

Kotaro Miyake

Ph.D. Student at Nagoya University

✉ miyake@hken.phys.nagoya-u.ac.jp

🌐 www.miyake.science

Department of Physics, Nagoya University

Updated: August 24, 2026

Education

2026– **Doctoral Program**, Nagoya University, Japan

2024–2026 **M.Sc.**, Nagoya University, Japan

2018–2024 **B.Sc.**, Nagoya University, Japan

Research Affiliations

2026– Special Research Student, Tokyo Metropolitan University, Japan

Fellowships and Research Support

2026– JST SPRING, “THERS Make New Standards Program for the Next Generation Researchers,” Grant No. JPMJSP2125

Awards

2025 Student Presentation Award, JPS 80th Annual Meeting, The Physical Society of Japan

Research Interests

Exotic Hadrons; Hadron Spectroscopy; Hadron Interactions; Hadron Structure

Publications

- 1 Miyake, Kotaro and Yamaguchi, Yasuhiro. P-wave $c\bar{c}$ meson contributions in exotic hadrons. J. Subatomic Part. Cosmol. **5**, 100398 (2026), arXiv:2604.15778[hep-ph].
- 2 Miyake, Kotaro and Yamaguchi, Yasuhiro. Hadronic Molecules and $\chi_{cJ}(2P)$ Coupled States. PoS **HADRON2025**, 060 (2026), arXiv:2507.21672[hep-ph].
- 3 Miyake, Kotaro and Yamaguchi, Yasuhiro. エキゾチックハドロンにおける P 波 $c\bar{c}$ メソンの寄与 (P-wave $c\bar{c}$ meson contributions in exotic hadrons). Genshikaku Kenkyu Vol. 70 Suppl. 1, 2026. (Non-peer reviewed)
- 4 Miyake, Kotaro and Yamaguchi, Yasuhiro. Hidden-Charmed Tetraquarks in a Mixture Model: Coupled-Channel Analysis with $c\bar{c}$ and Hadronic Molecular Components. Phys. Rev. D **112**, 036004 (2025), arXiv:2505.16219[hep-ph].
- 5 Miyake, Kotaro and Yamaguchi, Yasuhiro. クォーコニウムとハドロン分子 (Quarkonium and Hadronic Molecules). Genshikaku Kenkyu Vol. 69 Suppl. 2, 2025. (Non-peer reviewed)

Conference Presentations

International Conferences and Workshops

- 1 Miyake, Kotaro and Yamaguchi, Yasuhiro. P-wave $c\bar{c}$ meson contributions in exotic hadrons (oral presentation). Baryons 2025, Jeju, Korea, 10–14 Nov 2025.
- 2 Miyake, Kotaro and Yamaguchi, Yasuhiro. Hadronic Molecules and $\chi_{cJ}(2P)$ Coupled States (oral presentation). HADRON2025, Osaka, Japan, 27–31 Mar 2025.

- 3 Miyake, Kotaro and Yamaguchi, Yasuhiro. Analysis of Exotic Hadrons by Superposition of Hadronic Molecules and Charmonium (poster presentation). KMI2025, Nagoya, Japan, 5–7 Mar 2025.
- 4 Miyake, Kotaro and Yamaguchi, Yasuhiro. $\chi_{cJ}(2P)$ with hadronic molecules (oral presentation). HHIQCD2024, Kyoto, Japan, 14 Oct–15 Nov 2024.
- 5 Miyake, Kotaro and Yamaguchi, Yasuhiro. Mixture of Hadronic Molecules and Charmonium Core (oral presentation). International Workshop on Quark Structure of Hadrons 2024, Wako, Japan, 9–10 Aug 2024.
- 6 Miyake, Kotaro and Yamaguchi, Yasuhiro. Exotic mesons in the core-molecular hybrid model (oral and poster presentations). SNP CNS Summer School 2024, Tokyo/Wako, Japan, 3–8 Aug 2024.

Domestic Conferences and Workshops

- 1 Miyake, Kotaro. 重イオン衝突におけるエキゾチックハドロン (review) (Exotic hadrons in heavy ion collisions (review)) (poster presentation). Young Nuclear and Particle Physicist Group of Japan Summer School 2026, Numazu, Japan, 2–6 Aug 2026.
- 2 Miyake, Kotaro and Yamaguchi, Yasuhiro. Coupled-Channel Analysis of Hidden-Charm Exotic States with P -Wave Charmonium and Molecular Components (oral presentation). RARiS 研究会「実験・有効理論・格子シミュレーションで探るハドロンダイナミクス」(RARiS Workshop "Exploring Hadron Dynamics through Experiments, Effective Theories, and Lattice Simulations"), Sendai, Japan, 25–26 Nov 2025.
- 3 Miyake, Kotaro and Yamaguchi, Yasuhiro. P 波チャーモニウム状態の寄与を含むエキゾチックハドロンの構造解析 (Structural analysis of exotic hadrons including contributions from P -wave charmonium states) (oral presentation). JPS 80th Annual Meeting, Hirohima, Japan, 16–18 Sep 2025.
- 4 Miyake, Kotaro and Yamaguchi, Yasuhiro. エキゾチックハドロンにおける P 波 $c\bar{c}$ メソンの寄与 (P -wave $c\bar{c}$ meson contributions in exotic hadrons) (oral presentation). Young Nuclear and Particle Physicist Group of Japan Summer School 2025, Tokyo, Japan, 6–10 Aug 2025.
- 5 Miyake, Kotaro and Yamaguchi, Yasuhiro. ハドロン分子と $\chi_{cJ}(2P)$ 結合状態 (Hadronic Molecules and $\chi_{cJ}(2P)$ Coupled States) (oral presentation). JPS 2025 Spring Meeting, Online, 18–21 Mar 2025.
- 6 Miyake, Kotaro and Yamaguchi, Yasuhiro. $\chi_{cJ}(2P)$ とハドロン分子によるエキゾチックハドロンの解析 (Analysis of Exotic Hadrons by $\chi_{cJ}(2P)$ and Hadronic Molecules) (oral presentation). Meeting for Intersections of Nuclear and Other Researches 2025, Wako, Japan, 10–11 Mar 2025.
- 7 Miyake, Kotaro and Yamaguchi, Yasuhiro. Mixture of $\chi_{cJ}(2P)$ and Hadronic Molecules (oral presentation). RARiS 研究会「実験・反応・構造計算、格子 QCD で解き明かすハドロン分光 2024」(RARiS Workshop "Elucidating Hadron Spectroscopy through Experiments, Reaction/Structure Calculations, and Lattice QCD 2024"), Sendai, Japan, 20–21 Nov 2024.
- 8 Miyake, Kotaro and Yamaguchi, Yasuhiro. クォーコニウムとハドロン分子 (Quarkonium and Hadronic Molecules) (oral presentation). Young Nuclear and Particle Physicist Group of Japan Summer School 2024, Tokyo, Japan, 21–25 Aug 2024.
- 9 Miyake, Kotaro and Yamaguchi, Yasuhiro. コア-分子混合模型によるエキゾチックメソンの解析 (Analysis of Exotic Mesons by Core-Molecular Hybrid Model) (poster presentation). JPS 2024 Spring Meeting, Online, 18–21 Mar 2024.

Teaching Experience

- 2024–2026 Teaching Assistant, Pre-Seminar, Department of Physics, Nagoya University, Japan. Mentored first-year undergraduate students.