Report on International Conference on Network Softwarization (NetSoft) 2021

Kazuhiko Kinoshita* and Kohei Shiomoto**
* Vice Chair of NetSoft 2021 and Tokushima University
**General Co-chair of NetSoft 2021 and Tokyo City University

1. Overview

The 7th International Conference on Network Softwarization (NetSoft) 2021 was held from June 28th to July 2nd as a virtual conference [1]. It is organized by the IEEE Communications Society and is technically co-sponsored by Technical Committee on Information and Communication Management, the Institute of Electronics, Information and Communication Engineers (IEICE ICM) and the IEICE Communications Society.

NetSoft 2021, with its theme being “Accelerating Network Softwarization in the Cognitive Age,” consists of 5 keynote speeches, a distinguished expert panel, 6 plenary sessions, 5 technical sessions, 1 demo session, and 5 tutorial sessions. It also includes 5 workshops. 275 people from 41 countries participated in the conference.

2. Highlights

Five executives delivered keynote speeches. Three of them are about Beyond 5G, including “Developing B5G/6G Communication Systems: Opportunities and Challenges” by Dr. Hideyuki Tokuda from NICT, “Innovative Network Beyond 5G: IOWN” by Mr. Yoshikatsu Okazaki from NTT, and “Edge Intelligence for B5G/6G and IoT” by Prof. Ai-Chun Pang from NTU. Besides, Dr. Ying Zhang from Facebook gave a speech on “Robotron: Top-down network management at scale” and Mr. Luis Miguel Contreras Murillo from Telefonica introduced “Transformation of Transport Networks through Softwarization.”

In the distinguished expert panel session, six panelists discussed various emerging topics about edge computing towards Beyond 5G/6G era with moderator and audiences.

A total of 89 papers were submitted to NetSoft 2021, among which 18 papers were accepted to be presented in plenary sessions. Besides, 25 papers were accepted to be presented in technical sessions. Frequent keywords in submitted papers are shown in Fig. 1.

The technical program committee and organizing committee gave the best paper award to “Physical Wireless Resource Virtualization for Software-Defined Whole-Stack Slicing,” presented by Matthias Sander-Frigau from Iowa State University and the best student paper award to “SoftTap: A Software-Defined TAP via Switch-Based Traffic Mirroring,” presented by Sogand Sadrbaghighi from University of Calgary.

In the demo session, six videos were introduced. Five one-day or half-day workshops were co-located, such as the 1st International Workshop on Theory and Practice of Programmable Forwarding (TaPoPF 2021), the 4th International Workshop on Advances in Slicing for Softwarized Infrastructures (S4SI 2021), the 1st International Workshop on Intent-based Networking (WIN 2021), the 3rd International Workshop on Cyber-Security Threats, Trust and Privacy Management in Software-Defined and Virtualized Infrastructures (SecSoft 2021), and the 2nd International Workshop on Network Softwarization Techniques for IoT Applications (SoftIoT 2021).

3. Summary

Unfortunately, NetSoft 2021 was not held in Tokyo, Japan as planned due to COVID-19 pandemic. In a virtual style, however, it was closed with great success. On behalf of all organizing committee members, we would like to express our appreciation to all parties involved in this conference.

NetSoft 2022 will be held in Milano, Italy.

4. Reference