Friedrich-Alexander-Universität
Technische Fakultät

Informatik–Kolloquium SS 2023

Dienstag, 11.04.2023, 14.00 Uhr, Raum 01.150, Cauerstr.11

Dr. Timo Bolkart

Max Planck Institute for Intelligent Systems, Tübingen

From Images to Expressive 3D Heads

Recovering expressive humans from images is essential for understanding human behavior. We approach this by learning 3D models of the human face and relate these to how humans appear in images and videos. Such 3D models require large 3D datasets in dense semantic correspondence, which are difficult and time consuming to process. To overcome this, we directly predict facial meshes in a consistent mesh topology from multi-view images, which speeds up data capture by three orders of magnitude compared to traditional techniques. Understanding and reasoning about faces in less constrained images and videos requires tools to reliably capture accurate face shape and the full spectrum of facial expression. Unfortunately, the best recent 3D face regression methods from monocular images reconstruct faces in the wrong metrical scale, and are unable to capture the full spectrum of facial expression, such as subtle or extreme emotions. To address this, we train 3D face regressors that recover metrically accurate face shape, geometric shape details, as well as their relationship to facial expressions by leveraging face and emotion recognition networks.

Kontakt:
Prof. Dr. Bernhard Egger
Informatik 9 (Graphische Datenverarbeitung)
Cauerstr. 11
91058 Erlangen
www.lgdv.tf.fau.de