

CyberValley

CVPR 2021: Accepted papers from Cyber Valley partner institutions

1. [Learning Decision Trees Recurrently Through Communication](#)

Stephan Alaniz (MPI for Informatics, University of Tübingen), Diego Marcos (Wageningen University and Research), Bernt Schiele (MPI for Informatics), Zeynep Akata (University of Tübingen, MPI for Informatics, MPI for Intelligent Systems, Tübingen)

2. [Neural Deformation Graphs for Globally-consistent Non-rigid Reconstruction](#)

Aljaz Bozic (Technical University of Munich), Pablo Palafox (Technical University of Munich), Justus Thies** (Technical University of Munich), Angela Dai (Technical University of Munich), Matthias Nießner (Facebook Reality Labs)

3. [Distilling Audio-Visual Knowledge by Compositional Contrastive Learning](#)

Yanbei Chen (University of Tübingen), Yongqin Xian (MPI for Informatics), Almut Sophia Koepke (University of Tübingen), Zeynep Akata (University of Tübingen, MPI for Informatics, MPI for Intelligent Systems, Tübingen)

4. [Stereo Radiance Fields \(SRF\): Learning View Synthesis from Sparse Views of Novel Scenes](#)

Julian Chibane (MPI for Informatics), Aayush Bansal (Carnegie Mellon University), Enric Corona, Albert Pumarola, and (Institut de Robotica i Informatica Industrial), Albert Pumarola, Guillem Alenya (Institut de Robotica i Informatica Industrial, CSIC-UPC), Gerard Pons-Moll (University of Tübingen, MPI for Informatics) Francesc Moreno-Noguer (Institut de Robotica i Informatica Industrial, CSIC-UPC)

5. [SMPLicit: Topology-aware Generative Model for Clothed People](#)

Enric Corona, Albert Pumarola, Guillem Alenya (Institut de Robotica i Informatica Industrial, CSIC-UPC), Gerard Pons-Moll (MPI for Informatics), Francesc Moreno-Noguer (Institut de Robotica i Informatica Industrial, CSIC-UPC)

6. [SPSG: Self-Supervised Photometric Scene Generation from RGB-D Scans](#)

Angela Dai (Technical University of Munich), Yawar Siddiqui (Technical University of Munich), Justus Thies** (Technical University of Munich), Julien Valentin (Google), Matthias Nießner (Technical University of Munich)

7. [Dynamic Neural Radiance Fields for Monocular 4D Facial Avatar Reconstruction](#)

Guy Gafni (Technical University of Munich), Justus Thies* (Technical University of Munich), Michael Zollhöfer (Facebook Reality Labs), Matthias Nießner (Technical University of Munich)

8. [Human POSEitioning System \(HPS\): 3D Human Pose Estimation and Self-localization in Large Scenes from Body-Mounted Sensors](#)

Vladimir Guzov (University of Tübingen, MPI for Informatics), Torsten Sattler (CIIRC, Czech Technical University in Prague, Czech Republic), Gerard Pons-Moll (University of Tübingen, MPI for Informatics)*

9. [Populating 3D Scenes by Learning Human-Scene Interaction](#)

Mohamed Hassan, Partha Ghosh, Joachim Tesch, Dimitrios Tzionas, Michael J. Black (MPI for Intelligent Systems, Tübingen)

10. [Orthogonal Over-Parameterized Training](#)

Weiyang Liu (University of Cambridge, MPI for Intelligent Systems, Tübingen), Rongmei Lin (Emory University), Zhen Liu (Mila, Université de Montréal), James Rehg (Georgia Institute of Technology), Liam Paull (Mila, Université de Montréal), Li Xiong (Emory University), Le Song (Georgia Institute of Technology), Adrian Weller (University of Cambridge, Alan Turing Institute)

11. [SCALE: Modeling Clothed Humans with a Surface Codec of Articulated Local Elements](#)

Qianli Ma (MPI for Intelligent Systems, Tübingen, ETH Zurich), Shunsuke Saito, Jinlong Yang (MPI for Intelligent Systems, Tübingen), Siyu Tang (ETH Zurich) Michael J. Black (MPI for Intelligent Systems, Tübingen)

12. [Open World Compositional Zero-Shot Learning](#)

Massimiliano Mancini (University of Tübingen), Mohammad Ferjad Naeem (University of Tübingen, Technical University of Munich), Yongqin Xian (MPI for Informatics) Zeynep Akata (University of Tübingen, MPI for Informatics, MPI for Intelligent Systems, Tübingen)

13. [LEAP: Learning Articulated Occupancy of People](#)

Marko Mihajlovic, Yan Zhang (ETH Zurich), Michael J. Black (MPI for Intelligent Systems, Tübingen), Siyu Tang (ETH Zurich)

