

A. 査読付き原著論文 ※逆年代順に記載

- A20. [Tomohiro Oishi](#), Masaaki Kimura, and Lorenzo Fortunato, “One-proton emission from ^{102}Sb and its sensitivity to the proton-neutron interaction”, [Physical Review C 111, 034307 \(2025\)](#).
- A19. [Tomohiro Oishi](#), “Spin correlation in two-proton emission from ^6Be ”, [Physics Letters B 862, 139361 \(2025\)](#).
- A18. Nobuo Hinohara, [Tomohiro Oishi](#), and Ken’ichi Yoshida, “Triplet-odd pairing in finite nuclear systems: Even-even singly closed nuclei”, [Physical Review C 109, 034302 \(2024\)](#).
- A17. Tomoya Naito, [Tomohiro Oishi](#), Hiroyuki Sagawa, and Zhiheng Wang, “Comparative study on charge radii and their kinks at magic numbers”, [Physical Review C 107, 054307 \(2023\)](#).
- A16. [Tomohiro Oishi](#), “Time-dependent Dirac equation applied to one-proton radioactive emission”, [Physical Review C 107, 034301 \(2023\)](#).
- A15. Goran Kruzic, [Tomohiro Oishi](#), and Nils Paar, “Magnetic quadrupole transitions in the relativistic energy density functional theory”, [The European Physical Journal A, Vol. 59 \(3\), page 50 \(2023\)](#).
- A14. [Tomohiro Oishi](#), Ante Ravlic, and Nils Paar, “Symmetry breaking of Gamow-Teller and magnetic-dipole transitions and its restoration in calcium isotopes”, [Physical Review C 105, 064309 \(2022\)](#).
- A13. [Tomohiro Oishi](#), Goran Kruzic, and Nils Paar, “Discerning nuclear pairing properties from magnetic dipole excitation”, [The European Physical Journal A, Vol. 57 \(6\), page 1-7 \(2021\)](#).
- A12. Goran Kruzic, [Tomohiro Oishi](#), and Nils Paar, “Evolution of magnetic dipole strength in 100-140 Sn isotope chain and the quenching of nucleon g factors”, [Physical Review C 103, 054306 \(2021\)](#).
- A11. [Tomohiro Oishi](#), Goran Kruzic, and Nils Paar, “Role of residual interaction in the relativistic description of M1 excitation”, [Journal of Physics G: Particle and Nuclear Physics, Vol. 47, 115106 \(2020\)](#).
- A10. Goran Kruzic, [Tomohiro Oishi](#), and Nils Paar, “Magnetic dipole excitations based on the relativistic nuclear energy density functional”, [Physical Review C 102, 044315 \(2020\)](#).
- A09. [Tomohiro Oishi](#) and Nils Paar, “Magnetic dipole excitation and its sum rule in nuclei with two valence nucleons”, [Physical Review C 100, 024308 \(2019\)](#).
- A08. [Tomohiro Oishi](#), Lorenzo Fortunato, and Andrea Vitturi, “Two-fermion emission from spin-singlet and triplet resonances in one dimension”, [Journal of Physics G: Particle and Nuclear Physics, Vol. 45 \(10\), 105101 \(2018\)](#).
- A07. [Tomohiro Oishi](#), “One-proton emission from the $^6_{\Lambda}\text{Li}$ hypernucleus”, [Physical Review C 97, 024314 \(2018\)](#).
- A06. [Tomohiro Oishi](#), Markus Kortelainen and Alessandro Pastore, “Dependence of two-proton radioactivity on nuclear pairing models”, [Physical Review C 96, 044327 \(2017\)](#).
- A05. [Tomohiro Oishi](#), Markus Kortelainen, and Nobuo Hinohara, “Finite amplitude method applied to giant dipole resonance in heavy rare-earth nuclei”, [Physical Review C 93, 034329 \(2016\)](#).
- A04. [Tomohiro Oishi](#), Kouichi Hagino, and Hiroyuki Sagawa, “Role of diproton correlation in two-proton emission decay of the ^6Be nucleus”, [Physical Review C 90, 034303 \(2014\)](#).
- A03. Takahito Maruyama, [Tomohiro Oishi](#), Kouichi Hagino, and Hiroyuki Sagawa, “Time-dependent approach to many-particle tunneling in one dimension”, [Physical Review C 86, 044301 \(2012\)](#).
- A02. [Tomohiro Oishi](#), Kouichi Hagino, and Hiroyuki Sagawa, “Effect of proton-proton Coulomb repulsion on soft dipole excitations of light proton-rich nuclei”, [Physical Review C 84, 057301 \(2011\)](#).
- A01. [Tomohiro Oishi](#), Kouichi Hagino, and Hiroyuki Sagawa, “Diproton correlation in the proton-rich Borromean nucleus ^{17}Ne ”, [Physical Review C 82, 024315 \(2010\)](#).

