Simon Kallweit

Personal Data

Born	7 Nov 1982, Switzerland
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Education

02/17/2014 – 06/03/2016 **MSc in Computer Science**, *Swiss Federal Institute of Technology (ETH)*, Zürich.
Specialization Track: Visual Computing
Thesis: "Learning High-Order Scattering in Rendering from Data" Supervisor: Prof. Markus Gross

09/20/2010 – 08/30/2013 **BSc in Computer Science**, *Swiss Federal Institute of Technology (ETH)*, Zürich.
Major: Computational Science
Thesis: "Photon Beam Methods in Rendering" Supervisor: Prof. Markus Gross

1997 – 2001 **Matura**, *Gymnasium Oberaargau*, Langenthal.
Thesis: "Computer Simulation of Dynamics and Kinematics of Rigid Bodies"

Work Experience

09/02/2014 – 01/16/2015 **Technology Intern**, *Walt Disney Animation Studios*, Burbank, CA.
Worked on several problems and tasks related to rendering of participating media within Disney's Hyperion Renderer:
- Integration of Field3D and OpenVDB data formats
- Implementation of transformation, advection and interpolation based motion blur for volumes
- Design and development flexible yet performant framework for volume rendering
- Design and development of a high performance adaptive volume data structure

06/30/2014 – 08/22/2014 **Intern**, *DRZ*, Zürich.
- Development of CUDA based volume rendering framework using residual ratio tracking
- Extended residual ratio tracking with tri-linearly interpolated control variate

06/01/2008 – 12/16/2011 **Software Developer**, *FELA Management AG*, Diessenhofen.
Development lead for a commercial localization platform based on GSM/GPS technology. Contributions to the open-source real-time operating system eCos.

11/01/2001 – 03/31/2008 **Software Developer**, *intefo AG*, Herzogenbuchsee.
Responsible for analysis, design, implementation, testing and maintenance of software systems. Worked in multiple fields, including user interfaces, server applications and embedded systems in both Windows- and Linux-based environments.

Awards

June 2014	ETHZ Rendering Competition, 2nd place (link)
Aug 2013	Demodays, 4k Procedural Graphics, 1st place (link)
Mar 2013	Revision, PC 64k Intro, 2nd place (link)
Aug 2012	Demodays, Realtime Size-Limited Compo, 1st place (link)
Mar 2004	m4music Demotape Clinic, Best Newcomer Electronic Music

Languages

German	Native
English	Fluent
French	Intermediate

Computer Skills

Languages	C/C++11, x86 SIMD, GLSL, CUDA, Python, Ruby, Haskell

Tools	Git, Qt, Eclipse, CMake, Matlab, LaTeX
OS	OSX, Linux, Windows

Interests and Projects

Physically based rendering

Demoscene, size-limited programming

Electronic music production and live performance

Grades

BSc in Computer Science

Course	**Grade**	**ECTS**
Analysis I / Analysis II	4.75	13
Introduction to Programming	5.75	7
Data Structures and Algorithms	6.00	7
Parallel Programming	5.50	7
Linear Algebra	5.50	7
Discrete Mathematics	4.00	8
Physics	6.00	6
Digital Circuits	6.00	6
Data Modelling and Databases	5.00	7
Formal Methods and Functional Programming	4.75	7
Numerical Methods for Computer Science and Engineering	5.75	7
Operating Systems and Networks	5.50	8
Systems Programming and Computer Architecture	5.75	8
Theoretical Computer Science	5.75	8
Probability and Statistics	5.00	6
High Performance Computing for Science and Engineering	5.75	8
Modeling and Simulation	6.00	8
Numerical Methods for Partial Differential Equations	4.75	8
Visual Computing	5.75	8
Compiler Design	5.75	8
Applied Computer Architecture	6.00	6
Information Theory	5.00	5
Advanced Methods in Computer Graphics (Seminar)	6.00	2
Bachelor Thesis	6.00	10

Swiss Academic Grading Scheme

6.0	Excellent	4.5	Satisfactory	2.0	Poor
5.5	Very Good	4.0	Sufficient	1.0	Very Poor
5.0	Good	3.0	Insufficient		