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Generative Models for Computer Vision

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Message from the Guest Editors

Dear Colleagues,

Recent advances in generative visual modeling have led to a surge in new techniques and methodologies, mainly in the areas of adversarial, auto-regressive, and diffusion models. These approaches have enabled the synthesis of photorealistic images, including ones that are three-dimensionally consistent, and even the generation of entire 3D scenes. Moreover, the ability of such generative models to capture the distribution of given data has been shown to be useful for a wide variety of discriminative visual tasks.

The goal of this Special Issue is to present current advances in generative visual modelling. Its scope will include (but is not limited to) the following areas of research:

- Advances in generative image models;
- Generative models for 3D shape and 3D scene synthesis;
- Benchmarking of generative image models;
- Render-and-compare approaches for visual recognition;
- Self-supervised learning with generative models;
- Out-of-distribution generalization with generative models

We look forward to receiving your valuable contributions.

Guest Editors



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Special Issue



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Message from the Editor-in-Chief

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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