G, is promised to be enhanced and strengthened in 6G, such as the maximum connection density. The enhanced version is abbreviated as emMTC in 6G. Internet of Things (IoT) is one dominant application branch in emMTC and has emerged as a revolution for the development of futuristic network services and applications. IoT is transforming our future by interconnecting everything through an intelligent connection. By introducing the softwarization technologies, the huge amount of data and resources requested by smart devices and humans can be collected and investigated in a more intelligent manner.

Given the strong interest in both industry and academia, this special issue aims at integrating network softwarization techniques into 6G communications systems and networks and applications. There are many interesting challenges currently requiring to be addressed by the research community.

LIST OF POTENTIAL TOPICS INCLUDE, BUT ARE NOT LIMITED TO:

- Management of SDIs (Software-Defined Infrastructures) for 6G communications and applications
- APIs and management protocols for 6G communications and applications
- Virtualization of resources, services and functions in SDN and NFV for 6G communications and applications
- Management of software-defined datacenters for 6G communications and applications
- Resource management of SDN- or NFV-based systems for 6G communications and applications
- Network slicing for 6G communications and applications
- Network softwarization for 6G communications and applications
- Softwarized edge cloud infrastructures for 6G communications and applications
- Network management at the edge for 6G communications and applications
- Dynamic migration of network functions in SDN or NFV-based systems for 6G communications and applications
- QoS/QoE management and control in softwarized networks for 6G communications and applications
- Applying AI technologies in softwarized networks for 6G communications and application

PROPOSED SCHEDULE:

Manuscript submission deadline: 30th June 2022

First notification of status: 30th August 2022

Second notification of status: 30th October 2022

Final manuscript due: 30th November 2022

Tentative publication date: Q4, 2024 (TBA by the Editor-in-Chief)

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