

Alisa Jung

alisajung.github.io

Education

Karlsruhe Institute of Technology , PhD in Computer Science	Aug 2017 - May 2024
• Thesis: Mollifying Realistic Image Synthesis for Time Constrained Rendering • Research: Physically based and spectral rendering, fluorescence, regularization, path guiding. • Programming: Mostly C, C++, Python, some bash. Linux and Windows. • Teaching: Exercise for lectures, advising student projects and theses.	
Karlsruhe Institute of Technology , M.Sc. in Computer Science	Apr 2015 - Jun 2017
• Thesis: Fluorescence in Bidirectional Rendering	
Cornell University , Ithaca NY. Semester abroad for Master's thesis	Oct 2016 - Mar 2017
Karlsruhe Institute of Technology , B.Sc. in Computer Science	Sep 2011 - Mar 2015
• Thesis: Irradiance Importance Sampling	

Experience

Visiting Rendering Researcher , Weta Digital / Unity – Wellington, New Zealand	Jan 2023 – Jun 2023
• Physically based rendering, path guiding and regularization in Manuka (C++)	
Student Assistant , Karlsruhe Institute of Technology	Mar 2016 – Sep 2016
• Programmer (C++) for data-driven BRDFs in photorealistic rendering	
Teaching Assistant , Karlsruhe Institute of Technology	Oct 2012 – Feb 2016
• Tutoring for lecture "Basic notions of computer science", each winter term	
Lecturer , Duale Hochschule Baden-Württemberg – Karlsruhe	May 2015 – Jul 2015
• Lecturer for "Mobile Application Development"	
Student Assistant , Fraunhofer IOSB – Karlsruhe	Mar 2014 – Sep 2014
• Programmer (C++) for path planning for a mobile robot platform and arm	
Student Assistant , Teco research group (KIT) – Karlsruhe	Jun 2013 – Sep 2013
• Programmer (Java) for distributed smart home applications	

Voluntary Activities

Ultimate Frisbee Coach , MTV Karlsruhe	Since 2018
• Coaching beginner and intermediate-level teams, planning and assisting at events	
Student Dorm Activities , Hans Dickmann Kolleg Karlsruhe	Apr 2012 – Sep 2016
• Various roles in dorm self-government, planning and assisting at dorm's events	

Skills

- **Technologies:** C, C++, Python, C#, Java, Git, GitLab, Linux, Windows.
Basic experience with Blender, Katana, Unity, GLSL, Vulkan, OpenGL.
- **Languages:** German (native), English (proficient), French (basic)

Publications

Guiding Light Trees for Many-Light Direct Illumination.

Eric Hamann, Alisa Jung, Carsten Dachsbacher
Eurographics 2023 – Short Papers

Path Guiding with Vertex Triplet Distributions

Vincent Schüßler, Johannes Hanika, Alisa Jung, Carsten Dachsbacher
Computer Graphics Forum 41(4), EGSR 2022

Improving Spectral Upsampling with Fluorescence

Lars König, Alisa Jung, Carsten Dachsbacher
MAM2020: Eurographics Workshop on Material Appearance Modeling

Detecting Bias in Monte Carlo Renderers using Welch's t-test

Alisa Jung, Johannes Hanika, Carsten Dachsbacher
Journal of Computer Graphics Techniques Vol. 9 (2), 2020. Presented at I3D 2021.

Spectral Mollification for Bidirectional Fluorescence

Alisa Jung, Johannes Hanika, Carsten Dachsbacher
Computer Graphics Forum 39(2) (Proceedings of Eurographics) 2020

Wide Gamut Spectral Upsampling with Fluorescence

Alisa Jung, Alexander Wilkie, Johannes Hanika, Wenzel Jakob, Carsten Dachsbacher
Computer Graphics Forum 38(4), EGSR 2019, runner-up for best paper award

Selective guided sampling with complete light transport paths

Florian Reibold, Johannes Hanika, Alisa Jung, Carsten Dachsbacher
ACM Transactions on Graphics 37(6) (Proceedings of SIGGRAPH Asia 2018)

A Simple Diffuse Fluorescent BBRRDF Model

Alisa Jung, Johannes Hanika, Steve Marschner, Carsten Dachsbacher
MAM2018: Eurographics Workshop on Material Appearance Modeling