Felix Taubner

PhD student at the intersection of 3D computer vision and generative AI, with focus on video diffusion models

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Education

PhD in Computer Science, University of Toronto 09/2024 – present
Supervised by David B. Lindell. 4D generative models with a focus on digital human avatars. Toronto, Canada

MSc in Robotics, Systems and Control, ETH Zurich GPA 5.96 / 6.00 09/2019 – 08/2022
Supervised by Roland Siegwart. Focus: 3D computer vision, perception and artificial intelligence. Zurich, Switzerland

BSc in Mechanical Engineering, ETH Zurich GPA 5.72 / 6.00 09/2015 – 05/2019
Focus: robotics, control and computational methods. Zurich, Switzerland

Research Experience

Research Intern, Meta 05/2025 – 03/2026
Supervised by Michael Zollhöfer. Pittsburgh, USA

- Animating 4D digital humans with learned, geometry-free 3D representations.

PhD Researcher, University of Toronto 05/2024 – present
Supervised by David B. Lindell. Toronto, Canada

- Generating controllable 4D human avatars from reference images with morphable multi-view diffusion and 3D Gaussian splatting; state of the art in single-image 4D head avatars (CVPR 2025 oral, SIGGRAPH Asia 2025).
- Recast 6-DoF pose tracking as video-to-video translation with fine-tuned video diffusion (NeurIPS 2026).

AI Research Scientist, LG Electronics 10/2022 – 02/2024
Supervised by Jinmiao Huang and Kevin Ferreira. Toronto, Canada

- Developed a vision-transformer-based 3D face tracking pipeline with 54% better motion capture and 8% better 3D reconstruction accuracy than the state of the art (CVPR 2024).
- Led a team of 4 researchers from 10/2023, planning generative AI research for digital humans with HQ.

Visiting Graduate Student & Research Assistant, University of Toronto 11/2021 – 09/2022
Supervised by Igor Gilitschenski. Event-based computer vision and 3D reconstruction from event data. Toronto, Canada

Graduate Student Researcher, ETH Zurich 01/2020 – 08/2020
Supervised by Roland Siegwart. Zurich, Switzerland

- Semester thesis: RGB-D place recognition by clustering and describing 3D line segments (3DV 2020).

Publications

- **ProxyPose: 6-DoF Pose Tracking via Video-to-Video Translation** NeurIPS 2026 | 12/2026
  Ruihang Zhang*, **Felix Taubner***, Pooja Ravi, Kiriakos N. Kutulakos, David B. Lindell.
- **MVP4D: Multi-View Portrait Video Diffusion for Animatable 4D Avatars** SIGGRAPH Asia 2025 | 12/2025
  Felix Taubner, Ruihang Zhang, Sherwin Bahmani, Mathieu Tuli, David B. Lindell. *Conference paper.*
- **Generating the Past, Present and Future from a Motion-Blurred Image** SIGGRAPH Asia 2025 | 12/2025
  SaiKiran Tedla, Kelly Zhu, Trevor Canham, **Felix Taubner**, Michael S. Brown, Kiriakos N. Kutulakos, David B. Lindell. *Journal paper.*
- **CAP4D: Creating Animatable 4D Portrait Avatars with Morphable Multi-View Diffusion Models** CVPR 2025 | 06/2025
  Felix Taubner, Ruihang Zhang, Mathieu Tuli, David B. Lindell. ***Oral*** *(top 3.3% of accepted papers).*
- **3D Face Tracking from 2D Video through Iterative Dense UV to Image Flow** CVPR 2024 | 06/2024
  Felix Taubner, Prashant Raina, Mathieu Tuli, Eu Wern Teh, Chul Lee, Jinmiao Huang.
- **LCD – Line Clustering and Description for Place Recognition** 3DV 2020 | 11/2020
  Felix Taubner, Florian Tschopp, Tonci Novkovic, Roland Siegwart, Fadri Furrer.

* Equal contribution.

Awards & Scholarships

- **NSERC Canada Graduate Research Scholarship – Doctoral (CGRS-D)** $40,000 CAD / year 05/2026 – 04/2029
- **Robert E. Lansdale / Okino Computer Graphics Graduate Fellowship** $2,000 CAD 03/2026
- **Ontario Graduate Scholarship** $10,000 CAD 05/2025 – 04/2026
- **DiDi Graduate Student Award in Computer Science** $10,000 CAD 01/2025
- **Zeno Karl Schindler Foundation Master Thesis Grant** 12,000 CHF 03/2022
- **Outstanding D-MAVT Bachelor Award** 2,000 CHF, for first-year exam results 09/2016