Special Issue on
“Management of Softwarized Networks”

Currently, there is a strong interest in both industry and academia in the softwarization of telecommunication networks and cloud computing infrastructures. This evolution of network softwarization is enabled by three paradigms: (i) Software-Defined Networking (SDN), which allows network control to be separated from the forwarding plane and allows for a flexible management of the network resources, (ii) Network Virtualization (NV), which enables virtualization of network resources, and (iii) Network Function Virtualization (NFV), which focuses on virtualization of software-based network functions. Instead of installing and managing dedicated hardware devices for these functions, they are instead implemented as software components and deployed on commodity hardware infrastructures. There are also ongoing research efforts focusing on Software-Defined Clouds, including edge clouds and Fog Computing.

In order to efficiently manage softwarized networks and to be able to use them to their full potential, there are many interesting challenges to be addressed (cfr. in the areas listed below). We welcome submissions addressing the important challenges and presenting novel research or experimentation results. Survey papers that offer a perspective on related work and identify key challenges for future research will be considered as well. We look forward to your submissions!

About the special issue
Topics of interest for this special issue, include, but are not limited to the following:
• APIs and management protocols for software programmable networks
• Management of SDIs (Software-Defined Infrastructures)
• Virtualization of resources, services and functions in SDN and NFV
• Management of software-defined datacenters
• Resource management for SDN or NFV-based systems
• Efficient management of cloud computing and softwarized edge cloud infrastructures
• Network softwarization for 5G networks
• Life cycle management of virtual network functions, SFC modeling and representation
• Composition algorithms and automated deployment of Service Function Chains (SFCs)
• Algorithms for efficient orchestration in softwarized networks
• Dynamic resource scaling and migration of network functions in NFV-based systems
• Efficient network and service monitoring for SDN or NFV
• Security management for SDN and NFV-based systems
• Automated configuration and repair of virtualized software-defined systems
• Algorithms for diagnosis and correlation of events in SDN or NFV-based systems
• Availability and resilience of virtualized software-defined systems
• Debugging and introspection of software-defined virtualized systems
• Management of federated SDN/NFV infrastructures
• Detailed experience reports from experimental testbeds
• Transition strategies from existing networks to SDN/NFV
Submission format
Papers will be evaluated based on their originality, presentation, relevance and contribution to the field of management of software-defined virtualized systems, as well as their overall quality and suitability for the special issue. The submitted papers must be written in a good English and describe original research which has not been published nor currently under review by other journals or conferences. Previously published conference papers should be clearly identified by the authors at the initial submission stage and an explanation should be provided of how such papers have been extended in order to be considered for this special issue.
Author guidelines for preparation of manuscript can be found at: http://www.comsoc.org/tnsm/author-guidelines
For more information, please contact the guest editors.

Submission guideline
All manuscripts and any supplementary material should be submitted through the IEEE ManuscriptCentral service located at: http://mc.manuscriptcentral.com/tnsm
Authors must indicate in the submission cover letter that their manuscript is intended for the "Management of Softwarized Networks" special issue.

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