14. [On Self-Contact and Human Pose](#)

Lea Müller, Ahmed A. A. Osman (MPI for Intelligent Systems, Tübingen), Siyu Tang (ETH Zurich), Chun-Hao P. Huang, Michael J. Black (MPI for Intelligent Systems, Tübingen)*

15. [Learning Graph Embeddings for Compositional Zero-shot Learning](#)

Mohammad Ferjad Naeem (University of Tübingen, Technical University of Munich), Yongqin Xian (MPI for Informatics), Federico Tombari (Technical University of Munich, Google), Zeynep Akata (University of Tübingen, MPI for Informatics, MPI for Intelligent Systems, Tübingen)

16. [GIRAFFE: Representing Scenes as Compositional Generative Neural Feature Fields](#)

M. Niemeyer and A. Geiger (University of Tübingen, MPI for Intelligent Systems, Tübingen)*

17. [Neural Parts: Learning Expressive 3D Shape Abstractions with Invertible Neural Networks](#)

D. Paschalidou (MPI for Intelligent Systems, Tübingen, Max Planck ETH Center for Learning Systems, NVIDIA), A. Katharopoulos (Idiap Research Institute, Switzerland, École Polytechnique Fédérale de Lausanne), A. Geiger (University of Tübingen, MPI for Intelligent Systems, Tübingen), and S. Fidler (NVIDIA, University of Toronto, Vector Institute)

18. [AGORA: Avatars in Geography Optimized for Regression Analysis](#)

Priyanka Patel, Chun-Hao P. Huang, Joachim Tesch (MPI for Intelligent Systems, Tübingen) David T. Hoffmann (University of Freiburg, Bosch Center for Artificial Intelligence), Shashank Tripathi, Michael J. Black (MPI for Intelligent Systems, Tübingen)

19. [Multi-Modal Fusion Transformer for End-to-End Autonomous Driving](#)

A. Prakash, K. Chitta, and A. Geiger (University of Tübingen, MPI for Intelligent Systems, Tübingen)

20. [D-NeRF: Neural Radiance Fields for Dynamic Scenes](#)

Albert Pumarola, Enric Corona (Institut de Robotica i Informatica Industrial, CSIC-UPC), Gerard Pons-Moll (MPI for Informatics), Francesc Moreno-Noguer (Institut de Robotica i Informatica Industrial, CSIC-UPC)

21. [BABEL: Bodies, Action and Behavior with English Labels](#)

Abhinanda R. Punnakal, Arjun Chandrasekaran, Nikos Athanasiou (MPI for Intelligent Systems, Tübingen), Alejandra Quiros-Ramírez (University of Constance), Michael J. Black (MPI for Intelligent Systems, Tübingen)

22. [SCANimate: Weakly Supervised Learning of Skinned Clothed Avatar Networks](#)

Shunsuke Saito, Jinlong Yang (MPI for Intelligent Systems, Tübingen), Qianli Ma (ETH Zurich), Michael J. Black (MPI for Intelligent Systems, Tübingen)*

23. [SMD-Nets: Stereo Mixture Density Networks](#)

F. Tosi (University of Bologna), Y. Liao, C. Schmitt, and A. Geiger (University of Tübingen, MPI for Intelligent Systems, Tübingen)

24. [Locally Aware Piecewise Transformation Fields for 3D Human Mesh Registration](#)

S. Wang (ETH Zurich), A. Geiger (University of Tübingen, MPI for Intelligent Systems, Tübingen), and S. Tang (ETH Zurich)

25. [We are More than Our Joints: Predicting how 3D Bodies Move](#)

Yan Zhang (ETH Zurich) Michael J. Black (MPI for Intelligent Systems, Tübingen), Siyu Tang (ETH Zurich)

26. [3D CNNs with Adaptive Temporal Feature Resolutions](#)

Mohsen Fayyaz, Emad Bahrami Rad (University of Bonn), Ali Diba (KU Leuven), Mehdi Noroozi (Bosch Center for Artificial Intelligence), Ehsan Adeli (Stanford University), Luc Van Gool (KU Leuven/ETH Zurich), Juergen Gall (University of Bonn)

27. [Fostering Generalization in Single-view 3D Reconstruction by Learning a Hierarchy of Local and Global Shape Priors](#)

Jan Bechtold (Bosch Center for Artificial Intelligence/University of Freiburg), Maxim Tatarchenko (Bosch Center for Artificial Intelligence), Volker Fischer (Bosch Center for Artificial Intelligence), Thomas Brox (University of Freiburg)

**Received a Best Paper nomination.*

***Justus Thies joined the Max Planck Institute for Intelligent Systems in Tübingen on April 1, 2021 as leader of the new Neural Capture & Synthesis research group.*