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Recent Advances in Underwater Image Processing

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Message from the Guest Editors

In the last several decades, there has been great interest in underwater images. This could be related not only to the wide diffusion of low-cost waterproof digital cameras that have enriched personal photo galleries, but also to the analysis and monitoring of sea environments through remotely operated and autonomous underwater vehicles. These two different target images (personal and monitoring images) are affected by several distortions typical of underwater environments (color casting, blur, poor contrast and visibility, noise). While many different correction methods exist in the literature, underwater image enhancement and restoration is still an open issue. In the last several years, machine and deep learning methods have been applied to this particular set of images. However, the cardinality of the training data and the availability of ground truth databases pose the major challenges. Finally, to quantify the performance of the image processing methods, underwater image quality assessment is of great importance...

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Message from the Editor-in-Chief

Our primary goal is to encourage scientists and engineers to publish their theoretical results and developed methods in as much detail as possible. There is no limit to the maximum length of papers. Whenever possible, authors are encouraged to provide relevant data and developed code so that the results can be reproduced. Our goal is to provide a platform for scientists and engineers to share new approaches to signal processing in various application domains.

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