

Sep 29 – Oct 1

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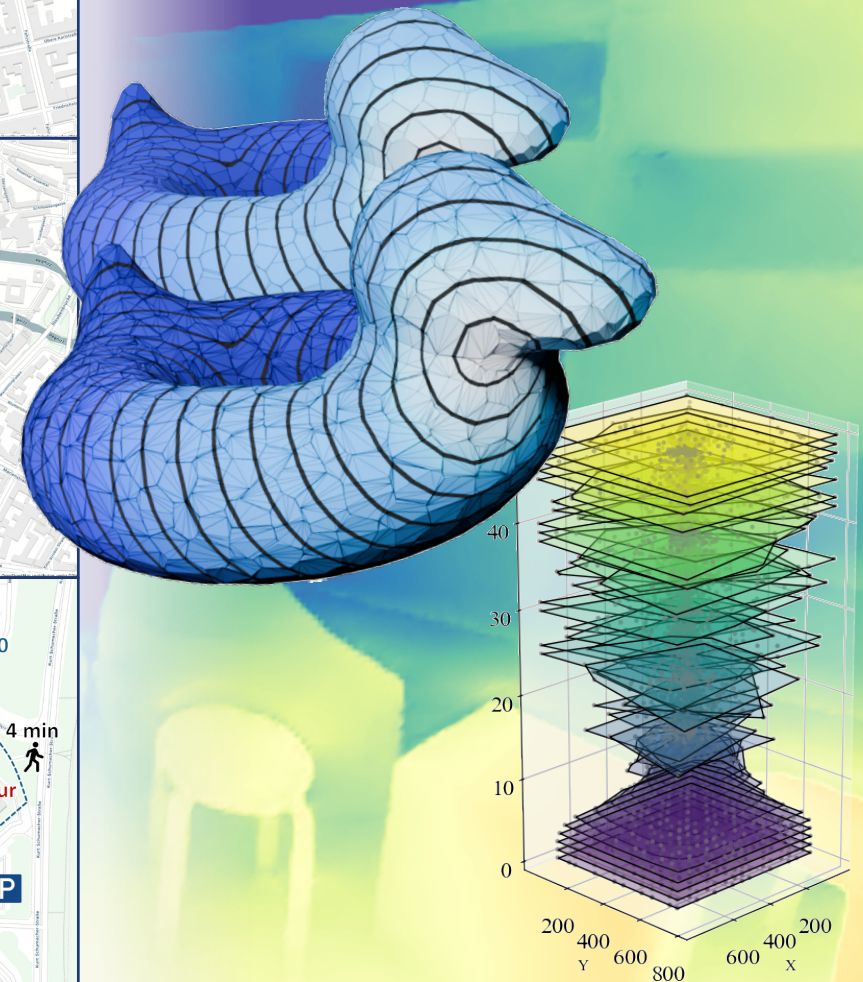
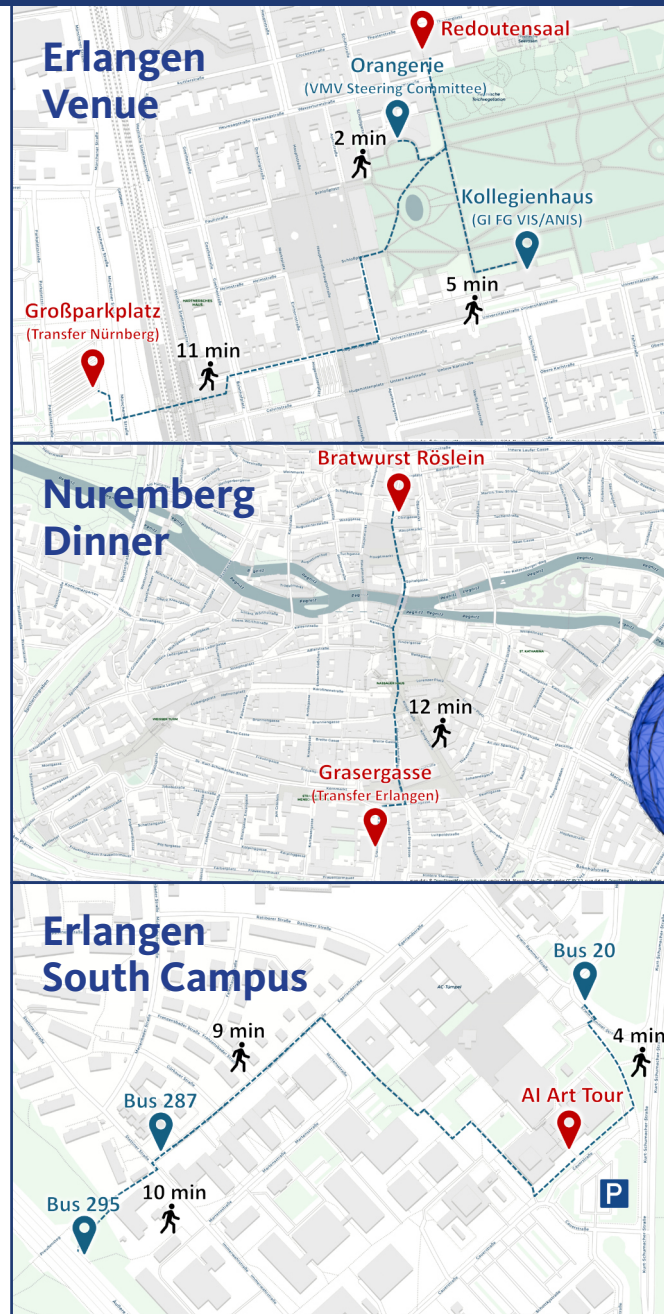
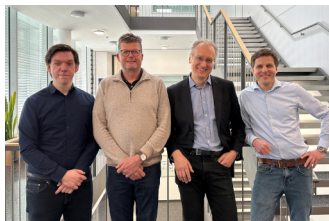
Organization

