

ETH Zurich
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Research Interests

Learning-based image and video processing, geometry processing.

Education

ETH Zurich, Fall 2017 - Now
PhD Candidate in Computer Science
Research Topic: Detail-driven raw data restoration and enhancement, 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] Iso-Points: Optimizing Neural Implicit Surfaces with Hybrid Representations - **Wang Yifan**, Shihao Wu, Cengiz Öztireli, Olga Sorkine-Hornung. CVPR 2021
- [2] Neural Cages for Detail-Preserving 3D Deformations - **Wang Yifan**, Noam Aigerman, Vladimir Kim, Siddhartha Chaudhuri, Olga Sorkine-Hornung. CVPR 2020, **oral presentation**.
- [3] 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.
- [4] Patch-based Progressive 3D Point Set Upsampling - **Wang Yifan**, Shihao Wu, Hui Huang, Daniel Cohen-Or and Olga Sorkine-Hornung. CVPR 2019.
- [5] 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.
- [6] 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 (Pending)	2019
US patenting: Techniques for Upscaling Images Generated with Undetermined Downscaling Kernels (Pending)	2019
US patenting: Video Super-Resolution Using An Artificial Neural Network (US Patent App. 15/886,625)	2017

Research Internships

<i>DeepMind, (remote) Zurich Switzerland</i> geometry-aware video understanding	Fall 2016 - Feb 2017
<i>Adobe Research, Seattle USA</i> deformation-based shape generation	Jun 2019 - Sep 2019
<i>AICFVE, Beijing China</i> Image-to-image translation	May 2017
<i>Disney Research, Zurich Switzerland</i> Image super-resolution	Fall 2016 - Feb 2017
<i>ETH Zurich, Zurich Switzerland</i> Action Recognition from Videos	May 2016 - Jul 2016
<i>BMW Research and Technology, Munich Germany</i> Hardware for augmented reality	May 2014 - Jul 2014

Awards

<i>Apple Fellowship in AI/ML</i> Recipient in area "Augmented Reality and Computer Vision"	2020
<i>Facebook Fellowship</i> Finalist in area "Computer Graphics"	2020
<i>New Trends in Image Restoration and Enhancement Challenge</i> Winner Award in Track 1 and Honorable Mention in Tracks 2-4.	2018
<i>HackZurich</i> Finalist in Europe's largest Hackathon.	2016
<i>Heinrich und Lotte Mühlfenzl-Stiftung</i> Selected recipient	2013

Invited Talks

<i>Toronto Geometry Colloquium (toronto-geometry-colloquium.github.io)</i> "Detail-Driven 3D Content Creation"	Feb 2021
<i>Graphics And Mixed Environment Seminar (games-cn.org)</i> "Detail-driven shape deformation"	Jun 2020

Selected Courses

Geometry Processing and Shape Modelling, Image Analysis and Computer Vision, 3D pho-

tography, Machine Learning, Probabilistic Artificial Intelligence, Probabilistic Graphical Models for Image Analysis

Teaching

I'm teaching assistant for "Linear Algebra for Computer Science" and "C++ for Mechanical Engineers".