

# Kenji Tojo

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## About

Kenji Tojo is a Ph.D. student at the University of Tokyo specializing in computer graphics and computational design. He has published multiple first-author papers at top venues, including *SIGGRAPH*, and his research has been recognized with several awards, such as the Dean's Prize for Outstanding Master's Thesis and a Best Paper Honorable Mention at SGP. His work bridges algorithmic innovation with practical design applications, aiming to advance both creative tools and scientific understanding. His academic training spans mathematics, computer science, and graphics, providing a strong foundation for interdisciplinary research.

## Education

<b>Ph.D. Information Science and Technology</b> – The University of Tokyo	<i>Apr 2023 – Present</i>
◦ Adviser: Nobuyuki Umetani	
<b>M.S. Information Science and Technology</b> – The University of Tokyo	<i>Apr 2021 – Mar 2023</i>
◦ Adviser: Nobuyuki Umetani	
◦ Dean's prize for best M.S. thesis	
<b>B.S. Information Science</b> – The University of Tokyo	<i>Apr 2017 – Mar 2021</i>
◦ Thesis Adviser: Takeo Igarashi	

## Publications

<b>Strands2Cards: Automatic Generation of Hair Cards from Strands</b>	<i>Dec 2025</i>
◦ <b>Kenji Tojo</b> , Liwen Hu, Nobuyuki Umetani, Hao Li	
◦ <i>Conditionally accepted to appear at SIGGRAPH Asia 2024 Conference Proceedings</i>	
<b>The Mokume Dataset and Inverse Texturing of Solid Wood</b>	<i>Aug 2025</i>
◦ Maria Larsson, Hodaka Yamaguchi, Ehsan Pajouheshgar, I-Chao Shen, <b>Kenji Tojo</b> , Chia-Ming Chang, Lars Hansson, Olof Broman, Takashi Ijiri, Ariel Shamir, Wenzel Jakob, Takeo Igarashi	
◦ <i>ACM Transactions on Graphics (presented at SIGGRAPH 2025)</i>	
<b>GreenCloud: Volumetric Gradient Filtering via Regularized Green's Functions</b>	<i>Jul 2025</i>
◦ <b>Kenji Tojo</b> , Nobuyuki Umetani	
◦ <i>Symposium of Geometry Processing (SGP) 2025 – Best Paper Honorable Mention</i>	
<b>3D Gabor Splatting: Reconstruction of High-frequency Surface Texture using Gabor Noise</b>	<i>Apr 2025</i>
◦ Haato Watanabe, <b>Kenji Tojo</b> , Nobuyuki Umetani	
◦ <i>Eurographics 2025 – Short Papers</i>	
<b>Free-form Floor Plan Design using Differentiable Voronoi Diagram</b>	<i>Oct 2024</i>
◦ Xuanyu Wu, <b>Kenji Tojo</b> , Nobuyuki Umetani	
◦ <i>Pacific Graphics 2024</i>	
<b>Fabricable 3D Wire Art</b>	<i>Aug 2024</i>
◦ <b>Kenji Tojo</b> , Ariel Shamir, Bernd Bickel, Nobuyuki Umetani	
◦ <i>SIGGRAPH 2024 Conference Proceedings</i>	
<b>Stealth Shaper: Reflectivity Optimization as Surface Stylization</b>	<i>Aug 2023</i>
◦ <b>Kenji Tojo</b> , Ariel Shamir, Bernd Bickel, Nobuyuki Umetani	
◦ <i>SIGGRAPH 2023 Conference Proceedings</i>	

<b>Recolorable Posterization of Volumetric Radiance Fields Using Visibility-Weighted Palette Extraction</b>	<i>Jul 2022</i>
<ul style="list-style-type: none"> <li>◦ <b>Kenji Tojo</b>, Nobuyuki Umetani</li> <li>◦ <i>Eurographics Symposium on Rendering (EGSR) 2022</i></li> </ul>	
<b>Neural Motion Compression with Frequency-adaptive Fourier Feature Network</b>	<i>Apr 2022</i>
<ul style="list-style-type: none"> <li>◦ <b>Kenji Tojo</b>, Nobuyuki Umetani</li> <li>◦ <i>Eurographics 2022 – Short Papers</i></li> </ul>	

## Awards

<b>Best Paper Honorable Mention</b> – Symposium on Geometry Processing 2025	<i>Jul 2025</i>
◦ Awarded for the paper <i>GreenCloud: Volumetric Gradient Filtering via Regularized Green's Functions</i>	
<b>JSPS Fellowship Supplement for Outstanding Research Progress</b>	<i>Apr 2025 – Mar 2026</i>
◦ Additional stipend of 360,000 JPY / year awarded in recognition of exceptional research performance during fellowship	
<b>Dean's prize for outstanding Master's research</b> – The University of Tokyo	<i>Mar 2023</i>
◦ Best Master's thesis of the year in the Creative Informatics Department	
<b>Japan Society for the Promotion of Science Research Fellow (DC1)</b>	<i>Apr 2023 – Mar 2026</i>
◦ Competitive national fellowship providing 2,400,000 JPY / year	

## Experience

<b>Visiting Researcher</b> – ETH Zürich, <i>Zürich, Switzerland</i>	<i>Jun 2025 – Aug 2025</i>
◦ Mentor: Bernd Bickel	
<b>Visiting Researcher</b> – MBZUAI, <i>Abu Dhabi, United Arab Emirates</i>	<i>Sep 2024 – Nov 2024</i>
◦ Mentor: Hao Li	
<b>Visiting Researcher</b> – ISTA, <i>Klosterneuburg, Austria</i>	<i>Dec 2023 – Jan 2024</i>
◦ Mentor: Bernd Bickel	
<b>Software Engineer Intern</b> – Morgenrot Inc., <i>Tokyo, Japan</i>	<i>Mar 2023 – Mar 2023</i>
<b>Research Assistant</b> – The University of Tokyo, <i>Tokyo, Japan</i>	<i>Feb 2021 – Mar 2021</i>
◦ Mentor: Takeo Igarashi	

## Teaching

<b>CV 802: ADVANCED 3D COMPUTER VISION</b> – MBZUAI	<i>Autumn, 2024</i>
◦ <b>Invited Lecturer</b> – Topic: <i>Differentiable Rendering</i>	

## Technical skills

**Programming:** C++, OpenGL, Eigen, CUDA, Python, PyTorch, pybind11, nanobind etc.  
**Creative:** Adobe Illustrator, Adobe Premiere Pro, Blender, Unreal Engine, etc.

## Test scores

**TOEFL iBT:** 105 (October 15, 2022)