Visual Computing Erlangen

Cauerstraße 11
91058 Erlangen

Bernhard Egger
Tobias Günther
Marc Stamminger
Tim Weyrich

Andrea Müller
Jutta Schoppmeier



Monday, September 29

AI Art Tour (10:00–11:30), FAU South Campus, Cauerstr. 11, 1st Floor
From Palette to Pixel and Back

Light Lunch / Registration (12:00–13:00), Redoutensaal Erlangen

Opening + Keynote I (13:00–14:15)

Katja Bühler
Uncertainty, Reliability, and Trust in Computer-Aided Image-Based Decision-Making

Session 1 (14:20–15:00)
Real-Time Rendering

Session Chair: Quirin Meyer

Alias-Free Shadows with Ray Cones for Alpha Tested Geometry
Felix Brüll, René Kern, Thorsten Grosch

Fast Rendering of Large-Scale Dynamic Multi-Layered Height Maps
Alexander Maximilian Nilles, Stefan Müller

Coffee Break (15:00–15:30)

Session 2 (15:30–17:10)
Neural and Differentiable Rendering

Session Chair: Rüdiger Westermann

Neural Acquisition & Representation of Subsurface Scattering
Arjun Majumdar, Raphael Braun, Hendrik Lensch

A Bag of Tricks for Efficient Implicit Neural Point Clouds
Florian Hahlbohm, Linus Franke, Leon Overkamp, Paula Wespe, Susana Castillo, Martin Eisemann, Marcus Magnor

Learning Neural Antiderivatives
Fizza Rubab, Ntumba Elie Nsambi, Martin Balint, Felix Mujkanovic, Hans-Peter Seidel, Tobias Ritschel, Thomas Leimkühler

Quantised Global Autoencoder: A Holistic Approach to Representing Visual Data
Tim Elsner, Paula Usinger, Victor Czech, Gregor Kobsik, Yanjiang He, Isaak Lim, Leif Kobbelt

Refinement of Monocular Depth Maps via Multi-View Differentiable Rendering
Laura Fink, Linus Franke, Bernhard Egger, Joachim Keinert, Marc Stamminger

Nectar Fast Forward (17:10–17:20)

Nectar Session + Reception (17:30–19:30)

Efficient Perspective-Correct 3D Gaussian Splatting Using Hybrid Transparency
Florian Hahlbohm, Fabian Friederichs, Tim Weyrich, Linus Franke, Moritz Kappel, Susana Castillo, Marc Stamminger, Martin Eisemann, Marcus Magnor

Adaptive Phase-Field-FLIP for Very Large Scale Two-Phase Fluid Simulation
Bernhard Braun, Jan Bender, Nils Thuerey

Inverse Rendering of Near-Field mmWave MIMO Radar for Material Reconstruction
Nikolai Hofmann, Vanessa Wirth, Johanna Bräunig, Ingrid Ullmann, Martin Vossiek, Tim Weyrich, Marc Stamminger

Electromyography-Informed Facial Expression Reconstruction For Physiological-Based Synthesis and Analysis
Tim Büchner, Christoph Anders, Orlando Guntinas-Lichius, Joachim Denzler

Matérn Kernels for Tunable Implicit Surface Reconstruction
Maximilian Weiherer, Bernhard Egger

Towards Robust Autonomous Driving: Out-of-Distribution Object Detection in Bird's Eye View Space
Muhammad Asad, Ihsan Ullah, Ganesh Sistu, Michael G. Madden

A Particle-Based Approach to Extract Dynamic 3D FTLE Ridge Geometry
Daniel Stelter, Thomas Wilde, Christian Rössl and Holger Theisel

