

Master Thesis in Visual Computing: *Face Tracking and Facial Reenactment*

The goal of this thesis is to explore the space of face tracking with RGB and RGB-D cameras. To this end, a statistical model of the face is utilized whose parameters are obtained at runtime using a continuous optimization approach and/or a data-driven machine learning technique. Having a reconstructed face, a large variety of applications, such as facial reenactment or virtual character animations, can be realized.



[Thies et al. 16] Real-time Facial Reenactment

Milestones:

- 1) Keypoint-based face detector
- 2) Blendshape non-linear least squares fit
- 3) Character and reenactment application

Pre-requisites: Strong C++, graphics and vision background, highly self-motivated ☺

References: Face2Face <https://www.youtube.com/watch?v=ohmajJTcpNk>
<http://www.graphics.stanford.edu/~niessner/thies2016face.html>



[Thies et al. 16] Face2Face

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