

Benedikt Bitterli



<https://benedikt-bitterli.me>



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WORK EXPERIENCE

FEB 2016 - AUG 2016	Civil Service at University of Basel, Basel Development of virtual reality applications for computer tomography imaging. Performance optimizations on image registration software.
SEPT 2015 - DEC 2015	Research Intern at Disney Research Zurich, Zürich Research, development and implementation of denoising algorithms for participating media.
MAR 2014 - AUG 2015	Part-time Research Intern at Disney Research Zurich, Zürich Research, development and implementation of new appearance models for Hair and Fur, in tight collaboration with Walt Disney Animation Studios.
SEPT 2013 - FEB 2014	Technology Intern at Walt Disney Animation Studios, Burbank Heavy performance and memory optimization on the Hyperion production renderer, involving high-level algorithm design and low-level optimization for SIMD and memory hierarchy in C++11. Research and development of new importance sampling techniques. Development of in-house content creation software for specialized lighting.

EDUCATION

SEPT 2016 - 2021 (Expected)	PhD in COMPUTER SCIENCE Dartmouth College, NH, USA Focus: Computer Graphics
FEB 2014 - SEPT 2015	Master of Science in COMPUTER SCIENCE Swiss Federal Institute of Technology (ETH), Zürich Graduation with Distinction Focus: Visual Computing Thesis: "Informed Choices in Primary Sample Space"
SEPT 2010 - SEPT 2013	Bachelor of Science in COMPUTER SCIENCE Swiss Federal Institute of Technology (ETH), Zürich Focus: Computational Science Thesis: "A rendering framework for the BSSRDF"

COMPUTER SKILLS

Proficient in	C++11, C, CUDA, GLSL, MATLAB, JAVASCRIPT
Some experience with	PYTHON, JAVA
Tools	GIT, QT, ECLIPSE, L ^A T _E X
Operating Systems	LINUX, WINDOWS FAMILY

PUBLICATIONS

2016	<i>Bilateral Regularization in Reproducing Kernel Hilbert Spaces for Discontinuity Preserving Image Registration</i> Christoph Jud, Nadia Möri, Benedikt Bitterli , Philippe C. Cattin
2016	<i>Nonlinearly Weighted First-order Regression for Denoising Monte Carlo Renderings</i> Benedikt Bitterli , Fabrice Rousselle, Bochang Moon, José A. Iglesias-Guitián, David Adler, Kenny Mitchell, Wojciech Jarosz, Jan Novák
2016	<i>A Practical and Controllable Hair and Fur Model for Production Path Tracing</i> Matt Jen-Yuan Chiang, Benedikt Bitterli , Chuck Tappan, Brent Burley
2015	<i>Portal-Masked Environment Map Sampling</i> Benedikt Bitterli , Jan Novák, Wojciech Jarosz

SCHOLARSHIPS AND AWARDS

DEC 2014	Physically Based Simulation Competition, ETH	1st place
JUN 2014	ETH Rendering Competition	1st place
JUN 2014	Game Programming Lab, ETH	Jury Award
AUG 2013	Demodays 2013	2nd place
MAR 2013	Master Scholarship Award	(\$20,000)
MAR 2013	Revision 2013	2nd place
AUG 2012	Demodays 2012	1st place
MAY 2010	Swiss Olympiad in Informatics	7th place

MOVIE CREDITS

OCT 2014	Big Hero 6 WALT DISNEY ANIMATION STUDIOS
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LANGUAGES

ENGLISH:	Fluent
GERMAN:	Mother tongue