Moritz Kappel

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Profile

Name	Moritz Kappel
Gender	Male
Date of birth	January 20, 1994
Place of birth	Bonn, Germany
Citizenship	German
Languages	German (native), English (fluent)

Positions

Since Feb. 2019 — **PhD candidate**, *Institute for Computer Graphics, TU Braunschweig*, Braunschweig (Germany),
Topic: Neural Reconstruction and Rendering of Dynamic Real-World Scenes.
Under the supervision of Prof. Dr.-Ing. Marcus A. Magnor.

Education

Mar. 2020 — **Research Visit (6 months)**, *Graphics, Vision & Video Group, Max Planck Institute for Informatics (MPII)*, Saarbrücken, Germany.
Under the supervision of Prof. Dr. Christian Theobalt.

Nov. 2018 — **M.Sc.**, *Technische Universität Braunschweig*, Braunschweig, Germany, *focus on visual computing*.
Master thesis: "Learning Optical Flow from Long-Exposure Images".

May. 2016 — **B.Sc.**, *Technische Universität Braunschweig*, Braunschweig, Germany.
Bachelor thesis: "Dense Image-Correspondences for Reflecting Surfaces".

July 2012 — **Abitur** (German high school diploma), *Friedrich-Ebert-Gymnasium*, Bonn, Germany.

Research Experience

2019 - present — **Computer Graphics and Vision Researcher**, *Institut for Computer Graphics, TU Braunschweig*, Braunschweig (Germany).
Research topics including machine learning and neural rendering for virtual avatars and panorama imaging.

2016	**Research Assistant**, *Institute for Computer Graphics, TU Braunschweig*, Braunschweig (Germany).
	Research topics including stereo correspondence estimation for free viewpoint interpolation.

Teaching Experience

Teaching Assistant	**TU Braunschweig**, *Braunschweig, Germany*.
	Courses:
	○ Physics-Based Modeling and Simulation (Summer 2020)
	○ Bildbasierte Modellierung (Summer 2022)
Lecturer	**TU Braunschweig**, *Braunschweig, Germany*.
	Courses:
	○ Team Project (Winter 2021/2022)

Academic Service

Reviewer

○ IEEE Conference on Computer Vision and Pattern Recognition (CVPR)

○ IEEE International Conference on Computer Vision (ICCV)

○ Eurographics Symposium on Rendering (EGSR)

○ IEEE International Conference on Image Processing (ICIP)

○ Symposium on Vision, Modeling, and Visualization (VMV)

○ IEEE International Conference on Virtual Reality (VR)

○ Pacific Conference on Computer Graphics and Applications (Pacific Graphics)

Conference Organization

○ Volunteer student for Symposium on Visual Computing and Perception (SVCP) 2017.

○ Local Organizing Committee for Symposium on Vision, Modeling, and Visualization (VMV) 2023.

Awards & Honors

Since Dec. 2022	**Elected Member of AI Grid**.

Technical Skills

Programming Languages	**Python, C++, C, Java**.
Graphics and Machine Learning	**PyTorch, Tensor Flow, OpenGL, OpenCV**.
Miscellaneous	**LaTeX, CMake, VS Code**.

Publications

Kappel, Moritz, Vladislav Golyanik, Susana Castillo, Christian Theobalt, and Marcus Magnor. Fast Non-Rigid Radiance Fields from Monocularized Data. arXiv preprint, 2022. url: https://arxiv.org/abs/2212.01368.

Kappel, Moritz, Vladislav Golyanik, Mohamed Elgharib, Jann-Ole Henningson, Hans-Peter Seidel, Susana Castillo, Christian Theobalt, and Marcus Magnor. High-Fidelity Neural Human Motion Transfer from Monocular Video. In *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, pages 1541–1550, June 2021. Oral presentation.

Marc Kassubeck, **Kappel, Moritz**, Susana Castillo, and Marcus Magnor. N-SfC: Robust and Fast Shape Estimation from Caustic Images. arXiv preprint, Dec 2021. url: https://arxiv.org/abs/2112.06705.

Moritz Mühlhausen, **Kappel, Moritz**, Marc Kassubeck, Paul M. Bittner, Susana Castillo, and Marcus Magnor. Temporal consistent motion parallax for omnidirectional stereo panorama video. In *Proceedings of the 26th ACM Symposium on Virtual Reality Software and Technology*, VRST '20, New York, NY, USA, 2020. Association for Computing Machinery.

Tobias Bertel, Moritz Mühlhausen, **Kappel, Moritz**, Paul Maximilian Bittner, Christian Richardt, and Marcus Magnor. Depth Augmented Omnidirectional Stereo for 6-DoF VR Photography. In *Proc. IEEE Virtual Reality (VR) Workshop*, pages 660–661, May 2020.

Marc Kassubeck, Talash Malek, Moritz Mühlhausen, **Kappel, Moritz**, Susana Castillo, Marc-André Dittrich, and Marcus Magnor. Optical Quality Control for Adaptive Polishing Processes. In *Proc. IEEE Southwest Symposium on Image Analysis and Interpretation*. IEEE Computer Society, 2020.

Thiemo Alldieck, **Kappel, Moritz**, Susana Castillo, and Marcus Magnor. Reconstructing 3D Human Avatars from Monocular Images. *Real VR, LNCS 11900*, pages 188–218, 2020.