

Introduction Lecture

Seminar – Deep Learning in Computer Graphics

7th May 2025



A brain riding a rocketship heading towards the moon.

Sahari et al. (2022)



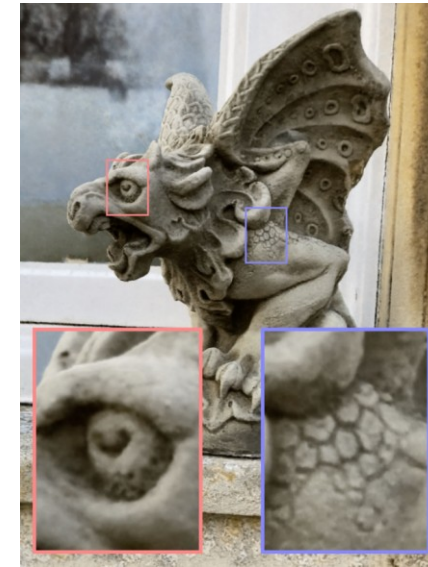
Lin et al. (2022)

Hertz et al. (2024)



"a cake with decorations."

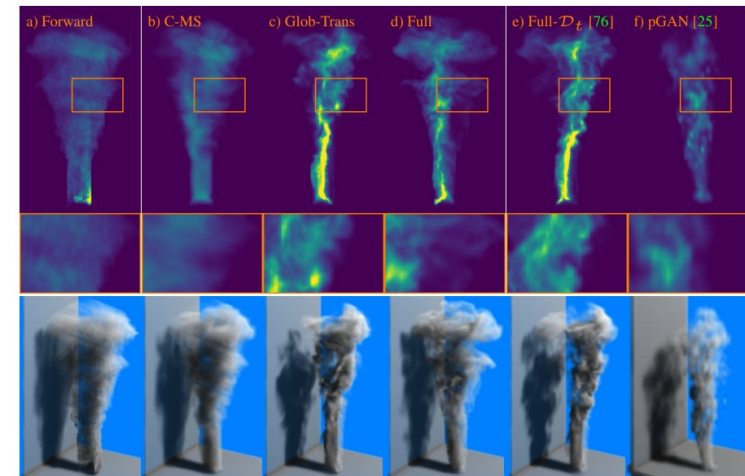
jelly beans



Müller et al. (2022)



Kerbl et al. (2023)



Franz et al. (2021)

About us



Patrick Schnell

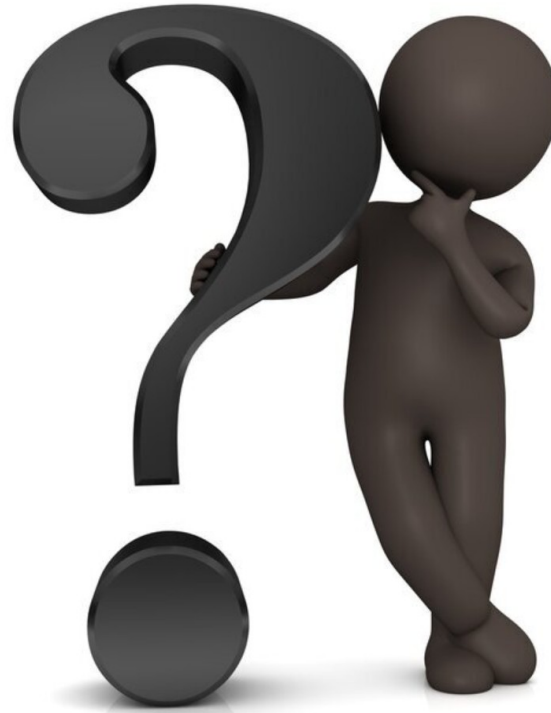


Benjamin Holzschuh



Nils Thürey

About you



About this seminar

- Recent research in deep learning in computer graphics
 - Be familiar with the basics of machine learning
 - Know about the structure of neural networks
- Independent investigations
 - Critical analysis and evaluation of the topic and related work
- Develop writing and presentation skills

Deep Learning Resources

- Book: Hastie et al., [The Elements of Statistical Learning](#)
- Book/Online: Goodfellow et al., [Deep Learning](#)
- Online: Nielsen, [Neural Networks and Deep Learning](#)

Report

- Maximum 4 pages excluding references
- ACM SIGGRAPH TOG format (acmtog) [precompiled latex template](#)
- Due two weeks **after** your talk (Wednesday by 23:59)
- For example, if the presentation is on May 28th, then the final report needs to be submitted on June 11nd
- Guidelines
 - Summary of the paper
 - Add own reasoning about the work/own experiments
 - e.g. comparisons, pros and cons, limitations, possible future work

Slides

- Any slide layout you like, prepare slides as PDF
 - Ensure readability (colors, images and font size)
 - Avoid using too much text
 - Highly encouraged to do some paper-related experiments and show some results in the presentation
- Send semi-final slides one week before your talk, otherwise talk will be cancelled
 - We will take a look and give feedback
 - Revise slides until presentation
- Send final slides and final report two weeks after your presentation

Presentation

- Present your topic in English
- 20-25 minutes of presentation
- 5-10 minutes of discussion
- Actively participate in the discussion for other presentations

- Test your setup (laptop/connection to projector) before giving your presentation!

- Tips for a good presentation: [DocTUM: How to give a great scientific talk](#)

- TUMonline registration will happen automatically eventually, no manual registration required
- Advisor
 - Contact any time you have questions related to the seminar or your paper
 - Feedback for semi-final slides (and semi-final report if you want)
- Attendance
 - Missing one session is allowed, if you let us know in advance and write a short summary of the papers (~ 1 page) in your own words
 - Missing another session means failing the seminar (special rules for severe issues as appropriate)

Any questions?