Federico Perazzi

Mobile Phone	(+41) 76 266 3105	**Address**	Stampfenbachstrasse 48,
Email	federico@disneyresearch.com		Zurich, 8006, Switzerland
Web	https://graphics.ethz.ch/~perazzif		

Personal Profile

I am a Postdoctoral Researcher at Disney Research, in the Imaging and Video Processing Group. I obtained my PhD in Computer Science at ETH Zurich.

Research Interests

Applied research in Computer Vision and Machine Learning; Current research: deep learning methods for video segmentation, super-resolution and image-to-image translation; Previous research includes: saliency detection, panoramic video stitching and calibration of fish-eye camera arrays.

Software Development

- Programming Languages: Python, C/C++, Sh/Bash, Matlab.
- Vision/ML APIs: Caffe, TensorFlow, scikit-learn, OpenCV.

Education

2013 - Feb 2017 Ph.D in Computer Science - ETH, Zurich, Switzerland

General Topic: Dense Correspondence Estimation across Images and Videos.
Advisors: Prof. Markus Gross, Dr. Alexander Sorkine-Hornung (Disney Research)

2010-2012 M.Sc. in Computer Science - ETH, Zurich, Switzerland

Thesis: Fisheye Camera Array Calibration
GPA: 5.45 out of 6.0

2008-2010 M.Sc. in Entertainment Technology - Carnegie Mellon University, Pittsburgh, United States
GPA: 3.6 out of 4.0

2004-2008 B.Sc. in Computer Science - Universita degli Studi di Pavia, Pavia, Italy
GPA: 100 out of 110

Selected Publications

2017 Learning Video Object Segmentation from Static Images.
F. Perazzi, A. Khoreva, R. Benenson, B. Schiele, M. Gross, A. Sorkine-Hornung.
IEEE CVPR 2017, Honolulu, HI, United States.

2016 A Benchmark Dataset and Evaluation Methodology for Video Object Segmentation.
F. Perazzi, J. Pont-Tuset, B. McWilliams, L. Van Gool, M. Gross, A. Sorkine-Hornung.
IEEE CVPR 2016, Las Vegas, NV, United States.

Bilateral Space Video Segmentation.
Nicolas Marki, Federico Perazzi, Oliver Wang, Alexander Sorkine-Hornung.
IEEE CVPR 2016, Las Vegas, NV, United States

2015 Fully Connected Object Proposal For Video Segmentation.
Federico Perazzi, Oliver Wang, Alexander Sorkine-Hornung, Markus Gross.
IEEE ICCV 2015, Santiago, Chile.

Panoramic Video From Unstructured Camera Arrays.
F. Perazzi, A. Sorkine-Hornung, H. Zimmer, P. Kaufmann, O. Wang, S. Watson, M. Gross.
EUROGRAPHICS 2015, Computer Graphics Forum, Vol. 34, No. 2, Zurich, Switzerland.

2013 Non-Polynomial Galerkin Projection on Deforming Meshes.
M. Stanton, Y. Sheng, M. Wicke, F. Perazzi, A. Yuen, S. Narasimhan, A. Treuille.
SIGGRAPH 2013, ACM Transactions on Graphics Vol. 32(4), Anaheim, CA, United States.

2012 Saliency Filters: Contrast Based Filtering for Salient Region Detection.
Federico Perazzi, Philipp Krähenbül, Yael Pritch, Alexander Hornung.
IEEE CVPR 2012, Providence, RI, United States.

Workshop Organization

2017 The 2017 DAVIS Challenge on Video Object Segmentation
J. Pont-Tuset, F. Perazzi, S. Caelles, P. Arbeláez, A. Sorkine-Hornung, L. Van Gool.
IEEE CVPR 2017, Honolulu, HI, United States.

Patents

2015 Visual Saliency Estimation for Images and Videos
F. Perazzi, A. Sorkine-Hornung, Krähenbül, Yael Pritch
US Patent 9,025,880

2014 Panoramic Video from Unstructured Camera Arrays with Globally Consistent Parallax Removal
F. Perazzi, A. Sorkine-Hornung, H. Zimmer, O. Wang, P. Kaufmann, S. Watson
US Patent App. 14/339,253

2012 Robotic Texture
P. Beardsley, J. Alonso Mora, A. Breitenmoser, F. Perazzi, A. Hornung
US Patent App. 13/458,875

Employment History

Mar 2013 - current Disney Research, Zurich, ZH, Switzerland
PhD and Postdoctoral Researcher

Oct 2012 - Feb 2013 Walt Disney Imagineering, Los Angeles, CA, United States
Advanced Development Intern

Designed and developed a panoramic video stitching algorithm for the Disney Parks attraction *Soarin' Around the World*. Results patented and published at Eurographics 2015.

Oct 2010 - Sep 2012 Disney Research, Zurich, Switzerland
Lab Associate

- Designed and developed a novel unsupervised approach to detect salient objects in images. Results patented and published at CVPR 2012.
- Developed an algorithm to convey motion of nature, e.g. water, to a swarm of disk-shaped robots.

May 2009 - Feb 2010 Carnegie Mellon University, Pittsburgh, PA, United States
Research Intern

Designed and developed a novel algorithm to deform tetrahedral meshes based on physically accurate fluid simulation. Results published at SIGGRAPH 2013.