



Daniel Meister

meistdan@gmail.com • meistdan@github.io

Education

The Czech Technical University in Prague	PRAGUE, CZECH REPUBLIC
Ph.D. in Information Science and Computer Engineering	2014 – 2018
M.Sc. in Computer Graphics and Interaction	2012 – 2014
B.Sc. in Software Engineering	2009 – 2012

Work Experience

Postdoctoral Researcher, The University of Tokyo	2019/9 – Present
Researcher, Czech Technical University in Prague	2017/11 – 2019/8
External Developer (Interactive Rendering System), Škoda Auto	2014/10 – 2017/3

Computer Skills

C/C++, CUDA, OpenCL, OpenGL, OptiX, Embree, Matlab, Python, PyTorch, Bash, Git, CMake, L^AT_EX

Research Interests

Data Structures for Ray Tracing, Real-Time Ray Tracing, GPGPU, Parallel Computing, Global Illumination

Languages

Czech (*native language*), English (*fluent*), Japanese (*pre-advanced - JLPT N2*), French (*basic knowledge*) and Spanish (*basic knowledge*)

Professional Visits Abroad

National Institute of Informatics, Japan (5 months)	2017
Vienna University of Technology, Austria (1 month)	2014

Teaching

CTU Algorithms of Computer Graphics (English)	2018
CTU Algorithms of Computer Graphics (Czech)	2015

Awards

JSPS Postdoctoral Fellowship (standard)	2019
Finalist of Antonín Svoboda Award for the Best Ph.D. Thesis	2019
Dean's Award (Outstanding Dissertation, Doctoral course)	2019

Professional Society Membership

Upsilon Pi Epsilon Honor Society

Reviewer

Eurographics, High-Performance Graphics, Graphical Models, IEEE Computer Graphics and Applications

Publications

- Daniel Meister, Adam Pospíšil, Imari Sato, and Jiří Bittner. Spatio-Temporal BRDF: Modeling and Synthesis. *Computers and Graphics*, 2021
- Daniel Meister, Shinji Ogaki, Carsten Benthin, Michael J. Doyle, Michael Guthe, and Jiří Bittner. A Survey on Bounding Volume Hierarchies for Ray Tracing. *Computer Graphics Forum (Proceedings of Eurographics)*, 40(2), 2021
- Daniel Meister, Jakub Bokšanský, Michael Guthe, and Jiří Bittner. On Ray Reordering Techniques for Faster GPU Ray Tracing. In *Proceedings of Symposium on Interactive 3D Graphics and Games*, 2020
- Jakub Hendrich, Adam Pospíšil, Daniel Meister, and Jiří Bittner. Ray Classification for Accelerated BVH Traversal. *Computer Graphics Forum (Proceedings of EGSR)*, 38(4):49–56, 2019
- Daniel Meister and Jiří Bittner. Parallel Reinsertion for Bounding Volume Hierarchy Optimization. *Computer Graphics Forum (Proceedings of Eurographics)*, 37(2):463–473, 2018
- Daniel Meister and Jiří Bittner. Parallel Locally-Ordered Clustering for Bounding Volume Hierarchy Construction. *IEEE Transactions on Visualization and Computer Graphics*, 24(3):1345–1353, 2018
- Jakub Hendrich, Daniel Meister, and Jiří Bittner. Parallel BVH Construction Using Progressive Hierarchical Refinement. *Computer Graphics Forum (Proceedings of Eurographics)*, 36(2):487–494, 2017
- Daniel Meister and Jiří Bittner. Parallel BVH Construction Using k -means Clustering. *Visual Computer (Proceedings of Computer Graphics International)*, 32(6-8):977–987, 2016
- Jiří Bittner and Daniel Meister. T-SAH: Animation Optimized Bounding Volume Hierarchies. *Computer Graphics Forum (Proceedings of Eurographics)*, 34(2):527–536, 2015
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Invited Talks

Bounding Volume Hierarchies for Ray Tracing, Huawei Tokyo Research Center

5/2020