CV

Name: Maria Larsson
Nationality: Sweden/EU
E-mail: ma.ka.larsson@gmail.com
Website: www.ma-la.com

Employment:

The University of Tokyo — Tokyo, Japan
- Project Assistant Professor — Apr 2023 - now
- Research Assistant — Apr 2020 - Mar 2023
- Academic Project Supporting Staff — Jan 2018 - Mar 2020

User Interface Research Laboratory, Department of Creative Informatics, Graduate School of Information Science and Technology. Conducting and co-leading research, guiding undergraduate and graduate students, and managing funding.

Pool Architekten, GmbH. Architect — Zürich, Switzerland, Oct 2015 - Jun 2017
Design team for a 40,000 sqm educational wood building.

Digital Design Lab, Nikken Sekkei LTD. Architect — Tokyo, Japan, Apr 2014 - Aug 2015
Parametric 3D modeling team, Tokyo 2020 Olympic Stadium.

White Arkitekter AB. Architect Intern — Stockholm, Sweden, Aug 2009 - Aug 2010
Group for hotel and office design.

Education:

The University of Tokyo. Doctor Degree — Tokyo, Japan, Apr 2020 - Mar 2023
Ph.D. in Information Science and Technology, User Interface Lab
Thesis title: Computational Carpentry: Material- and Fabrication-aware Design Systems. Adviser: Takeo Igarashi

The University of Tokyo. Master's Degree — Tokyo, Japan, Oct 2012 - Sep 2014
Master of Engineering in Architecture, Digital Fabrication Lab
Thesis title: Computational Organization of Differentiated Components for Monocoque Shell Structure. Adviser: Yusuke Obuchi

The University of Tokyo. Visiting Research Student — Tokyo, Japan, Oct 2011 - Sep 2012
School of Architecture, Timber Structures Lab

KTH Royal Institute of Technology. Bachelor's Degree — Stockholm, Sweden, Aug 2010 - Jun 2011
Bachelor of Science in Architecture (1 year of studies, after transferring credits from the degree below)

Harvard University. Bachelor's Degree — Cambridge, USA, Sep 2005 - May 2009
Bachelor of Arts, concentration in History of Art and Architecture

Viktor Rydberg Gymnasium. High School Diploma — Stockholm, Sweden, Aug 2002 - Jun 2005
Science and Mathematics Program

Peer-reviewed International Publications

- Journal Papers -

- Maria Larsson, Hodaka Yamaguchi, Ehsan Pajouheshgar, I-Chao Shen, Kenji Tojo, Chia-Ming Chang, Lars Hansson, Olof Broman, Takashi Ijiri, Ariel Shamir, Wenzel Jakob, and Takeo Igarashi. 2025. The Mokume Dataset and Inverse Modeling of Solid Wood Textures. *ACM Transaction on Graphics (SIGGRAPH '25)*. 14 pages. DOI: https://doi.org/10.1145/3730874
- Maria Larsson,* Takashi Ijiri,* I-Chao Shen, Hironori Yoshida, Ariel Shamir, and Takeo Igarashi. 2024. Learned Inference of the Annual Ring Pattern of Solid Wood. *Computer Graphics Forum (CGF '24)*. 10 pages. DOI: https://doi.org/10.1111/cgf.15074 *Joint first authors
- Maria Larsson, Takashi Ijiri, Hironori Yoshida, Johannes A. J. Huber, Magnus Fredriksson, Olof Broman, and Takeo Igarashi. 2022. Procedural Texturing of Solid Wood with Knots. *ACM Transaction on Graphics (SIGGRAPH '22)*, July 2022. 9 pages. DOI: https://doi.org/10.1145/3528223.3530081

- Conference Papers -

- Ramya Iyer, Mustafa Doga Dogan, Maria Larsson, and Takeo Igarashi. 2025. XR-penter: Material-Aware, Improvisational Woodwork Design In-Situ. *ACM Human Factors in Computing Systems (CHI '25).* 16 pages. DOI: https://doi.org/10.1145/3706598.3713331
- Xinyue Gui, Ding Xia, Wang Gao, Mustafa Doga Dogan, Maria Larsson, and Takeo Igarashi. 2025. Draw2Cut: Direct On-Material Annotations for CNC Milling. *ACM Human Factors in Computing Systems (CHI '25).* 17 pages. DOI: https://doi.org/10.1145/3706598.3714281
- Ryuki Maeda, Maria Larsson, and Hironori Yoshida. 2025. Additional Captions Generated by GPT-4 for Furniture Assembly Manuals. HCI International Conference (HCII '25). 10 pages. DOI: https://doi.org/10.1007/978-3-031-93418-6_12
- Maria Larsson, Hironori Yoshida, Nobuyuki Umetani, and Takeo Igarashi. 2020 Tsugite: Interactive Design and Fabrication of Wood Joints. *ACM Symposium on User Interface Software and Technology (UIST '20)*. 11 pages. DOI: https://doi.org/10.1145/3379337.3415899
- Maria Larsson, Hironori Yoshida, and Takeo Igarashi. 2019. Human-in-the-Loop Fabrication of 3D Surfaces with Natural Tree Branches. *ACM Symposium on Computational Fabrication (SCF '19)*. 12 pages. DOI: https://doi.org/10.1145/3328939.3329000

- Short Papers -

- Atsushi Maruyama, Maria Larsson, I-Chao Shen, and Takeo Igarashi. 2024. Designing Reconfigurable Joints. *SIGGRAPH Asia '24 Technical Communications.* 4 pages. DOI: https://doi.org/10.1145/3681758.3698006
- Musashi Shinjo, Maria Larsson, and Hironori Yoshida. A Design and Fabrication Workflow for Upcycling Leftover Fabrics as Mosaic Art. 2024. *The International Conference on Computational Creativity (ICCC '24)*. 5 pages.
- Hironori Yoshida, Maria Larsson, and Takeo Igarashi. 2019. Upcycling Tree Branches as Architectural Elements through Collaborative Design and Fabrication. *ACM International Conference on Tangible, Embedded, and Embodied Interaction (TEI).* 5 pages. DOI: https://doi.org/10.1145/3294109.3295639

Patents

- Japanese domestic patent for Tsugite Graphical User Interface. Invention title: Information processing system, information processing method and program. Application number: 2021-148001. Application date: 2021.10.09. Applicant: The University of Tokyo. Inventors: Maria Larsson, Hironori Yoshida, Nobuyuki Umetani, Takeo Igarashi

Grants

- ACT-X Research Grant, Acceleration phase, Japan Science and Technology Agency (JST), 2024 ($36,000)
- KAKENHI Research Grant, Japan Society for the Promotion of Science, 2023-2025 ($7,000)
- ACT-X Research Grant, JST, 2020-2023 ($54,000)