Delio Vicini

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Education

September 2017 — now	**PhD Student**, École Polytechnique Fédérale de Lausanne, Switzerland Advisor: Prof. Dr. Wenzel Jakob Topics: Rendering, machine learning
2015 — 2017	**M. Sc. in Computer Science**, ETH Zurich, Switzerland Focus Track: Visual Computing GPA: 5.92 / 6.00 (graduation with distinction) Thesis: Gradient-Domain Volumetric Path Tracing (Advisors: Dr. Jan Novák, Dr. Fabrice Rousselle, Prof. Dr. Markus Gross)
2012 — 2015	**B. Sc. in Computer Science**, University of Bern, Switzerland Subjects: Computer Science 90 ECTS, Mathematics 60 ECTS, History 30 ECTS GPA: 5.91 / 6.00 (Summa Cum Laude) Thesis: Image Filtering using Halide and a new Denoising Algorithm for Gradient-Domain Rendering (Advisor: Prof. Dr. Matthias Zwicker)

Publications

2019	D. Vicini, V. Koltun, W. Jakob, **A Learned Shape-Adaptive Subsurface Scattering model**, ACM Transactions on Graphics (Proc. SIGGRAPH 2019), 2019
2018	D.Vicini, D. Adler, J. Novák, F. Rousselle, B. Burley, **Denoising Deep Monte Carlo Renderings**, Computer Graphics Forum, 2018
2016	M.Manzi, D.Vicini, M.Zwicker: **Regularizing Image Reconstruction for Gradient-Domain Rendering with Feature Patches**, Computer Graphics Forum (Proc. Eurographics 2016), 2016

Professional Experience

November 2016 – February 2017	**Research Intern** (Rendering Group) Walt Disney Animation Studios (in collaboration with and located at Disney Research Zurich)
July – September 2016	**Research Intern** (Rendering Group) Disney Research Zurich

Fall 2014 / Spring 2015	**Teaching Assistant** (Lectures: Analysis I/II) Mathematical Institute, University of Bern
Spring 2014	**Teaching Assistant** (Lecture: Computer Architecture) Institute of Computer Science, University of Bern

Technical Skills

Programming Languages/Frameworks	C++, Python, Tensorflow, PyTorch, CUDA, MATLAB, Halide, C#, OpenGL, GLSL, Java
Tools	Git, Maya, Nuke, Photoshop

Language Skills

German	Native Language
English	Proficient
French	Intermediate

Study Projects

3D Vision (ETH Zürich, 2016)	Depth Map and Normal Direction Fusion Using Convex Optimization
Computational Intelligence Lab (ETH Zürich, 2016)	Road Extraction from Aerial Images using Deep Convolutional Neural Networks (3rd place in class competition)
Game Programming Lab (ETH Zürich, 2016)	Development of a splitscreen multiplayer racing game titled “Fruit Smashers”.
Computer Graphics (ETH Zürich, 2015)	Implementation of subsurface scattering, denoising and several smaller rendering features based on the Nori framework (2nd place in rendering competition)
Physically-Based Simulation (ETH Zürich, 2015)	Goal-Driven Fire Simulation (1st place in project competition)
Multimedia Communications (ETH Zürich, 2015)	Compressing Images Using K-SVD Learned Overcomplete Dictionaries
Software Engineering Lab (University of Bern, 2014)	Patria-DB: Extension of a web-based member management software for the local scout organization “Patria”.
Introduction to Software Engineering, (University of Bern, 2013)	Android app to retrieve the canteen menus and organize lunch with friends.