Special Session 2

Distributed Large Language Model Training/Inference Systems over Edge Networks

2026 IEEE 9th World Conference on Computing and Communication Technologies (WCCCT) will be held in Qingdao, China during April 10-12, 2026, sponsored by Ocean University of China and IEEE, co-sponsored by IEEE Qingdao AP/MTT/COM Joint Chapter, Qingdao University of Technology, Shandong Normal University, Shenzhen University, Sichuan Normal University, Xihua University, Warsaw University of Technology, Guangzhou Institute of Science and Technology, and Gannan Normal University, and technically supported by University of Haute Alsace, Okayama University, Qinghai Institute of Technology, and Key Laboratory of Wireless Sensor Network in University of Sichuan Province, Sichuan Normal University.

The deployment and training of Large Language Models (LLMs) over edge networks introduce substantial challenges, including constrained resources, heterogeneous infrastructures, and stringent latency constraints. This Special Session solicits research contributions on distributed systems and optimization techniques for resource-efficient LLM inference and convergence-aware LLM training in edge computing environments. Two core technical thrusts include:

(1) Inference deployment resource optimization, encompassing expert selection and placement, token-aware routing, memory- and bandwidth-constrained scheduling, KV-cache management, and SLO-compliant serving strategies across distributed edge nodes;

(2) Training convergence optimization, including communication-efficient gradient synchronization, sparsity-aware update mechanisms, adaptive parallelism strategies (e.g., MoE), and convergence acceleration under limited communication bandwidth.

Topics of interest include but are not limited to:

– Joint computation–communication–energy co-optimization;
– Model partitioning and orchestration across edge–cloud hierarchies;
– Federated or hierarchical training with provable convergence guarantees;
– System frameworks for scalable, low-latency LLM inference.

The session welcomes both theoretical results and system-level designs, particularly those validated on realistic edge platforms or standardized LLM benchmarks.

Please choose Special Session 2 to submit. **Submission Link: https://www.zmeeting.org/submission/wccct2026**

More details about special session 2, Please view: https://wccct.org/ss_2.html

Special Session 2 Chair

Assoc. Prof. Danyang Zheng
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Research Areas: Services Computing, AI on Network, Network Reliability, and Network Security

Co-Chairs

Assoc. Prof. Chengzong Peng
Chengdu University of Information Technology, China

Research Areas: Network Function Virtualization, Network Security

Assoc. Prof. Shaohua Cao
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Research Areas: Edge Intelligence, Federated and Distributed Learning

Asst. Prof. Chen Yang
Southwest Jiaotong University, China

Research Areas: Services Computing, Edge Intelligence, Federated Learning

Publication

IEEE

Submitted manuscripts will be peer reviewed by the conference scientific committees. Accepted and presented papers will be published in **WCCCT2026 Conference Proceedings** by **IEEE** after registration and presentation. The proceedings will be submitted for inclusion into **IEEE Xplore** and indexed by **Ei Compendex** & **Scopus**.

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