

Seri Nishimoto

Ph.D. student

Department of Architecture, Graduate School of Engineering, The University of Tokyo.

website: <https://serinishimoto.wixsite.com/seri-nishimoto>

mail: s-nishimoto@g.ecc.u-tokyo.ac.jp

Education

Ph.D. of Engineering Apr.2023 - Current

Department of Architecture, The University of Tokyo, Japan

Advisor: Tomohiro Tachi

Master of Engineering Apr.2021 – Mar.2023

Department of Architecture, The University of Tokyo, Japan

Thesis: "Transformable Surface Mechanisms by Assembly of Geodesic Grid Mechanisms"

Advisor: Tomohiro Tachi

Bachelor of Engineering Apr.2018 – Mar.2021

Department of Architecture, The University of Tokyo, Japan

Thesis: "A Study on the Changes and Actual Conditions of Recent Wallpaper Construction Methods and Practices"

Advisor: Tomoyuki Gondo

Department of Architecture, National Institute of Technology (KOSEN), Akashi College Apr.2013 - Mar.2018

Publications

International Journal

- Nishimoto, S., & Tachi, T. (2024). Transformable Surface Mechanisms Based on Bending-active Scissors Structures. *Journal of the International Association for Shell and Spatial Structures*, 65(4), 268-276.
<https://doi.org/10.20898/j.iass.2024.017>
- Ono, F., Kamijo, H., Kase, M., Nishimoto, S., Sempuku, K., Shigematsu, M., & Tachi, T. (2024). Growth-induced transformable surfaces realized by bending-active scissors grid. *Architectural Intelligence*, 3(1), 21. <https://doi.org/10.1007/s44223-024-00065-0>
- Nishimoto S., Horiyama T, Tachi T, Geodesic Folding of Regular Tetrahedron, *Journal for Geometry and Graphics* Volume 26 (2022), No. 1, 81–100, 2022.
<https://www.heldermann.de/JGG/JGG26/JGG261/jgg26011.htm>

Papers (Reviewed Proceedings)

- Seri Nishimoto, Maya Kraft and Tomohiro Tachi. Transformable Surface Mechanism with Single Scissors Units, *Proceedings of Bridges 2025: Mathematics and the Arts*, Jul.2025.
- Nishimoto, S. & Tachi, T. (2024). Transformable Surface Mechanisms based on Bending-active Scissors Structures, *Proceedings of the IASS 2024 Symposium*, Aug.2024.

- Adachi, A., Nishimoto, S., Totsuka, H., Warisaya, K., Tokolo, A., & Tachi, T. (2024). Origami Cellular Material Switching Between Single and Multiple DOF Modes, *8th International Meeting on Origami in Science, Mathematics, and Education (8OSME)*, Jul. 2024.
- Foschi, R., Maleczek, R., Mundilova, K., Nishimoto, S., & Tachi, T. (2024). Slit-Folding --- Actuating Curved Creases by Closing Tailored Openings, *8th International Meeting on Origami in Science, Mathematics, and Education (8OSME)*, July. 2024.
- Nishimoto, S., & Tachi, T. (2023). Transformable Surface Mechanisms by Assembly of Geodesic Grid Mechanisms, *Advances in Architectural Geometry - AAG 2023*, Oct. 2023.
- Ono, F., Kase, M., Sempuku, K., Shigematsu, M., Tamai, H., Nishimoto, S., & Tachi, T. (2023). Controlling frills of bending-active negative curvature surface. *Proceedings of IASS Annual Symposia*, Jul.2023.
- Warisaya, K., Nishimoto, S., Morishima, T., & Tachi, T. (2023). Triply periodic discrete surface of constant negative curvature constructed from one type of piece. *Proceedings of IASS Annual Symposia*, July.2023.
- Nishimoto, S., Ono, F., Miki, M., Domyo, K., & Tachi, T. (2022). Branching and Merging of Kumihimo Braiding based on the Geodesics of Regular Tetrahedron, *International Conference on Geometry and Graphics 2022*, Aug. 2022.

International Conference

- Nishimoto S., Horiyama T, & Tachi T. Polyhedral Forms from Geodesic Strips, *the Society of Engineering Science virtual conference 2020*, Sep. 2020. (Oral presentation, reviewed)
- Nishimoto S., Horiyama T, & Tachi T. Goedesic Folding of Tetrahedron, *Symmetry: Art and Science*, Kanazawa, Nov. 2019. (Oral presentation, reviewed)

Domestic Conference (in Japanese)

- 西本清里, 館知宏. シザーズ変形可能なグリッドの組み合わせによる曲面変形, *日本建築学会 第17回コロキウム構造形態の解析と創生 2022*, 2022 年 10 月. (Oral presentation, non-reviewed)
- 西本清里, 堀山貴史, 館知宏. 正四面体の測地線折り, *第32回折り紙の科学・数学・教育研究集会*, 2022 年 6 月. (Oral presentation, non-reviewed)
- 西本清里, 小野富貴, 道明葵一郎, 館知宏. 正四面体の測地線に基づく組紐の分岐と合流, *日本図学会 2021 年度大会*, 2021 年 11 月. (Oral presentation, non-reviewed)
- 西本清里, 堀山貴史, 館知宏. ジオデシック四面体, *第26回折り紙の科学・数学・教育研究集会*, 2019 年 6 月. (Oral presentation, non-reviewed)

