

Ayush Tewari

M.Sc. — PhD Student

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Education

- 10/2016 – present **Max Planck Institute for Informatics and Saarland University**, Saarbrücken, Germany.
PhD student in the Graphics, Vision and Video group under the supervision of Prof. Dr. Christian Theobalt
- 08/2014 – 07/2015 **Grenoble Institute of Technology**, Grenoble, France.
Master of Science in Computer Science,
Master Thesis: "Image Blending using Local Phase"
- 06/2010 – 05/2014 **International Institute of Information Technology**, Hyderabad, India.
Bachelor of Technology (Honours) in Computer Science

Positions

- 06/2016 – 09/2016 **Max Planck Institute for Informatics**, Saarbrücken, Germany.
Research Intern
- 02/2015 – 07/2015 **GRAPHDECO team, INRIA Sophia-Antipolis**, Sophia Antipolis, France.
Research Intern
- 05/2013 – 07/2013 **Siemens Technology and Services Private Limited**, Bangalore, India.
Research Intern

Teaching

- Teaching Assistant **Max Planck Institute for Informatics**, Saarbrücken, Germany.
Seminars:
 - 3D Shape Analysis (Summer 2018)
 - Computer Vision for Computer Graphics (Summer 2017, Summer 2019)
- Teaching Assistant **International Institute of Information Technology**, Hyderabad, India.
Courses:
 - Digital Signals Analysis and Applications (Spring 2013)
 - Mathematics I (Discrete Mathematics) (Fall 2012, Fall 2013)

Advised Theses

- Master Theses **Max Planck Institute for Informatics**, Saarbrücken, Germany.
 - "Weakly-supervised Surface Reconstruction Using Floating Radial Basis Functions"
Hossein Hajipour (2018)
 - "Combined 3D Eye and Face Reconstruction using Monocular RGB Images "
Chitra Singh (2019)

Academic Services

Reviewing.

- The IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- International Journal of Computer Vision (IJCV)
- The IEEE International Conference on Computer Vision (ICCV) (2019)
- IEEE Conference on Computer Vision and Pattern Recognition (CVPR) (2019, 2020)
- SIGGRAPH (2019), SIGGRAPH Asia (2019)
- Eurographics (2018, 2020)

Talks

- 06/2019 **FML: Face Model Learning from Videos.**
Oral Presentation, CVPR 2019, Long Beach, USA
- 06/2019 **Reconstructing and Editing Faces in the Wild.**
TU Munich
- 04/2019 **Building 3D Morphable Face Models from 2D Data.**
Dagstuhl Semimar on 3D Morphable Models
- 03/2019 **Reconstructing and Editing Faces in the Wild.**
Google, San Francisco
- 06/2018 **Self-supervised Multi-level Face Model Learning for Monocular Reconstruction at over 250 Hz.**
Oral Presentation, CVPR 2018, Salt Lake City, USA
- 10/2017 **MoFA: Model-based Deep Convolutional Face Autoencoder for Unsupervised Monocular Reconstruction.**
Oral Presentation, ICCV 2017, Venice, Italy
Workshop on Image-based Modeling of Articulated and Deformable Objects, ICCV 2017, Venice, Italy

Publications

- [1] Bernhard Egger, William A. P. Smith, **Ayush Tewari**, Stefanie Wuhrer, Michael Zollhoefer, Thabo Beeler, Florian Bernard, Timo Bolkart, Adam Kortylewski, Sami Romdhani, Christian Theobalt, Volker Blanz, and Thomas Vetter. 3d morphable face models - past, present and future. *arxiv preprint arXiv:1909.01815*, 2019.
- [2] Edgar Tretschk, **Ayush Tewari**, Michael Zollhöfer, Vladislav Golyanik, and Christian Theobalt. DEMA: Deep Mesh Autoencoders for Non-Rigidly Deforming Objects. *arXiv preprint arXiv:1905.10290*, 2019.
- [3] Ohad Fried, **Ayush Tewari**, Michael Zollhöfer, Adam Finkelstein, Eli Shechtman, Dan B Goldman, Kyle Genova, Zeyu Jin, Christian Theobalt, and Maneesh Agrawala. Text-based editing of talking-head video. *ACM Trans. Graph.*, 38(4):68:1–68:14, July 2019. doi: 10.1145/3306346.3323028.
- [4] **Ayush Tewari**, Florian Bernard, Pablo Garrido, Gaurav Bharaj, Mohamed Elgharib, Hans-Peter Seidel, Patrick Pérez, Michael Zollhöfer, and Christian Theobalt. FML: Face model learning from videos. In *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR) (Oral Presentation)*, 2019.
- [5] **Ayush Tewari**, Michael Zollöfer, Florian Bernard, Pablo Garrido, Hyeonwoo Kim, Patrick Perez, and Christian Theobalt. High-fidelity monocular face reconstruction based on an unsupervised model-based face autoencoder. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, pages 1–1, 2018a. ISSN 0162-8828. doi: 10.1109/TPAMI.2018.2876842.
- [6] Qianru Sun, **Ayush Tewari**, Weipeng Xu, Mario Fritz, Christian Theobalt, and Bernt Schiele. A hybrid model for identity obfuscation by face replacement. In *European Conference on Computer Vision (ECCV)*, 2018.
- [7] Hyeonwoo Kim, Pablo Garrido, **Ayush Tewari**, Weipeng Xu, Justus Thies, Matthias Nießner, Patrick Pérez, Christian Richardt, Michael Zollöfer, and Christian Theobalt. Deep video portraits. *ACM Transactions on Graphics (TOG)*, 37(4):163, 2018a.
- [8] **Ayush Tewari**, Michael Zollhöfer, Pablo Garrido, Florian Bernard, Hyeonwoo Kim, Patrick Pérez, and Christian Theobalt. Self-supervised multi-level face model learning for monocular reconstruction at over 250 hz. In *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR) (Oral Presentation)*, 2018b.

- [9] Hyeonwoo Kim, Michael Zollöfer, **Ayush Tewari**, Justus Thies, Christian Richardt, and Theobalt Christian. Inversefacenet: Deep single-shot inverse face rendering from a single image. In *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018b.
- [10] **Ayush Tewari**, Michael Zollöfer, Hyeonwoo Kim, Pablo Garrido, Florian Bernard, Patrick Perez, and Theobalt Christian. MoFA: Model-based Deep Convolutional Face Autoencoder for Unsupervised Monocular Reconstruction. In *The IEEE International Conference on Computer Vision (ICCV) (Oral Presentation)*, 2017.