

# Call for Papers

## *International Journal of Computer Vision*

### Special Issue on Generative Adversarial Networks for Computer Vision

#### Guest Editors:

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#### Scope:

Generative Adversarial Networks (GANs) have been at the forefront of research on generative models in the past few years. GANs can approximate real data distribution and synthesize realistic data samples. The concept of GANs is not limited to generating samples from certain data distributions but also has inspired many other research trends, including image generation and editing, feature learning, visual domain adaptation, data generation and augmentation for visual recognition, and many other practical applications, often leading to state of the art results.

While GANs have achieved substantial progress for various computer vision applications, many issues remain to be solved and new research problems emerge. For example, what are the appropriate network structures and objective functions for generating visual data (e.g., images, videos, 3D)? What are the proper metrics for evaluating deep generative models? How can we improve the photorealism and resolution of the synthesized data samples? How can the generated data help solve other computer vision tasks?

This special issue provides a significant collective contribution to this emerging field of study. Specifically, we aim to solicit original contributions that include the following three areas:

- Theoretical analysis and foundations: Authors are invited to submit manuscripts on the theoretical considerations of GANs and its variants such as the convergence and the limitations of models.
- Novel formulations and training methods: We would like to solicit submissions on new network architectures, robust objective functions, and better training procedures that can improve the quality, resolution, and training stability of GANs-based models.
- New computer vision applications: We welcome new work that explores GANs-based approaches for computer vision applications. We encourage original research in these fields to discuss how they adopt adversarial learning to individual computer vision applications. Besides, we also encourage submissions on solving cross-disciplinary research problems through adversarial learning, such as vision and language as well as robotics and vision.

#### Topics of Interest:

The topics of interest include (but are not limited to):

- Theoretical analysis of GANs and its variants.
- Evaluation of implicit generative models.
- New objective functions and formulations for GANs.
- New network structures and training schema for GANs.
- Unsupervised, semi-supervised and self-supervised feature learning with GANs.
- Adversarial learning for data generation and visual recognition.
- Image-to-Image translation.
- Video generation and future prediction.
- 3D generative modeling and editing.

- Adversarial domain adaptation and transfer learning.
- Image generation and photo manipulation.
- Image generation from textual descriptions.
- Low-level and middle-level vision with adversarial learning: super-resolution, denoising, inpainting, etc.
- Adversarial cross-modal learning.
- Adversarial imitation learning and reinforcement learning.
- Image and video style transfer with adversarial learning.

### Important Dates:

Full paper submission deadline EXTENDED	15 May 2019
First review decision	15 July 2019
Revised paper due	31 Oct 2019
Final review decision	30 Nov 2019
Final manuscript submission	30 Dec 2019

### Paper Submission and Review:

Submitted papers should present original, unpublished work, relevant to one of the topics of the Special Issue. All submitted papers will be evaluated on the basis of relevance, significance of contribution, technical quality, scholarship, and quality of presentation, by at least three independent reviewers. It is the policy of the journal that no submission, or substantially overlapping submission, be published or be under review at another journal or conference at any time during the review process.

Manuscripts will be subject to a peer reviewing process and must conform to the author guidelines available on the IJCV website at: <https://www.springer.com/11263> (link "Instructions for Authors" on the right panel).

Authors need to submit full papers online through the IJCV submission site at: <http://visi.edmgr.com>, selecting the choice that indicates this special issue: **S.I. : Generative Adversarial Networks for Computer Vision**.

*If you have any questions, please contact:*  
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