Jakob Troidl

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GitHub: github.com/jakobtroidl

About

I am a Ph.D. student in computer science at Harvard University, advised by Hanspeter Pfister. I am deeply interested in data visualization, biomedical imaging, and computer vision. My latest research focuses on applications of data visualization in neuroscience and climate sciences. When I am not prototyping new ideas, I enjoy rowing, reading philosophy, hiking, or just being in nature.

Education

Harvard University — Cambridge, MA
Ph.D. in Computer Science, Advisor: Prof. Hanspeter Pfister — 2021–2027
- Focus: Data Visualization, Computational Neuroscience

TU Wien — Vienna, Austria
M.Sc. in Visual Computing, Advisor: Prof. Eduard Gröller — 2019–2021
- Focus: Data Visualization, Biomedical Imaging, Computer Vision
- Current GPA: 1.1/1.0

TU Wien — Vienna, Austria
B.Sc. with Honors in Medical Informatics, GPA: 1.45/1.0 — 2015–2019
- Thesis: Flow Visualization on Curved Manifolds
- Among the top 5% of all computer science students

Experience

Harvard University — Cambridge, MA
Research Fellow with Prof. Hanspeter Pfister — 02/2020 - 08/2020
- Scalable Comparison and Neighborhood Analysis of Nanoscale Brain Structures
- Development and design of a visual analysis tool to compare high resolution EM data

Brainlab AG — Munich, Germany
Research Intern — 06/2019 - 08/2019
- Mixed Reality for 3D Medical Visualization
- Explored the potential of Mixed Reality in a clinical usecase

King Abdullah University of Science & Technology (KAUST) — Thuwal, Saudi Arabia
Research Intern with Prof. Markus Hadwiger — 02/2019 - 05/2019
- Observer Relative Flow Visualization in Curved Spaces
- Co-authored a publication which won the SciVis Best Paper Award at IEEE VIS 2020

Brainlab AG — Munich, Germany
Research Intern — 08/2018 - 01/2019
- Path Tracing for Realtime 3D Medical Visualization
- Worked on intraoperative navigation for neurosurgery

Jetsam GmbH Regensburg, Germany
Software Development Intern 08/2017 - 09/2017

– Developed a face recognition system for marketing purposes

Publications

[1] P. Rautek, M. Mlejnek, J. Beyer, J. Troidl, H. Pfister, T. Theußl, and M. Hadwiger, "Objective observer-relative flow visualization in curved spaces for unsteady 2d geophysical flows", *IEEE Transactions on Visualization and Computer Graphics*, 2020.

Teaching

- **Teaching Fellow** at TU Wien — Fall 2020
  Selected Chapters from Medical Visualization
- **Teaching Fellow** at TU Wien — Spring 2017, Spring 2018
  Introduction to Visual Computing
- **Teaching Fellow** at TU Wien — Fall 2017
  Introduction to Computer Engineering

Skills

- **Coding:** C++, Python, Matlab, HTML, CSS, Java-Script, Java
- **Tools:** Unity, QT, CMake, Latex

Languages

English, German, Latin

Scholarships and Awards

- Best SciVis Paper, IEEE VIS 2020 (among the best 3 papers out of 211 accepted papers) 2020
- Scholarship, Austrian Marshall Plan Foundation (9.100$) 2020
- Bachelor with Honors, TU Wien (among the top 5% of CS students at TU Wien) 2020
- Short-term grant for scientific work abroad, TU Wien (3.100$) 2020
- Merit Based Scholarship, TU Wien (1.000$) 2018

References

- **Eduard Gröller**, Associate Professor, TU Wien
  groeller@cg.tuwien.ac.at
- **Markus Hadwiger**, Associate Professor, KAUST
  markus.hadwiger@kaust.edu.sa
- **Johanna Beyer**, Research Associate, Harvard University
  jbeyer@g.harvard.edu