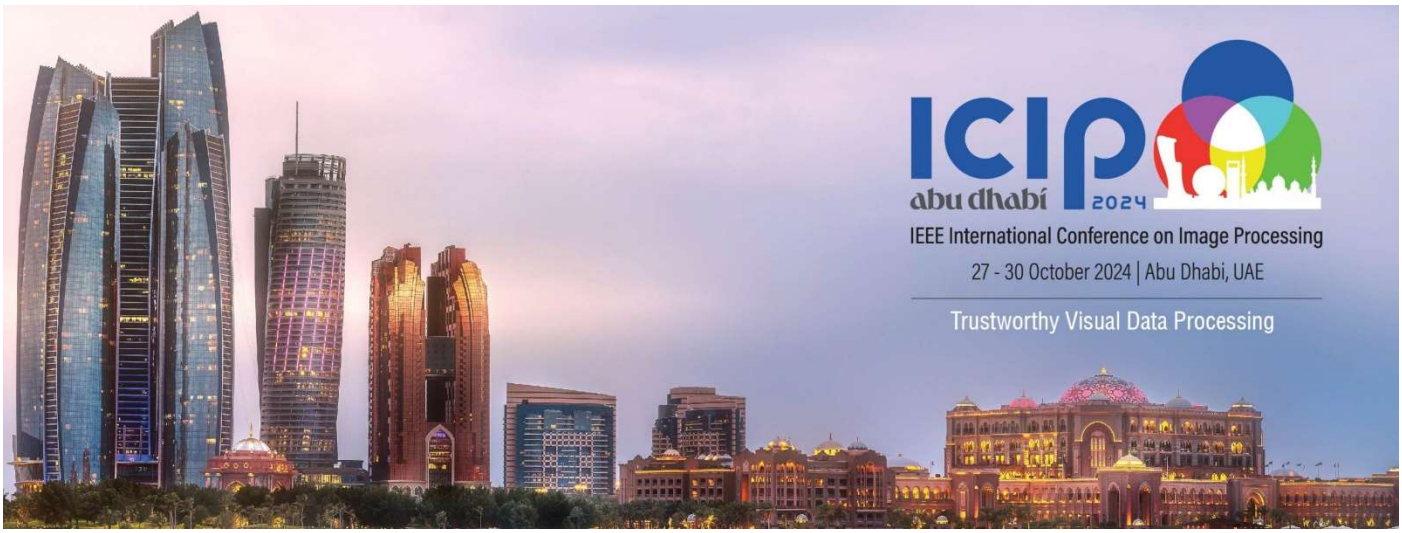

Special Session:
AI-based Medical Image Quality Assessment and Enhancement Towards Better Disease Diagnosis

Medical images play a crucial role in clinical disease diagnosis and health monitoring. Recent advances in medical image analysis, such as lesion detection and segmentation, have led to the development of new ideas, methodologies, and solutions for disease diagnosis, achieving state-of-the-art performance in many diagnostic tasks. However, current intelligent disease diagnosis systems are still plagued by the problem of performance instability caused by low-quality images. Multiple factors contribute to the low quality of medical images in clinics, including the quality of imaging sensors, doctors' experience, patient cooperation, and lesion characteristics. Despite the rapid development of quality assessment methods for natural scene images and computer graphic images, creating a perfect medical image quality assessment system that considers both visual experience and clinical utility remains challenging. Artificial intelligence (AI) offers a promising approach for medical image assessment and enhancement, with potential applications ranging from quality assessment to image enhancement and disease diagnosis. The main topics of interest include, but are not limited to:

1) Quality assessment theories for medical images;
2) New subjective image quality assessment methods and datasets;
3) AI-based objective image quality assessment methods;
4) AI-based medical image enhancement methods;
5) Relationship between image quality and the accuracy of disease diagnosis;
6) Applications of image quality assessment and enhancement in disease diagnosis;
7) IQA-aided disease diagnosis methods;
8) AI-based advanced disease diagnosis methods.

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