Yifan Wang — CURRICULUM VITAE

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Research Interests

Learning-based image and video processing, geometry processing.

Education

ETH Zurich, Fall 2017 - Oct 2021
Ph.D. in Computer Science
Dissertation title: Detail-driven geometry processing pipeling using neural networks, supervised by Prof. Olga Sorkine-Hornung.

ETH Zurich, Fall 2014 - Fall 2016
Master of Science in Robotics, Systems and Control
Graduated with distinction.
Master Thesis: Semantic-Regional CNNs for Action Recognition, supervised by Prof. Otmar Hilliges.

ETH Zurich, Fall 2013 - Spring 2014
ERASMUS program in Electrical Engineering

TU Munich, Fall 2010 - Spring 2013
Bachelor of Science in Electrical Engineering and Information Technology
Graduated with distinction.
Bachelor Thesis: High Data Rate MIMO Configuration for LEO Satellite Communications.

Publications

[1] Input-level Inductive Biases for 3D Reconstruction - **Wang Yifan**, Carl Doersch, Relja Arandjelović, João Carreira, Andrew Zisserman. arXiv 2021

[2] Advances in neural rendering - Ayush Tewari, Justus Thies, Ben Mildenhall, Pratul Srinivasan, Edgar Tretschk, **Yifan Wang**, Christoph Lassner, Vincent Sitzmann, Ricardo Martin-Brualla, Stephen Lombardi, Tomas Simon, Christian Theobalt, Matthias Niessner, Jonathan T Barron, Gordon Wetzstein, Michael Zollhoefer, Vladislav Golyanik. arXiv 2021

[3] Geometry-Consistent Neural Shape Representation with Implicit Displacement Fields - **Wang Yifan**, Lukas Rahmann, Olga Sorkine-Hornung. arXiv 2021

[4] Iso-Points: Optimizing Neural Implicit Surfaces with Hybrid Representations - **Wang Yifan**, Shihao Wu, Cengiz Öztireli, Olga Sorkine-Hornung. CVPR 2021

[5] Neural Cages for Detail-Preserving 3D Deformations - **Wang Yifan**, Noam Aigerman, Vladmir Kim, Siddhartha Chaudhuri, Olga Sorkine-Hornung. CVPR 2020, **oral presentation**.

[6] Differentiable surface splatting for point-based geometry processing. **Yifan Wang**, Felice Serena, Shihao Wu, Cengiz Öztireli, Olga Sorkine-Hornung. ACM Transactions on Graphics (TOG) 38.6 (2019): 1-14.

[7] Blind image super resolution with spatially variant degradations - Victor Cornillère, Abdelaziz Djelouah, **Wang Yifan**, Olga Sorkine-Hornung, Christopher Schroers. ACM Transactions on Graphics (TOG) 38.6 (2019): 166.

[8] Patch-based Progressive 3D Point Set Upsampling - **Wang Yifan**, Shihao Wu, Hui Huang, Daniel Cohen-Or and Olga Sorkine-Hornung. CVPR 2019.

[9] A Fully Progressive Approach to Single-Image Super-Resolution - **Yifan Wang**, F. Perazzi, B. McWilliams, A. Sorkine-Hornung, O. Sorkine-Hornung, C. Schroers. CVPRW 2018.

[10] Two-Stream SR-CNNs for Action Recognition in Videos - **Yifan Wang**, Jie Song, Limin Wang, Luc Van Gool and Otmar Hilliges. BMVC 2016.

Patents (including pending)

US patenting: Techniques For Performing Point-Based Inverse Rendering (US Patent App. 16/586,746) 2019

US patenting: Techniques for Upscaling Images Generated with Undetermined Downscaling Kernels (US Patent App. 16/542,227) 2019

US patenting: Video Super-Resolution Using An Artificial Neural Network (US Patent App. 15/886,625) 2017

Research Internships

DeepMind, (remote) London UK Jul 2021 - Nov 2021
geometry-aware video understanding

Adobe Research, Seattle USA Jun 2019 - Sep 2019
deformation-based shape generation

AICFVE, Beijing China May 2017
Image-to-image translation

Disney Research, Zurich Switzerland Fall 2016 - Feb 2017
Image super-resolution

ETH Zurich, Zurich Switzerland May 2016 - Jul 2016
Action Recognition from Videos

BMW Research and Technology, Munich Germany May 2014 - Jul 2014
Hardware for augmented reality

Awards

Apple Fellowship in AI/ML 2020
Recipient in area "Augmented Reality and Computer Vision"

Facebook Fellowship 2020
Finalist in area "Computer Graphics"

New Trends in Image Restoration and Enhancement Challenge 2018
Winner Award in Track 1 and Honorable Mention in Tracks 2-4.

HackZurich 2016
Finalist in Europe's largest Hackathon.

Heinrich und Lotte Münlfenzl-Stiftung 2013
Selected recipient

Invited Talks

Toronto Geometry Colloquium (toronto-geometry-colloquium.github.io) Feb 2021
"Detail-Driven 3D Content Creation"

Graphics And Mixed Environment Seminar (games-cn.org) Jun 2020
"Detail-driven shape deformation"

Teaching

I have been a teaching assistant for “Linear Algebra for Computer Science" and “C++ for Mechanical Engineers" at ETH Zurich.

Supervised students

Lukas Rahmann	Master thesis	Sep 2020
Viviane Yang	Semester project	May 2020
Lixin Xue	Semeter project	Jan 2020
Lea auf der Maur	Master thesis	Feb 2019