Hannes Hergeth

Curriculum Vitae

Education

2019 **Visiting Scholar**, *Dartmouth College*, Hanover, NH, USA.
Master Thesis: Higher Dimensional Photon Primitives for Surface Illumination
Supervisor: Wojciech Jarosz, Professor Leif Kobbelt.

2017–2020 **Master of Computer Science**, *RWTH Aachen University*, Germany.
Current Grade – 1.6 (equivalent to GPA 3.6)

2017–2018 **Erasmus Student**, *École Polytechnique Fédérale de Lausanne*, Switzerland.
Two Erasmus semesters at EPFL.
1st place in the Advanced Computer Graphics rendering competition.

2012–2017 **Bachelor of Computer Science**, *RWTH Aachen University*, Germany.
Grade – 2.4 (equivalent to GPA 3.3), Minor in Business Administration
Thesis: Extending Adaptive Progressive Photon Mapping to Participating Media
Supervisor: Professor Leif Kobbelt, Grade – 1.0 (equivalent to GPA 4.0)

Awards

2019 **RWTH Research Ambassador Scholarship**.

Experience

2017 - 2018 **Research Assistant**, *EPFL Realistic Graphics Lab*, Lausanne, Switzerland.
Research areas: Polarization in Light Transport Simulation
Physical measurements in a laboratory and implementing polarization in a renderer.
Supervisor: Professor Wenzel Jakob

2017 **Research Intern**, *Nvidia Advanced Rendering Center*, Berlin, Germany.
5-month internship at Nvidia Research working on state-of-the-art light transport algorithms.
Supervisor: Alexander Keller

2016–2017 **Research Assistant**, *Computer Graphics Group RWTH Aachen*, Germany.
Research areas: Geometry Processing - Spline Fitting
Implementing algorithms for fitting spline surfaces to polygonal meshes.
Supervisors: Janis Born, Professor Leif Kobbelt

2013–2015 **Research Assistant**, *Computer Graphics Group RWTH Aachen*, Germany.
Research areas: Geometry Processing - Quad Meshing
Designing new algorithms for multiresolution quadrangulation of triangular meshes.
Supervisors: Hans-Christian Ebke, Professor Leif Kobbelt

2011–2012 **Software Engineer**, *Ingenieurbüro Schemmel & Partner GbR*, Aachen, Germany.
Designing and implementing validation software for train schedules.

Aachen – Germany
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Projects

2012-ongoing **CudaTracerLib**: A CUDA library for rendering algorithms based on ray-tracing. Includes implementations of Bidirectional Path Tracing, Volumetric Probabilistic Progressive Photon Mapping and Vertex Connection and Merging. `https://github.com/hhergeth/CudaTracerLib`

2010-2012 **RisenEditor** A D3D11 level editor for a well-known German PC game which enables user modifications. Based on a small engine capable of hardware tessellation, deferred shading and other state-of-the-art algorithms.

Professional Service

2015 – 2017 SIGGRAPH Student Volunteer

2015 GCPR, VMV Student Volunteer

Computer Skills

Tools Git, CMake, Docker, Visual Studio, Jupyter, LaTeX

Technologies Parallel Computing in CUDA, Direct3D 11, Gurobi

Programming Languages Proficient: C++, C#, Python (NumPy, SciPy)
Beginner: Java, Matlab, Delphi

Languages

German Mother tongue

English Fluent

French Basic words and phrases only