Vincent Sitzmann

Curriculum Vitae

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Education

since 07/20 **Postdoctoral Associate**, *Massachusetts Institute of Technology*, Cambridge, MA.
Computer Science and Artificial Intelligence Laboratory.

07/19–01/20 **Research Intern**, *Google AI*, New York City, NY.

09/17–04/20 **Doctor of Philosophy**, *Stanford University*, Stanford, CA.
Electrical Engineering Department, Stanford Graduate Fellowship.

09/15–06/17 **Master of Science**, *Stanford University*, Stanford, CA.
Computer Science Department, Fulbright Fellowship.

10/11–04/15 **Bachelor of Science**, *Technical University of Munich*, Germany.
Electrical Engineering, degree awarded with high distinction (top 3% of class).

Fellowships and Awards

2019 **NeurIPS Honorable Mention: Outstanding New Directions**.

2017–2020 **Stanford Graduate Fellowship**.

2016–2017 **Fellowship of the German Academic Exchange Service**.

2015–2017 **Full Fulbright Fellowship**.

2014 **Scholarship of the Lothar and Sigrid Rohde-Foundation**.

2013–2017 **Scholarship of the German National Academic Foundation**.

2013–2017 **Scholarship of the Max-Weber Program of Bavaria**.

Conference Publications

C6 **Implicit Neural Representations with Periodic Activation Functions**, *V. Sitzmann*, J. Martel*, A. Bergman, D. Lindell, G. Wetzstein*, 2020, Conference on Neural Information Processing Systems (NeurIPS, oral).

C5 **MetaSDF: Meta-Learning Signed Distance Functions**, *V. Sitzmann*, E. R. Chan*, R. Tucker, N. Snavely, G. Wetzstein*, 2020, Conference on Neural Information Processing Systems (NeurIPS, poster).

C4 **Semantic Implicit Neural Scene Representations with Semi-supervised Training**, *A. Kohli*, V. Sitzmann*, G. Wetzstein*, 2020, International Conference on 3D Vision (3DV).

C3 **State of the Art on Neural Rendering**, *A. Tewari et al.*, 2020, Eurographics, State of the Art Report.

C2 **Scene Representation Networks: Continuous 3D-structure-aware Neural Scene Representations**, *V. Sitzmann, M. Zollhoefer, G. Wetzstein*, 2019, Conference on Neural Information Processing Systems (NeurIPS, oral, Outstanding New Directions Award).

C1 **Deep Voxels: Learning Persistent 3D Feature Embeddings**, *V. Sitzmann, J. Thies, F. Heide, M. Niessner, G. Wetzstein, M. Zollhoefer*, 2019, IEEE Conference on Computer Vision and Pattern Recognition (CVPR, oral).

Journal Publications

J5 **Hybrid optical-electronic convolutional neural networks with optimized diffractive op-tics for image classification**, *J. Chang, V. Sitzmann, X. Dun, W. Heidrich, G. Wetzstein*, 2018, Scientific Reports.

J4 **End-to-end Optimization of Optics and Image Processing for Achromatic Extended Depth of Field and Super-resolution Imaging**, *V. Sitzmann*, S. Diamond*, Y. Peng*, X. Dun, S. Boyd, W. Heidrich, F. Heide, G. Wetzstein*, 2018, ACM Transactions on Graphics (SIGGRAPH).

J3 **Saliency in VR: How do people explore virtual environments?**, *V. Sitzmann, A. Serrano, A. Pavel, M. Agrawala, D. Gutierrez, B. Masia, G. Wetzstein*, 2018, IEEE Transactions on Visualization and Computer Graphics (IEEE Virtual Reality).

J2 **Towards a Machine-learning Approach for Sickness Prediction in Virtual Environments**, *N. Padmanaban, T. Ruban, V. Sitzmann, A. Norcia, G. Wetzstein*, 2018, IEEE Transactions onVisualization and Computer Graphics (IEEE Virtual Reality).

J1 **Movie Editing and Cognitive Event Segmentation in Narrative Virtual Reality**, *A. Serrano, V. Sitzmann, J. Ruiz-Borau, G. Wetzstein, D. Gutierrez, B. Masia*, 2017, ACM Transactions on Graphics (SIGGRAPH).

Non-Refereed Publications

NR2 **Unrolled Optimization with Deep Priors**, *S. Diamond*, V. Sitzmann*, F. Heide, G. Wetzstein*, 2017, arXiv:1705.08041.

NR1 **Dirty Pixels: Optimizing Image Classification Architectures for Raw Sensor Data**, *S. Diamond, V. Sitzmann, S. Boyd, G. Wetzstein, F. Heide*, 2017, arXiv:1701.06487.

Tutorials and Workshops

08/20 **Learning 3D Representations for Shape and Appearance**, *ECCV 2020*.

07/20 **Neural Rendering**, *CVPR 2020*.

05/20 **State of the Art on Neural Rendering**, *Eurographics 2020*.

Invited Talks & Presentations

08/20 **Stanford University, course CS348I: Computer Graphics in the Era of AI**, *Guest lecture on Implicit Neural Scene Representations*.

08/20 **University of Toronto, Machine Learning Group**, *Implicit Neural Scene Representations*.

08/20 **Oxford Visual Geometry Group**, *Implicit Neural Scene Representations*.

08/20 **Carnegie Mellon Vision and Autonomous Systems Seminar**, *Implicit Neural Scene Representations*.

07/20 **University of Bath, Visual Computing Group**, *Implicit Neural Scene Representations*.

07/20 **ICML 2020, Workshop for Object-Oriented Representations**, *Implicit Neural Scene Representations*.

07/20 **Autonomous Vision Group, Max Planck Institute**, *Implicit Neural Scene Representations*.

07/20 **Visual Computing Lab, Technical University of Munich**, *Implicit Neural Scene Representations*.

03/20 **Adobe Research**, *Self-supervised Scene Representation Learning*.

03/20 **Google DeepMind**, *Self-supervised Scene Representation Learning*.

01/20 **Apple Research**, *Self-supervised Scene Representation Learning*.

01/20 **Google AI**, *Self-supervised Scene Representation Learning*.

01/20 **NVidia Research**, *Self-supervised Scene Representation Learning*.

03/18 **SIGGRAPH 2018**, *Saliency in VR*.

03/18 **University of Tübingen, Graphics Department**, *Learning Domain-Specific Cameras*.

03/18 **Max-Planck Institute for Informatics, Graphics Department**, *Learning Domain-Specific Cameras*.

Students Supervised

Graduate **Eric Ryan Chan**, *Stanford University, 2020*.

Alexander William Bergman, *Stanford University, 2020*.

Undergrad. **Katie Collins**, *MIT, 2020–*.

Nikhil Murthy, *MIT, 2020–*.

Amit Pal Kohli, *Stanford University, 2019–2020*, now Ph.D. at UC Berkeley.

Theses

Doctoral Thesis.

title *Self-supervised Scene Representation Learning*

supervisor Prof. Gordon Wetzstein, Stanford University

Bachelor Thesis.

title *Plane Detection in SLAM Pointclouds for AR Applications*

supervisor Prof. Klaus Diepold, Technical University of Munich