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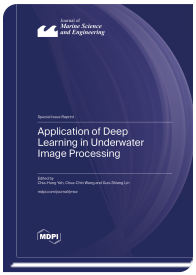
Special Issue Reprint

Application of Deep Learning in Underwater Image Processing



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Underwater image processing is one of the key technologies driving advancements in fields such as marine biology, oceanography, underwater exploration, and more. Serving as a carrier of information, the quality of underwater images significantly impacts various applications. However, capturing high-quality underwater images is challenging due to complex and uncontrollable conditions. Common issues include color distortion, blurred details, low contrast and brightness, and noise. These problems hinder both human perception and practical applications. Furthermore, the unique properties of underwater imaging, such as its selective light absorption and scattering, make it difficult to achieve satisfactory results with the existing in-air methods or traditional underwater image processing techniques.

In recent years, deep learning technologies have emerged as a game-changer in addressing these challenges and improving underwater image quality. These technologies provide new opportunities and insights, enhancing their applicability and reliability in real-world scenarios. This Special Issue aims to bring together leading researchers and practitioners from around the world to showcase their latest research findings and future directions in this dynamic field.

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