

Vincent Schüßler

📍 Karlsruhe, Germany

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Education

Dr.-Ing. (PhD)	Computer Graphics Group (IVD) , Karlsruhe Institute of Technology <ul style="list-style-type: none">Thesis: <i>Online Learning and Caching for Efficient Physically Based Rendering</i> (preliminary title)Topics: physically-based rendering, light transport simulation, Monte Carlo integration, path guiding, importance sampling, efficient texturing and filtering, microfacet modelsCompletion expected in 2025	Karlsruhe, Germany Feb 2019 – present
M.Sc.	Computer Science , Karlsruhe Institute of Technology <ul style="list-style-type: none">Thesis: <i>High-Dimensional Path Guiding</i> (computer graphics)Areas of specialization: Computer graphics and machine learningGrade 1.1 (very good, with distinction)	Karlsruhe, Germany Apr 2016 – Nov 2018
B.Sc.	Computer science , Karlsruhe Institute of Technology <ul style="list-style-type: none">Thesis: <i>Geometrically Correct Normal Maps Using Non-Symmetric Microsurfaces</i> (computer graphics)	Karlsruhe, Germany Oct 2012 – Feb 2016

Experience

Researcher , Karlsruhe Institute of Technology Computer Graphics Group, Institute for Visualization and Data Analysis <ul style="list-style-type: none">Conducting and publishing research projectsDeveloping research software for Monte Carlo renderingAdvising students for theses, seminars and practical courses; exercise lectures	Karlsruhe, Germany Feb 2019 – Jan 2025
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Skills

Programming languages: Rust, Python, C, C++, GLSL, JavaScript

Technologies: Vulkan, Git, Linux


Languages: English (fluent), German (native)

Publications

Selective Caching in Procedural Texture Graphs for Path Tracing Vincent Schüßler, Johannes Hanika, Basile Sauvage, Jean-Michel Dischler, Carsten Dachsbacher Eurographics Symposium on Rendering, https://doi.org/10.2312/sr.20251176	July 2025
Sampling of Anisotropic Spatial Gaussians for Path Guiding Sergey Lelyakin, Vincent Schüßler, Carsten Dachsbacher Eurographics 2025 - Posters, 10.2312/egp.20251017	May 2025
ReSTIR Subsurface Scattering for Real-Time Path Tracing Mirco Werner, Vincent Schüßler, Carsten Dachsbacher Proc. ACM CGIT (Proc. High Performance Graphics), 10.1145/3675372	Aug 2024
Bridge Sampling for Connections via Multiple Scattering Events Vincent Schüßler, Johannes Hanika, Carsten Dachsbacher Computer Graphics Forum (Proc. Eurographics Symposium on Rendering), 10.1111/cgf.15160	July 2024
Markov Chain Mixture Models for Real-Time Direct Illumination Addis Dittebrandt, Vincent Schüßler, Johannes Hanika, Sebastian Herholz, Carsten Dachsbacher Computer Graphics Forum (Proc. Eurographics Symposium on Rendering), 10.1111/cgf.14881	July 2023

Path Guiding with Vertex Triplet Distributions

July 2022

Vincent Schüßler, *Johannes Hanika, Alisa Jung, Carsten Dachsbacher*Computer Graphics Forum (Proc. Eurographics Symposium on Rendering), [10.1111/cgf.14582](https://doi.org/10.1111/cgf.14582) **Microfacet-based normal mapping for robust Monte Carlo path tracing**

Nov 2017

Vincent Schüßler, *Eric Heitz, Johannes Hanika, Carsten Dachsbacher*Transactions on Graphics (Proc. SIGGRAPH Asia), [10.1145/3130800.3130806](https://doi.org/10.1145/3130800.3130806) 