

IEEE Transactions on Consumer Electronics

Call for Papers

Special Section on “Cloud-edge Collaboration for Consumer Electronics”

Theme:

Edge computing is an emerging computing paradigm that refers to a range of networks and devices at or near the user. In this computing paradigm, the edge nodes can process the data closer to where it's generated, enabling the processing of large-scale data in real-time. On the other hand, powered by this computing architecture, there is no need to upload user data to the cloud center, which can ensure the security of private data. However, the edge node usually with limited computing power and energy. Hence, uploading part of the data to the cloud for further processing is one of the most intuitive approaches to overcome this problem, which has driven cloud-edge collaboration to be one of the hottest topics.

Nowadays, with the explosive growth of consumer electronic devices, edge computing will show a blowout development in consumer electronic devices. How to combine traditional cloud computing technologies and edge computing techniques to improve data processing efficiency and enhance the privacy of consumer electronic devices will become a hot topic in both academia and industry.

Topics of interest in this Special Section include (but are not limited to):

- Computing paradigm for cloud-edge collaboration
- Communication algorithm for cloud-edge collaboration
- Graph algorithms for cloud-edge collaboration
- Smart chips for cloud-edge collaboration
- Efficient network architecture
- Privacy-primary collaboration
- Edge pre-trained models
- Edge graph neural networks
- Edge-cloud reinforcement learning
- AI computing hardware in edge computing/ cloud computing
- CNN/DNN/GNN for cloud-edge collaboration
- Reinforcement learning for cloud-edge collaboration
- Federated reinforcement learning for cloud-edge collaboration

Important dates:

- End of submission of Manuscripts: **March 31, 2024**
- Expected publication date (tentative): 4th quarter, 2024

Guest Editors:

- ♦ Zhigao Zheng, Wuhan University, China, zhengzhigao@ieee.org
- ♦ Shahid Mumtaz, Nottingham Trent University, UK, shahid.mumtaz@ntu.ac.uk
- ♦ Hao Wang, City University of Hong Kong, HK SAR, China, hwang272@cityu.edu.hk

Instructions for authors:

Manuscripts should be prepared following guidelines at: <https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html> and must be submitted online following the IEEE Transactions on Consumer Electronics instructions: <https://ctsoc.ieee.org/publications/ieee-transactions-on-consumer-electronics.html>. During submission, the Special Section on “**Cloud-edge Collaboration for Consumer Electronics**” should be selected.

Editor-in-Chief: Dr. Kim Fung Tsang

kf.tce.eic@gmail.com