

Hisanari Otsu

PERSONAL DATA

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RESEARCH INTERESTS

Computer Graphics: Physically Based Rendering, Light Transport Simulation

EDUCATION

APR 2015 - MAR 2018	Ph.D. in INFORMATION SCIENCE AND TECHNOLOGY Graduate School of Information Science and Technology The University of Tokyo , Japan Advisor: Prof. Toshiya Hachisuka Thesis: Bridging Different Spaces in Light Transport Simulations
APR 2013 - MAR 2015	Master of INFORMATION SCIENCE AND TECHNOLOGY Graduate School of Information Science and Technology The University of Tokyo , Japan Advisor: Prof. Reiji Suda Thesis: Optimized Path Sampling Strategy Selection for Trans-Dimensional Mutation in Metropolis Light Transport
APR 2009 - MAR 2013	Bachelor of SCIENCE School of Science The University of Tokyo , Japan Advisor: Prof. Tomoyuki Nishita Thesis: A Study on Global Illumination Computation Using Replica Exchange Light Transport in Locality-Relaxed Light Path Space

PUBLICATIONS

- [1] **Hisanari Otsu**, Johannes Hanika, and Carsten Dachsbacher. Portal-Based Path Perturbation for Metropolis Light Transport. In *Vision, Modeling, and Visualization*. The Eurographics Association, 2020.
- [2] **Hisanari Otsu**, Johannes Hanika, Toshiya Hachisuka, and Carsten Dachsbacher. Geometry-aware metropolis light transport. *ACM Transactions on Graphics (Proc. of SIGGRAPH Asia)*, 37(6):278:1–278:11, 2018.
- [3] **Hisanari Otsu**, Yamamoto Masafumi, and Toshiya Hachisuka. Reproducing spectral reflectances from tristimulus colours. *Computer Graphics Forum*, 37(6):370–381, 2018.
- [4] **Hisanari Otsu**, Shinichi Kinuwaki, and Toshiya Hachisuka. Supervised learning of how to blend light transport simulations. In *Monte Carlo and Quasi-Monte Carlo Methods (MCQMC 2016)*, pages 409–427, 2018.
- [5] **Hisanari Otsu**, Anton Kaplanyan, Johannes Hanika, Carsten Dachsbacher, and Toshiya Hachisuka. Fusing state spaces for Markov chain Monte Carlo rendering. *ACM Transactions on Graphics (Proc. SIGGRAPH)*, 36(4):74:1–74:10, 2017.

- [6] Martin Šik, **Hisanari Otsu**, Toshiya Hachisuka, and Jaroslav Krivánek. Robust light transport simulation via Metropolised bidirectional estimators. *ACM Transactions on Graphics (Proc. SIGGRAPH Asia)*, 35(6):245:1–245:12, 2016.
- [7] **Hisanari Otsu**, Yonghao Yue, Qiming Hou, Kei Iwasaki, Yoshinori Dobashi, and Tomoyuki Nishita. Replica exchange light transport on relaxed distributions. *ACM SIGGRAPH 2013 Posters*, 2013.

WORK EXPERIENCE

APR 2018 - <i>present</i>	Postdoctoral Researcher at KARLSRUHE INSTITUTE OF TECHNOLOGY, Karlsruhe, Germany
OCT 2017 - MAR 2018	Visiting Research Scientist at KARLSRUHE INSTITUTE OF TECHNOLOGY, Karlsruhe, Germany

ACADEMIC SERVICES

REVIEWER EXPERIENCE

- SIGGRAPH (2020,2021)
- SIGGRAPH Asia (2015,2020)
- Eurographics (2020)
- Eurographics Symposium on Rendering (2015,2019)
- Pacific Graphics (2020)
- Computer Graphics International (2017)
- The Visual Computer (2017)
- Computers & Graphics (2021)
- Graphics Interface (2021)

AWARDS

2016	Super Creator Information-technology Promotion Agency (IPA), Japan
2013	Dean's Award Department of Information Science, The University of Tokyo

LANGUAGES

JAPANESE: Native
ENGLISH: Professional working proficiency
GERMAN: Beginner

PERSONAL PROJECTS

2014 - <i>Present</i>	Lightmetrica A modern, research-oriented renderer http://lightmetrica.org/
2012	Freestroke 3D Painting Tool https://github.com/hi2p-perim/freestroke
2018	minpt A path tracer in 300 lines of C++ https://github.com/hi2p-perim/minpt

Updated: June 13, 2021