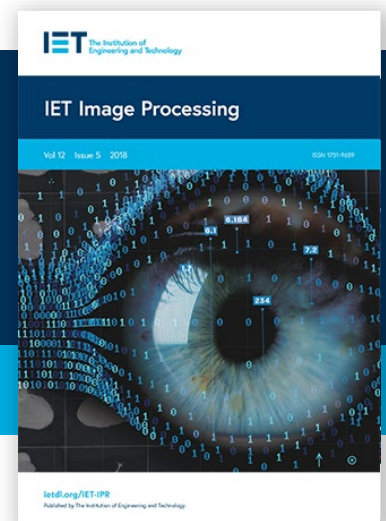


# IET Image Processing

## Call for Papers

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Editor-in-Chief: Farzin Deravi, University of Kent, UK

### Special Issue on: Image Processing in the Metaverse

Metaverse, a combination of the prefix “meta” (implying transcending) with the word “universe”, describes a hypothetical synthetic environment linked to the physical world. The construction of the metaverse will greatly supplement actual world information with the virtual world, and the way humans interact with the virtual world will be completely changed. Business models full of imagination will be born on this basis, and games, offices, social, entertainment, education, etc., will undergo qualitative changes accordingly. For example, metaverse can be applied to virtual fitting, digital tourism, remote office, situational online education, virtual interactive medicine, immersive games and so on. The development of artificial intelligence, Internet-of-things (IoT), blockchain, edge and cloud computing, and other technologies make it possible to create a metaverse. Image processing plays an essential role in building the ability of human beings to experience the virtual world in the metaverse. Advances in deep neural networks, 3D reconstruction, 3D visualization, human motion capture, face recognition and face editing in image processing have played a significant part in many applications of the metauniverse. However, there are still many image processing problems that need to be solved in the exploration of the metaverse, including 1) constructing efficient or real-time image processing algorithms to deal with real-time interaction in the metaverse; 2) creating realistic digital avatars as the human users’ representation in the metaverse using face/body modelling; 3) constructing realistic virtual environments with coherent geometry using stereo vision and 3D reconstruction, to build a scene foundation of the metaverse. The urgent demand for image processing in the metaverse brings profound implications for research into the topic of this particular issue.

Researchers and industry practitioners from academia are invited to submit innovative research on image processing-related technical challenges and recent discoveries in the emerging field of the metaverse. This special issue provides an opportunity to discuss and express views on current trends, challenges, and state-of-the-art solutions to various problems in image processing.

Topics of interest include, but are not limited to:

- Face, body, and object modelling and editing
- 3D object detection, segmentation and reconstruction
- Efficient or real-time image processing in the metaverse
- Monocular depth estimation, binocular stereo matching and multi-view stereo
- Human pose estimation and tracking
- Point cloud image processing and classification
- Virtual background generation and processing
- Structured light reconstruction
- Inverse rendering and neural rendering
- Application of metaverse based on image processing

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