



**Special Session Chairs:**

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**Special Session Title:**

*Quantum Image Processing: Challenges and Future Directions*

**Brief Description of the proposed topic ( 15-300 words):**

Quantum Image Processing (QIP) is an emerging interdisciplinary field that leverages quantum computing principles for image analysis, representation, and enhancement. This special session aims to bring together researchers and experts to discuss recent advancements, key challenges, and future opportunities in this domain. The session will cover topics such as quantum image representation, quantum-enhanced image processing algorithms, quantum cryptography for secure image transmission, and practical challenges in implementing QIP on current quantum hardware.

Papers are invited in relevant applications mentioned below but are not restricted to:

- Quantum image representation and encoding models
- Quantum-enhanced edge detection, filtering, and feature extraction
- Quantum machine learning for image classification and analysis
- Quantum cryptography and secure image processing
- Implementation challenges and hybrid quantum-classical approaches
- Applications in medical imaging, remote sensing, and computer vision

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