

# Coursework

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## Topic Presentation

Select a topic to present in class. Must be approved by instructor.

## Themes

- Quality Improvement
- Higher Resolution
- Conditional GANS
- Authoring
- Performance
- 3D, Etc

## Papers

- Quality / Resolution

Wasserstein GAN

<https://arxiv.org/abs/1701.07875>

Progressive Growing of GANs for Improved Quality, Stability, and Variation

<https://arxiv.org/pdf/1710.10196v3.pdf>

Spectral Normalization for Generative Adversarial Networks

<https://arxiv.org/abs/1802.05957>

Large Scale GAN Training for High Fidelity Natural Image Synthesis (BigGAN)

<https://arxiv.org/abs/1809.11096>

A Style-Based Generator Architecture for Generative Adversarial Networks (StyleGAN)

<https://arxiv.org/abs/1812.04948>

High-Resolution Image Synthesis and Semantic Manipulation with Conditional GANs (pix2pixHD)

<https://arxiv.org/pdf/1711.11585.pdf>

- Conditional

A Learned Representation For Artistic Style

<https://arxiv.org/abs/1610.07629>

Analyzing and Improving the Image Quality of StyleGAN

<https://arxiv.org/abs/1912.04958>

Image-to-Image Translation with Conditional Adversarial Networks (pix2pix)

<https://arxiv.org/abs/1611.07004>

- Authoring

Unpaired Image-to-Image Translation using Cycle-Consistent Adversarial Networks (CycleGAN)

<https://arxiv.org/pdf/1703.10593.pdf>

Semantic Image Synthesis with Spatially-Adaptive Normalization (GauGAN)

<https://arxiv.org/abs/1903.07291>

Anycost GANs for Interactive Image Synthesis and Editing

<https://arxiv.org/abs/2103.03243>

- Other

Gan Dissection: Visualizing And Understanding Generative Adversarial Networks  
[https://openreview.net/pdf?id=Hyg\\_X2C5FX](https://openreview.net/pdf?id=Hyg_X2C5FX)

Ensembling with Deep Generative Views  
<https://arxiv.org/abs/2104.14551>

ContraGAN: Contrastive Learning for Conditional Image Generation  
<https://arxiv.org/abs/2006.12681>

- 3D

pi-GAN: Periodic Implicit Generative Adversarial Networks for 3D-Aware Image Synthesis  
<https://arxiv.org/abs/2012.00926>

Image GANs meet Differentiable Rendering for Inverse Graphics and Interpretable 3D Neural Rendering  
<https://arxiv.org/abs/2010.09125>

Deep View Synthesis via Self-Consistent Generative Network  
<https://arxiv.org/abs/2101.10844>

- SIGGRAPH 2021

AgileGAN: Stylizing Portraits by Inversion-Consistent Transfer Learning  
<https://guoxiansong.github.io/homepage/agilegan.html>

SP-GAN: Sphere-Guided 3D Shape Generation and Manipulation  
<https://liruihui.github.io/publication/SP-GAN/>

SWAGAN: A Style-based Wavelet-driven Generative Model  
<https://arxiv.org/abs/2102.06108>

Designing an Encoder for StyleGAN Image Manipulation  
<https://arxiv.org/abs/2102.02766>

StyleCariGAN: Caricature Generation via StyleGAN Feature Map Modulation  
<https://arxiv.org/abs/2107.04331>

TryOnGAN: Body-aware Try-on via Layered Interpolation  
<https://tryongan.github.io/tryongan/>

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