

Call for Papers

Special Issue on

“Artificial Intelligence and Graph Applications in Power System”

Important Dates

Full Paper Submission: **Apr. 30, 2020**

Final Decision Notification: **Jun. 30, 2020**

Publication of Special Issue: **Aug. 31, 2020**

The planning, operation, control and asset management of the power system is facing big challenges, requires new theories, methods and tools be developed. Artificial intelligence (AI) tools, which are fast, robust and adaptive open a new direction to overcome the drawbacks of traditional solutions for several power systems problems. But most current AI models and techniques are not optimized for detecting connections or traversing relationships within different datasets, graph (graph database, graph computing and knowledge graph) technology which is widely and successfully used in Internet and Social networks, can reveal and navigate connections, and therefore discover context by linking attributes and complex relationships across the graph, making them the ideal data structure and computing modes to enhance Artificial Intelligence models. The combination of AI and Graph will create huge potential values when being applied in power system.

This Special Issue will focus on the latest research and development in AI and Graph Computing application in power system planning, operation, control and asset management.

Topics of interest include, but are not limited to:

- Development of AI, graph computing (graph database, knowledge graph) methods and tools will help address power system planning, operation, control and asset management critical issues such as performance, usability, accuracy and confidence;
- Applications for AI and Graph Technology in power system planning, including spatial-temporal load forecast, capacity optimization, site selection, and simulation calculation;
- Applications for AI and Graph Technology in power system operation, including On-line, real-time dynamic security assessment (DSA), OPF/SCUC/SCED approximation and speed up OPF/SCUC/SCED solution;
- Applications for AI and Graph Technology in power system control and protection, including preventive and corrective control, SPS, fault detection, alarm processing;
- Applications for AI and Graph Technology in power system asset management, including outage management, asset management, cyber security;
- Demonstration project and practical experience of AI and graph application.

Guest Editors-in-Chief:



Dr. Guangyi Liu

Global Energy Interconnection Research
Institute, USA
E-mail: Guangyi.liu@geirina.net



Prof. Jianhua Zhang

North China Electricity University, China
E-mail: jhzhang001@163.com



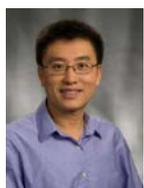
Dr. Shirang Abhyankar

Pacific Northwest National Laboratory
(PNNL), USA
E-mail: shri@pnnl.gov



Dr. Jiye Wang

Big Data Center, SGCC, China
E-mail: jiyewang@sgcc.com.cn



Prof. Jianhui Wang

Southern Methodist University, USA
E-mail: jianhui@mail.smu.edu

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