

# Yuki Koyama, Ph.D.

## PERSONAL DATA

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## RESEARCH INTERESTS

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**Computer Graphics:** Computational design; Physically-based animation; Computational fabrication; Machine learning for design; Image processing

**Human-Computer Interaction:** Design interface; Human computation; Machine learning for interaction; Interaction design for computational methods

## EDUCATION

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APR 2014 - MAR 2017	Ph.D. in INFORMATION SCIENCE AND TECHNOLOGY Graduate School of Information Science and Technology <b>The University of Tokyo</b> , Japan Advisor: Prof. Takeo IGARASHI
APR 2012 - MAR 2014	Master of INFORMATION SCIENCE AND TECHNOLOGY Graduate School of Information Science and Technology <b>The University of Tokyo</b> , Japan Advisor: Prof. Takeo IGARASHI
APR 2008 - MAR 2012	Bachelor of SCIENCE School of Science <b>The University of Tokyo</b> , Japan Advisor: Prof. Takeo IGARASHI

## PROFESSIONAL/WORK EXPERIENCE

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APR 2017 - <i>present</i>	Researcher at NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL SCIENCE AND TECHNOLOGY (AIST) Leading research projects for academic publication and industrial application.
APR 2014 - MAR 2017	Research Fellow (DC1) Funded for three years by JSPS Research Fellowships for Young Scientists (DC1).
MAY 2014 - AUG 2014	Lab Associate (Internship) at DISNEY RESEARCH, Boston Participated an internship program, and conducted a research project about computational design of 3D-printable objects.
JUL 2012 - FEB 2013	Project Leader of IPA MITOH PROGRAM Funded for half a year as a project leader of an exploratory software project, IPA MITOH Program, and developed a physics engine for real-time computer animations.
APR 2011 - APR 2012	Software Engineer at QONCEPT, INC., Tokyo Developed some AR Apps for iOS and Android OS.

## PUBLICATIONS (PEER-REVIEWED PAPERS)

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- [1] **Yuki Koyama** and Masataka Goto. 2018. Decomposing Images into Layers with Advanced Color Blending. *Comput. Graph. Forum* 37, 7 (2018), 397–407.  
DOI:<http://dx.doi.org/10.1111/cgf.13577>
- [2] Shoki Miyagawa, **Yuki Koyama**, Jun Kato, Masataka Goto, and Shigeo Morishima. 2018. Placing Music in Space: A Study on Music Appreciation with Spatial Mapping. In *Proceedings of the 2018 ACM Conference Companion Publication on Designing Interactive Systems (DIS '18 - Provocations & Works in Progress)*. 39–43.  
DOI:<http://dx.doi.org/10.1145/3197391.3205409>
- [3] **Yuki Koyama** and Masataka Goto. 2018. OptiMo: Optimization-Guided Motion Editing for Keyframe Character Animation. In *Proceedings of 2018 CHI Conference on Human Factors in Computing Systems (CHI '18)*. 161:1–161:12.  
DOI:<http://dx.doi.org/10.1145/3173574.3173735>
- [4] Eisuke Fujinawa, Shigeo Yoshida, **Yuki Koyama**, Takuji Narumi, Tomohiro Tanikawa, and Michitaka Hirose. 2017. Computational Design of Hand-Held VR Controllers Using Haptic Shape Illusion. In *Proceedings of the 23rd ACM Symposium on Virtual Reality Software and Technology (VRST '17)*. 28:1–28:10.  
DOI:<http://dx.doi.org/10.1145/3139131.3139160>
- [5] **Yuki Koyama**, Issei Sato, Daisuke Sakamoto, and Takeo Igarashi. 2017. Sequential Line Search for Efficient Visual Design Optimization by Crowds. *ACM Trans. Graph.* 36, 4 (2017), 48:1–48:11.  
DOI:<http://dx.doi.org/10.1145/3072959.3073598>
- [6] Morihiko Nakamura, **Yuki Koyama**, Daisuke Sakamoto, and Takeo Igarashi. 2016. An Interactive Design System of Free-Formed Bamboo-Copters. *Comput. Graph. Forum* 35, 7 (2016), 323–332.  
DOI:<http://dx.doi.org/10.1111/cgf.13029>
- [7] Lasse Farnung Laursen, **Yuki Koyama**, Hsiang-Ting Chen, Elena Garces, Diego Gutierrez, Richard Harper, and Takeo Igarashi. 2016. Icon Set Selection via Human Computation. In *Pacific Graphics 2016 - Short Papers*. 1–6.  
DOI:<http://dx.doi.org/10.2312/pg.20161326>
- [8] Kazutaka Nakashima, **Yuki Koyama**, Takeo Igarashi, Takashi Ijiri, Shin Inada, and Kazuo Nakazawa. 2016. Interactive Deformation of Structurally Complex Heart Models Constructed from Medical Images. In *Eurographics 2016 - Short Papers*. 49–52.  
DOI:<http://dx.doi.org/10.2312/egsh.20161012>
- [9] **Yuki Koyama**, Daisuke Sakamoto, and Takeo Igarashi. 2016. SelPh: Progressive Learning and Support of Manual Photo Color Enhancement. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16)*. 2520–2532.  
DOI:<http://dx.doi.org/10.1145/2858036.2858111>
- [10] **Yuki Koyama**, Shinjiro Sueda, Emma Steinhardt, Takeo Igarashi, Ariel Shamir, and Wojciech Matusik. 2015. AutoConnect: Computational Design of 3D-Printable Connectors. *ACM Trans. Graph.* 34, 6 (2015), 231:1–231:11.  
DOI:<http://dx.doi.org/10.1145/2816795.2818060>
- [11] **Yuki Koyama**, Daisuke Sakamoto, and Takeo Igarashi. 2014. Crowd-Powered Parameter Analysis for Visual Design Exploration. In *Proceedings of the 27th Annual ACM Symposium on User Interface Software and Technology (UIST '14)*. 65–74.  
DOI:<http://dx.doi.org/10.1145/2642918.2647386>