Talk

- “Exploration of Connecting Artifacts - Polyhedra, Weaving, and Scissors Structures”
ICERM Workshop "Geometry of Materials", Brown University, April7-11, 2025, Providence.
https://icerm.brown.edu/program/semester_program_workshop/sp-s25-w3
(video archive: https://icerm.brown.edu/video_archive/4092/)
- “Exploration of Connecting Artifacts - Polyhedra, Weaving, Scissors structures”
Special Semester on Rigidity and Flexibility Workshop6 ” Structures — Polyhedra, Meshes, Platforms”,
Johann Radon Institute for Computational and Applied Mathematics(RICAM), May 13–17, 2024 in Linz.
<https://www.ricam.oeaw.ac.at/specsem/specsem2024/workshop6/>
- 館知宏, 西本清里, 割鞘奏太.「つながるかたち」, 東京大学芸術創造連携研究機構シンポジウム「芸術がつなぐ学術の協働」, 2022 年 11 月 <https://www.art.c.u-tokyo.ac.jp/activity/social/340/>

Awards

- Hangai Prize / IASS2024 Aug.2024
- Dean's list / Graduate school of Engineering, The University of Tokyo Mar.2023
工学系研究科長賞（研究） / 東京大学大学院工学系研究科
- Best Presentation Award for Young Presenters / Architectural Institute of Japan Oct.2022
第 17 回 コロキウム構造形態の解析と創生 2022 若手優秀発表賞 / 日本建築学会
- Research Encouragement Award / Japan Society for Graphic Science Jun.2022
研究奨励賞 / 日本図学会

Artwork Exhibits

- Bridges 2025 Exhibition of Mathematical Art, Craft, and Design, TU Eindhoven, Jul.2025.
<https://gallery.bridgesmathart.org/exhibitions/bridges-2025-exhibition-of-mathematical-art/seri-nishimoto>
 - “Curved Surface by Repetition of a Single Type of Scissors (4747), (4563)”
- Recharge, Komaba Research Campus, May. – Jul. 2025. <https://pdlab.iis.u-tokyo.ac.jp/>
 - “Disk to Tube” Seri Nishimoto, Fumiya Nakano, Tomohiro Tachi, Shunji Yamanaka.
- CONNECTING ARTIFACTS 04, Science Museum, Oct. 2024. <https://sites.google.com/view/connecting-artifacts/04>
 - “Transformable Scissors Surfaces”, “Traveling Spherical Tessellation (movie)”.
- CONNECTING ARTIFACTS 03, Komaba Museum, Sep.- Nov.2023. <https://sites.google.com/view/connecting-artifacts/03>
 - “Branching and Merging of Kumihimo based on the Geodesics of Regular Tetrahedron”
 - “Transformable Surface Mechanisms by Assembly of Geodesic Grids”
- CONNECTING ARTIFACTS 2.5, ICC Annual 2023: Shapes of Things, NTT Inter Communication Center (ICC), June 24, 2023 - January 14, 2023. <https://www.nttcc.or.jp/en/exhibitions/2023/connecting-artifacts-2-point-5/>
- CONNECTING ARTIFACTS 02, TIERS GALLERY, Oct.– Nov.2022. <https://sites.google.com/view/connecting-artifacts/02>
 - “Branching and Merging of Kumihimo based on the Geodesics of Regular Tetrahedron”
 - “Sponge-shaped Polyhedron Composed of Zippers”
- KUMIHIMO: The Art of Japanese Silk Braiding by Domyo, Nishimoto S, Ono F, Miki M, Domyo K, Tachi T.
“Branching and Merging of Kumihimo based on the Geodesics of Regular Tetrahedron”
 - Japan House LA, 2021.12.11 - 2022.03.06
<https://www.japanhousela.com/exhibitions/kumihimo-the-art-of-japanese-silk-braiding-by-domyo/>
 - Japan House Sao Paulo, 2022.05.24 - 2022.10.23
<https://www.japanhousesp.com.br/artigo/jhsp-responde-kumihimo-tomohiro-tachi-e-seri-nishimoto/>
 - Japan House London, 2023.02.23 – 2023.06.11
<https://www.japanhouselondon.uk/whats-on/2023/kumihimo-japanese-silk-braiding-by-domyo/>
- CONNECTING ARTIFACTS 01, Komaba Museum, Sep.2021 – Nov.2021.
 - “Geodesic Folding of Tetrahedron”, “Kagome weave Tetrahedron”, “Zipper Tetrahedron” .

Fellowship

- JSPS Doctoral Course Research Fellowship (DC2) Apr.2024 - Current
- Designing Future Society Fellowship (DFS Fellowship) WINGS RA Apr.2023 - Mar.2024
未来社会デザインフェローシップ卓越 RA

Work Experience

Research Assistant Oct. 2021 – Mar.2024
World-leading Innovative Graduate Study Program Co-designing Future Society (WINGS CFS) WINGS RA, The

University of Tokyo

Teaching Assistant at The University of Tokyo

- | | |
|--|------------------------------------|
| • Laboratory Exercise for Graphic Science I (図形科学演習 I) | S semester, 2021 |
| • Architectural Media Studies 6 (造形第六) | S2 term, 2021 |
| • Architectural Media Studies (造形第四) | A2 term, 2021 |
| • Individual and Group (文理融合ゼミナール「個と群」) | 2021 A semester, intensive lecture |
| • Graphic Science A (図形科学 A) | A semester, 2022 |
| • Math and Music (文理融合ゼミナール「数学と音楽」) | 2024 A semester, intensive lecture |

Awards (for Architectural Design)

- 住宅課題賞 2019 入選, 2019 年 11 月.
- 2017 年度卒業設計 明石高専建築会賞奨励賞, 2018 年 3 月.
- 木の次世代茶室デザインコンペティション 優秀賞, 2016 年 12 月.
- 第 6 回高校生の建築甲子園 準優勝/教育・事業本委員長特別賞, 2015 年 12 月.

Skills

3D-CAD: Rhinoceros, Grasshopper, Design: illustrator, Photoshop, InDesign, Programming: Python, C# (beginner)

Language

Japanese (native), English