
Curriculum Vitae

Shu Suzuki

Date of birth: April 29th, 1989
Nationality: Japanese
Phone: +81 - 90 - 5223 - 9885
Email: shu.suzuki.1989@gmail.com
Homepage: <https://sisuzuki1911.github.io/>



Experience

October 2018–March 2022: **Postdoctoral fellow** (JSPS OS) at the University of Twente,
– Researching the nonequilibrium transport in Dirac systems.

October 2018–March 2022: **Postdoctoral fellow** (JSPS PD) at Nagoya University,
– Researching the nonequilibrium transport and odd-frequency Cooper pairs.
– Inverse proximity effect by odd-frequency Cooper pairs in ferromagnet-superconductor junctions.

April 2018–September 2018: **Postdoctoral fellow** at the University of Twente,
– Researching the transport of topological materials with Majorana bound states.

April 2017–March 2018: **Postdoctoral fellow** at Nagoya University, Japan Science and Technology Agency
– Researching the realization of quantum computations using Majorana bound states.
– Numerical and analytic calculations on superconductor/topological-insulator junctions.

April 2015–March 2017: **Research Fellowships for Young Scientists** (JSPS DC2) at Hokkaido University,
– Research on superconductors with anomalous paramagnetism by odd-frequency Cooper pairs.
– Elucidating the properties of odd-frequency Cooper pairs; novel composite particle.
– Numerical simulations on the magnetic response of mesoscopic superconductors.

April 2014–March 2015: **Research Assistant** (Part-time job), Hokkaido University
– Numerical simulations on the magnetic response of small high- T_c superconductors.
– Analytic calculations about quasiclassical theory.

April 2012–March 2015: **Teaching Assistant** (Part-time job), Hokkaido University
– Explaining analytical mechanics to physics bachelor students.
– Supervising experiments on diffraction of light and electronic transport properties.
– Helping master students with simulating quantum phenomena such as time-evolution and scattering.

Education

- 2014-2017: **Doctor course in Applied Physics**, Hokkaido University
Besides acquiring scientific knowledge and learning communication skills such as writing and giving presentations, I also collaborated a lot with international researchers, including Russian and Dutch researchers. I went to a number of international conferences and worked on a project about novel superconductivity in Italy. When communicating with a broad range of international researchers, I always felt inspired by cooperation with international researchers because of their different viewpoints. Additionally, I supervised several master students.
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- 2012-2014: **Master course in Applied Physics**, Hokkaido University
Constructing theoretical models for describing physical phenomena, which are sufficiently simple but represent the actual phenomena in great detail. Developing an algorithm for finite-size superconductors. Expanding my knowledge to advanced applied physics such as quantum field theory and semi-conductor engineering.
 - 2010-2012: **Bachelor course in Applied Physics**, Hokkaido University
A broad education on the fundamentals of physics, including quantum mechanics, solid-state physics, optics, numerics, and computer science.
 - 2005-2010: **Associate Degree in Mechanics Engineering**, Asahikawa National College of Technology
A unique high school specialized in engineering. The education system focuses on laying a good foundation for topics such as mechanics, fluid dynamics, metallurgical technology, and computer science.

Recent Publications (Full list is in my [web page](#))

- “Magnetic Response of Mesoscopic Unconventional Superconductors”,
[S.-I. Suzuki](#) and Y. Asano, *Topologica* **3** (Accepted for publication).
- “Anomalous inverse proximity effect in unconventional superconductor junctions”,
[S.-I. Suzuki](#), T. Hirai, M. Eschrig, and Y. Tanaka, *Physical Review Research* **3**, 043148 (2021).
- “Proposal for identifying possible even-parity superconducting states in Sr_2RuO_4 using planar tunneling spectroscopy”,
S. Ikegaya, [S.-I. Suzuki](#), Y. Tanaka, and Dirk Manske, *Physical Review Research* **3**, L032062 (2021).
- “Tunneling conductance of the $(d + ip)$ -wave superconductor”,
Y. Takabatake, [S.-I. Suzuki](#), and Y. Tanaka, *Physical Review B* **103**, 184515 (2021).
- “Identifying possible pairing states in Sr_2RuO_4 by tunneling spectroscopy”,
[S.-I. Suzuki](#), M. Sato, and Y. Tanaka, *Physical Review B* **101**, 054505 (2020).
- “Effects of phase coherence on local density of states in superconducting proximity structures”,
[S.-I. Suzuki](#), A. A. Golubov, Y. Asano, and Y. Tanaka, *Physical Review B* **100**, 024511 (2019).

Awards & Grants

- 2020: **Poster Preview Award**, International Conference on Topological Materials Science 2019,.
- 2019: **Best Poster Award**, International conference “OSS2019 - Oxide Superspin Workshop 2019”.
- 2016: **Researcher Exchange Program**, Grant-in-Aid “Topological Materials Science”.
- 2016: **Best Posters**, International conference on Strongly Correlated Electron Systems.
- 2015: **Grant-in-Aid for JSPS Fellows**, Japan Society for the Promotion of Science.
- 2015: **‡Exemption from restitution of the scholarship**, Japan Student Services Organization.
- 2014: **Poster Award**, International conference on Topological Quantum Phenomena.
- 2014: **Poster-Preview Award**, International conference on Topological Quantum Phenomena.
- 2012: **Award of Department of Applied Physics**, Hokkaido University.

Additional Skills

- **Languages:** Japanese (Native), English (Business).
 - **Computer skills:** Linux/Unix, MATLAB, Octave, C/C++, Fortran, MS Office, L^AT_EX, Adobe Illustrator, Inkscape, Gnuplot.
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Personal interests

- **Travelling:** I like to experience and explore different cultures. I engaged in international collaborations with researchers from Italy, Russia, and the Netherlands. This fall, I went on a holiday to the Netherlands.
- **Sports:** Volleyball and baseball. As a high school student, I was the team captain of a volleyball club for four years. When I was a student at Hokkaido University, I joined two baseball teams. At the moment, I am participating in a baseball competition for students and researchers at Nagoya University.
- **Other:** Photography, cooking, playing jazz guitar, and reading.

[‡] In Japan, it is customary for students to borrow money to pay their school fees (including the PhD course). However, a limited number of students who show excellent achievements is exempted from restitution.