- [12] Nobuyuki Umetani, **Yuki Koyama**, Ryan Schmidt, and Takeo Igarashi. 2014. Pteromys: Interactive Design and Optimization of Free-formed Free-flight Model Airplanes. *ACM Trans. Graph.* 33, 4 (2014), 65:1–65:10.  
DOI:<http://dx.doi.org/10.1145/2601097.2601129>
- [13] **Yuki Koyama** and Takeo Igarashi. 2013. View-Dependent Control of Elastic Rod Simulation for 3D Character Animation. In *Proceedings of the 12th ACM SIGGRAPH/Eurographics Symposium on Computer Animation (SCA '13)*. 73–78.  
DOI:<http://dx.doi.org/10.1145/2485895.2485898>
- [14] **Yuki Koyama**, Kenshi Takayama, Nobuyuki Umetani, and Takeo Igarashi. 2012. Real-Time Example-Based Elastic Deformation. In *Proceedings of the 11th ACM SIGGRAPH/Eurographics Symposium on Computer Animation (SCA '12)*. 19–24.  
DOI:<http://dx.doi.org/10.2312/SCA/SCA12/019-024>

## ACADEMIC SERVICES

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### COMMITTEE

- IUI (Regular) Program Committee (2018, 2019)

### REVIEWER EXPERIENCE

- ACM Trans. Graph (2017)
- SIGGRAPH (2015)
- SIGGRAPH Asia (2016, 2017)
- UIST (2016, 2017, 2018)
- CHI (2017)
- Eurographics (2017, 2018)
- Pacific Graphics (2013, 2016)
- IUI (2018, 2019)
- VRST (2018)

## AWARDS (SELECTED)

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MAR 2017	Dean's Award Graduate School of Information Science and Technology, The University of Tokyo
MAR 2017	JSPS Ikushi Prize Japan Society for the Promotion of Science
OCT 2015	Microsoft Research Asia Fellowship Nomination Award Microsoft Research Asia
MAR 2014	IPSI Yamashita SIG Research Award Information Processing Society of Japan (IPSI)
OCT 2013	Innovative Technologies 2013 Ministry of Economy, Trade and Industry (Japan)
MAR 2012	Dean's Award School of Science, The University of Tokyo

## COMPUTER SKILLS

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PROGRAMMING LANGUAGES: C++, Python, C#, Javascript, Ruby, GLSL, Java, ...

PLATFORMS/LIBRARIES: OpenGL, Qt, Eigen, Blender, Unity, Maya, CGAL, SQL, jQuery, ...

Updated: January 15, 2019