

Recent Trends in 3D Computer Vision (RT3DCV)

Introductory meeting - Summer semester 2021

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Goals

- You are going to learn:
 - about the state of the art in Computer Vision and Deep Learning
 - about current challenges in 3D vision

- And also:
 - how to read and understand a scientific article
 - how to give a tech talk to an audience, and related Q&A
 - how to condense a scientific topic into a short and precise article for a broad audience

Seminar contents

- The seminar includes a selection of the most recent and relevant papers in the field of computer vision and deep learning for 3d perception
 - Object detection (6D Object / Human)
 - Pose estimation
 - Generative shape synthesis/3D neural rendering
 - 3D scene understanding
 - Implicit neural representations
 - Object & Scene Reconstruction / Completion
 - Multi view depth estimation
 - Depth completion

Seminar Schedule

- 4 sessions (likely on Friday) + 1 introductory lecture
- 3 presentations per session (30 min each)
- Virtual meeting over Zoom

- Paper assignments:
 - selected students can express up to 3 preferences
 - We will then match them to a paper and tutor trying to maximize global happiness

Presentation

- Each presentation is 15-20 minutes + 10 minutes for Q&A
- Slides templates (Powerpoints, Latex, ..) provided on website
- The presentation should cover all relevant aspects of the paper
 - Introduction and state of the art
 - Main contribution(s)
 - Experimental results
 - Discussion, summary and future work
- The presentation should be self-contained
- All students are expected to attend all presentations and interact during Q&A (this will influence your final mark)

Blog article

- The blog article should summarize the paper in the way it has been presented during the talk, and provide the student's opinion concerning the main contributions and impact
- Language: **English**
- Once ready, send the article to supervisor, within **two weeks** from the day of the presentation
- Format: [Gitlab.lrz.de](https://gitlab.lrz.de) Markdown
- Size: Around **2000-3000 words**
- Examples: [GcGAN](#), [MonoDepth](#)

Example blog post

master example_blog / + ▾ History Find **Web IDE** Clone ▾

Update README.md
Nikolas Brasch authored 1 year ago e39766a2

README Add LICENSE Add CHANGELOG Add CONTRIBUTING Set up CI/CD

Name	Last commit	Last update
img	Upload New File	1 year ago
••• README.md	Update README.md	1 year ago

README.md

Example Blog Post

Introduction

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Evaluation criteria

- Quality of presentation (slides and speech)
 - Quality of the talk (including speaker's preparation on the topic)
 - Quality of the slides
 - Q&A
- Quality of the blog article
- Interaction and participation during the other talks

Application

- Register your choices via [TUM matching system](#)
- To increase your chances you are encouraged to submit a motivation letter:

rt3dcv@mailnavab.informatik.tu-muenchen.de

- Name and email
- Study program and semester
- A text summarizing your motivation
- (not mandatory) you can submit your latest CV, transcripts of records or both
- **Deadline 16.02.2021**

Any questions?