IEEE SMC 2022
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IEEE SMC 2022
International Conference on Systems, Man, and Cybernetics
Clarion Congress Hotel Prague, Czech Republic
October 9-12, 2022

Special Session

Code: xb7n7

Title

Computer Vision Technology in Electric Power System

Proposer / Main Organizer

Provide complete address/affiliation, phone, email and biography.
The main organizer will be the primary contact person to whom all correspondence will be sent.

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Category

Cybernetics

Number of Expected Paper Submissions:

6 or more

Keywords

Application of Artificial Intelligence; Machine Vision; Deep Learning; Image Processing and Pattern Recognition; Machine Learning

Brief Description and Justification (200-250 words):

Add a short description (200 to 250 words).

The electric power system is the important and key national infrastructure, and its safe and stable operation is related to the national economy and people's livelihood, as well as the sustainable development of the economy and society. Theories and methods of computer vision and machine learning have developed rapidly and have been widely used in the fields of medicine, manufacturing, retail, remote sensing, military, public safety, and autonomous driving. At present, the number of inspection images and videos obtained through normal inspection methods such as manual labor, helicopters, unmanned aerial vehicles, and robots is increasing. In order to improve the efficiency of power inspection and ensure the safe and stable operation of the electric power system, it has become a very necessary and urgent task to apply computer vision and machine learning to the visual processing of the goals and defects of power plants (including wind power, solar energy, thermal power, nuclear power, etc.), transmission lines, substations and distribution lines in electric power system.

Power vision technology is the application of computer vision technology in power system. It is an important part of power artificial intelligence technology. This special session will provide a platform to exchange research works, technical trends and practical experience related to power vision technology. It is expected that the researchers in relevant fields can have a broad and in-depth understanding of the latest technologies and application directions in power vision research field, and make new contributions to the development of power artificial intelligence.