Gen3DSR: Generalizable 3D Scene Reconstruction via Divide and Conquer from a Single View
Andreea Ardelean, Mert Özer, Bernhard Egger



Tuesday, September 30

Keynote II (09:00–10:00)

Elmar Eisemann
Virtually Building Reality – From Voxel Worlds to Colorful Analysis

Coffee Break (10:00–10:30)

Session 3 (10:30–11:50)
Visualization, Visual Analytics, and VR

Session Chair: Johanna Schmidt

XMTC: Explainable Early Classification of Multivariate Time Series in Reach-to-Grasp Hand Kinematics
Reyhaneh Sabbagh Gol, Dimitar Valkov, Lars Linsen

Uncovering Relations in High-Dimensional Behavioral Data of Drosophila Melanogaster
Michael Thane, Kai Michael Blum, Dirk J. Lehmann

ValLLM: A Visual Analytics Approach for the Critical Validation of LLM-Generated Tabular Data
Madhav Sachdeva, Christopher Narayanan, Marvin Wiedenkiller, Jana Sedlakova, Jürgen Bernard

An Investigation of the Apple Vision Pro for Out-of-Core Ray-Guided Volume Rendering with BorgVR
Camilla Hrycak, Jens Krüger

Lunch Break (11:50–13:20)

Committee Meetings (12:20–13:20)

GI Fachgruppe Visualisierung
GI Fachgruppe ANIS
VMV Steering Committee

invite
only

Session 4 (13:20–15:00)
Imaging and Image Processing

Session Chair: Susana Castillo

Towards Integrating Multi-Spectral Imaging with Gaussian Splatting
Josef Grün, Lukas Meyer, Maximilian Weiherer, Bernhard Egger, Marc Stamminger, Linus Franke

Fast Camera Calibration from Orthographic Views of Rotated Objects
Arne Rak, Tristan Wirth, Volker Knauthe, Arjan Kuijper, Dieter Fellner

Image Pre-Segmentation from Shadow Masks
Moritz Heep, Amal Dev Parakkat, Eduard Zell

Quantized FCA: Efficient Zero-Shot Texture Anomaly Detection
Andrei-Timotei Ardelean, Patrick Rückbeil, Tim Weyrich

CharGen: Fast and Fluent Portrait Modification
Jan-Niklas Dihlmann, Arnela Killguss, Hendrik Lensch

Coffee Break (15:00–15:30)

Jahrestreffen GI GDV (15:30–17:00)

Shuttle to Nuremberg (17:15–18:00)

City Tour Nuremberg (18:00–19:00)

Conference Dinner (19:30–21:30), Bratwurst Röslein Nuremberg
sponsored by e.solutions

Shuttle to Erlangen (21:50–22:30)



Wednesday, October 1

Keynote III (09:00–10:00)

William Smith
Inverse Rendering in the Age of Foundation Models

Coffee Break (10:00–10:30)

Session 5 (10:30–12:10)
Geometry, Simulation, and Optimization

Session Chair: Christian Rössl

Robust Discrete Differential Operators for Wild Geometry
Sven Dominik Wagner, Mario Botsch

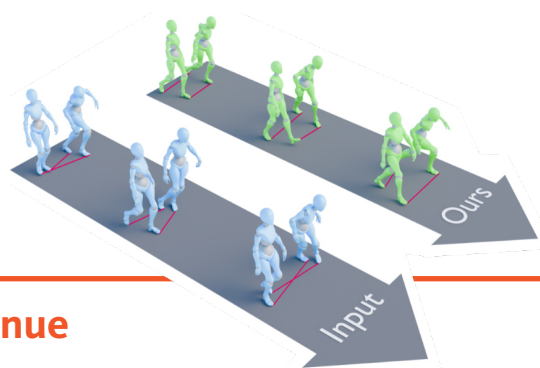
Bijjective Feature-Aware Contour Matching
Zain Selman, Nils Speetzen, Leif Kobbelt

Differentiable XPBD for Gradient-Based Learning of Physical Parameters from Motion
Simone Drysch, David Stotko, Reinhard Klein

Bin-VBSR: Variable Block Size Binned Block-Compressed Sparse Row for Efficient GPU-Accelerated Finite Element Analysis
Florian Pfeil, Stephanie Ferreira, Johannes Sebastian Mueller-Roemer

Exploring the Geometry of Swarm Intelligence: Negative Inertia and Ellipsoidal Search Space Evolution in PSO
Katharina Krämer, Stefan Müller, Michael Kosterhon

Closing (12:10–12:40)



Venue

Redoutensaal
Theaterplatz 1
91054 Erlangen, Germany

We are here to help!

☎ +49 173 3007141 VMV25-Hotline during the conference:
10 AM – 8 PM (Sep 29), 9 AM – 10 PM (Sep 30), 9 AM – 1 PM (Oct 1)
✉ contact-vce@fau.de

