



Speakers:

1. Georgia Gkioxari
2. Justin Johnson
3. Nikhila Ravi
4. Jeremy Reizenstein
5. David Novotny
6. Shubham Tulsiani
7. Christoph Lassner
8. Steve Branson

Reading Material:

1. Accelerating 3D Deep Learning with PyTorch3D, arXiv 2007.08501
2. Mesh R-CNN, ICCV 2019
3. SynSin: End-to-end View Synthesis from a Single Image, CVPR 2020
4. Fast Differentiable Raycasting for Neural Rendering using Sphere-based Representations, arXiv 2004.07484

Syllabus:

1. Introduction to PyTorch3D by **Nikhila Ravi**- 30min
 - a. Data structures
 - b. 3D operators
 - c. Differentiable rendering
2. Tutorial 1: Mesh Fitting via 3D operators by **Georgia Gkioxari** - 20min
 - a. Mesh batching
 - b. Mesh loss functions and regularizers
 - c. Optimization
3. Tutorial 2: Differentiable Rendering by **Steve Branson** - 20min
 - a. Multi-view silhouette and textured rendering
4. Tutorial 3: EdgeConv by **Jeremy Reizenstein** - 20min
5. Making 3D predictions with 2D supervision by **Justin Johnson** - 30min
6. Research Talk by **Shubham Tulsiani** - 30min
7. Volumetric Reconstruction by **David Novotny** - 30min
8. Pulsar & Tutorial by **Christoph Lassner**- 30min

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