FOREWORD

Special Section on Fusion of Network Virtualization/ Softwarization and Artificial Intelligence towards Beyond-5G Innovative IoT Services

5G is on the stage of realization and ultra-high speed mobile broadband, ultra-low latency in communications, and accommodation of massive IoT devices lay the groundwork for innovative IoT services. In the future generation, towards Beyond-5G era, requirements for more reliable, flexible, and robust ICT (Information and Communication Technologies) systems are emerging and pose new challenges.

Advanced technologies for network virtualization and softwarization are expected to provide flexibility to satisfy a wide variety of customer demands, scalability to expand in accordance with the increase of demands, efficiency in resource usage even under scarce and heterogeneous environment, and sustainability to involve new functionalities and technologies in an incremental manner for service continuity. Rapid progress needs to be made to tackle such new challenges. Fusion with artificial intelligence attracts great attention.

This special section aims to promote discussion and development of network virtualization and softwarization based on the fusion with artificial Intelligence towards Beyond-5G innovative IoT services. For this section, 8 high-quality papers were submitted and 6 papers were accepted. The accepted papers include 3 invited papers, discussing new paradigms toward end-to-end SDN/NFV orchestration for network and computing slicing, IoT edge cloud architecture/geolocation-centric information platform, and neural network and its wireless communications application, and 3 regular papers that address the various characteristics of virtualized infrastructures.

The editorial committee members sincerely appreciate all authors and reviewers for their contributions to this special section. We hope that the published studies will promote further advancement of network virtualization and softwarization.

Hiroaki Harai, Guest Editor-in-Chief

Hiroaki Harai *(Member)* received his Ph.D. degree in information and computer science from Osaka Univ., Japan in 1998. After he led R&D on innovative network architecture technologies, he has been appointed to a director-general at the National Institute of Information and Communications Technology, Tokyo, Japan since 2018, where he is leading R&D testbed construction and stable operation of networks and cloud. From 2017 to present, he is a vice-chair of IEICE technical committee on network virtualization (NV).