

# Hisanari Otsu

## PERSONAL DATA

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WEB: <http://lightmetrica.org/h-otsu/>

## RESEARCH INTERESTS

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**Computer Graphics:** Physically Based Rendering, Light Transport Simulation

## EDUCATION

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APR 2015 - MAR 2018	Ph.D. in INFORMATION SCIENCE AND TECHNOLOGY Graduate School of Information Science and Technology <b>The University of Tokyo</b> , 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 <b>The University of Tokyo</b> , 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 <b>The University of Tokyo</b> , Japan Advisor: Prof. Tomoyuki Nishita Thesis: A Study on Global Illumination Computation Using Replica Exchange Light Transport in Locality-Relaxed Light Path Space

## PUBLICATIONS

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- [1] **Hisanari Otsu**, Yamamoto Masafumi, and Toshiya Hachisuka. Reproducing spectral reflectances from tristimulus colours. *Computer Graphics Forum*, 37(6):370–381, 2018.
- [2] **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.
- [3] **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.
- [4] 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.
- [5] **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

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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
JUN 2015 - MAR 2016	Project Leader of IPA MITOH PROGRAM Developed an research-oriented renderer as a project leader of an exploratory software project, IPA MITOH Program.
APR 2015 - JUL 2015	Internship at LIGHT TRANSPORT ENTERTAINMENT, INC., Tokyo, Japan Developed a reference renderer and some light transportation algorithms.
APR 2013 - MAR 2015	Research Staff at UEI RESEARCH, Tokyo, Japan Researched and developed light transportation algorithms as a research staff.
JAN 2011 - SEP 2015	Contract Software Developer at ASUKALAB INC., Tokyo, Japan Developed AR/VR/MR applications and libraries as a contract software developer.
APR 2010 - MAY 2011	Part-time Software Developer at PIXIV INC., Tokyo, Japan Worked as a back-end web developer. Contributed to the encyclopedia service, mobile sites, and internationalization.

## ACADEMIC SERVICES

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### REVIEWER EXPERIENCE

- SIGGRAPH Asia (2015)
- Eurographics Symposium on Rendering (2015)
- Computer Graphics International (2017)
- The Visual Computer (2017)

## AWARDS

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

## LANGUAGES

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JAPANESE: Native  
ENGLISH: Professional working proficiency

## PERSONAL PROJECTS

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