

----- **Special Section on Internet Architecture, Applications and Operation Technologies
for a Cyber-Physical System** -----

The IEICE Transactions on Communications announces that it will publish a special section entitled "Special Section on Internet Architecture, Applications and Operation Technologies for a Cyber-Physical System" in the **January 2020** issue.

The Internet has become an important social infrastructure which underpins human activities, it is now widely integrated into society as a part of our lives. In the future, data will be generated from all kinds of places, people, things, and various data distribution and utilization will be further accelerated.

Establishing a "cyber-physical system" which creates new value for society will become increasingly important by collecting various data in the real (physical) world with the sensor network or the Internet and analyzing and knowledge using large-scale and distributed data processing technology. To deploy the cyber-physical system widely in society, it is important to establish multilateral solutions including not only the design of the Internet architectures and protocols but also the contributions against security issue between the real world and cyberspace. Platform technologies that enable to collect, storage and analysis various data using distributed computing, cloud edge computing, etc. are also indispensable. The network management and operation technologies should be sophisticated to feedback the analysis results obtained by these platforms from cyberspace to the real world. Because of such reasons, we call for publications (scheduled to appear in the January 2020 issue) to further promote research and development of Internet architecture, applications and operation technologies for a cyber-physical system.

1. Scope

This special section aims at timely dissemination of research in these areas. Possible topics include, but are not limited to:

- * Architectures and protocols for the CPS(Cyber-Physical System) / IoT(Internet of Things)
 - routing and traffic control technologies for large and complex networks
 - software-defined networking, network function virtualization, information centric networking, delay tolerant networking
 - sensor network, vehicular network, data center network
 - network security
- * Platform technologies for the CPS(Cyber-Physical System) / IoT(Internet of Things)
 - distributed computing, grid computing, cloud computing, edge computing, inter-cloud technologies
 - bigdata/social data analysis platform, test bed system
 - M2M network, P2P network
- * New applications in cyber physical society
 - IoT applications, bigdata analysis applications, simulation, embedded applications, applications of artificial intelligence
 - case studies involving implementations and experiments adapted to cyber physical society
- * Network management and operation technologies / experiences to accelerate the CPS
 - IoT device management methods
 - QoS/QoE support mechanisms, management methods for huge devices, access control technologies
 - security technologies, e.g., authentication, authorization and accounting mechanisms, intrusion detection

2. Submission Instructions

The standard number of pages is 8. The page charges are considerably higher for extra pages. Manuscripts should be prepared according to the guideline in the "Information for Authors." The latest version is available at the web site, http://www.ieice.org/eng/shiori/mokuji_cs.html. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for regular issues (60 days) because of the tight review schedule.

This special section will accept papers only by electronic submission. Submit a manuscript and electronic source files (LaTeX/Word files, figures, authors' photos and biographies) via the IEICE Web site https://review.ieice.org/regist/regist_baseinfo_e.aspx by February 15, 2019(JST). Authors should choose the **Internet Architecture, Applications and Operation Technologies for a Cyber-Physical System** as a "Journal/Section" on the online screen. Do not choose [Regular EB].

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