

Special Issue

Image Enhancement and Restoration Based on Deep Learning Technology

Message from the Guest Editors

A downgraded low-resolution image does not provide enough information in various computer vision applications. A nonlinear mapping from the low-resolution to super-resolution to reconstruct a clear and high resolution image is important and a fundamental task. Unfavorable weather causes significant problems to image quality as the rain or snow often occludes or blurs the scene information. Image enhancement and restoration are critical processes in various computer vision applications, such as security, surveillance imaging, medical imaging, image recognition, computational photography, and remote sensing. Due to the diversity of imaging sensors and mechanisms, multiple modality images may need to be fused together to enhance image quality. Recently, deep learning has been widely used in image enhancement and restoration and has achieved great success due to its superior ability to extract features. In addition, the deep convolutional neural network is also used for single image enhancement. In this Special Issue, we cover wide approaches for robust image enhancement and restoration based on deep learning technology.

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Deadline for manuscript submissions

closed (20 November 2023)



Applied Sciences

an Open Access Journal
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Impact Factor 2.5
CiteScore 5.5



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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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