(博士論文) Diproton Correlation and Two-Proton Emission from Proton-Rich Nuclei 東北大学(2014)

Abstract in Tohoku University Repository: <https://tohoku.repo.nii.ac.jp/records/70561>

Open-print version in arXiv: <https://arxiv.org/abs/2303.10529>

(修士論文) 密度依存デルタ関数型対相関力を用いた ^{17}Ne の三体構造計算 東北大学(2010)

B. 査読中プレプリント

- B2. [Tomohiro Oishi](#), and Masaaki Kimura, “Analytic continuation in coupling constant applied to two-proton emitters”, [arXiv: 2502.12577 \(2025\)](#).
- B1. [Tomohiro Oishi](#), and Masaaki Kimura, “Interference of resonances in two-proton emission of ^{16}Ne ”, [arXiv: 2312.15017 \(2023\)](#).

C. 研究会プロシーディング (査読付き)

- C7. Nils Paar, Goran Kruzic, and [Tomohiro Oishi](#), “Nuclear magnetic transitions in the relativistic energy density functional approach” in HINPw6 - Hellenic Institute of Nuclear Physics, 6th International Workshop on Perspectives on Nuclear Physics; From Fundamentals to Applications, [European Physical Journal: Web of Conferences, Vol. 252, 02002 \(2021\)](#).
- C6. Lorenzo Fortunato et al. with [Tomohiro Oishi](#), “An overview of the scientific contribution of ANDREA VITTURI to nuclear physics”, being an account of the “Theoretical Nuclear Physics in Padova: a meeting in honour of ANDREA VITTURI” in Padova, Italy, 21-22 May 2019, [The European Physical Journal A, Vol. 56, number 49 \(2020\)](#).
- C5. [Tomohiro Oishi](#), Goran Kruzic, and Nils Paar, “Relativistic energy-density functional approach to magnetic-dipole excitation”, proceeding in 27th International Nuclear Physics Conference (INPC2019), [Journal of Physics: Conference Series, Vol. 1643, 012153 \(2020\)](#).
- C4. [Tomohiro Oishi](#), and Lorenzo Fortunato, “TIME-DEPENDENT METHOD FOR MANY-BODY PROBLEMS AND ITS APPLICATION TO NUCLEAR RESONANT SYSTEMS”, proceeding of “XXXV Mazurian Lakes Conferences on Physics”, [Acta Physica Polonica B 49, pp 293-300 \(2018\)](#).
- C3. [Tomohiro Oishi](#), “Time-dependent Calculations for Two-proton Decay Width with Schematic Density-dependent Contact Pairing Interaction”, proceeding of PROCON2015, [Chinese Academy of Science, Nuclear Physics Review 33 \(2\), pp 203-206 \(2016\)](#).
- C2. [Tomohiro Oishi](#), Kouichi Hagino and Hiroyuki Sagawa, “Time-Dependent Approach to Two-Proton Radioactivity”, proceeding of the 12th Asia Pacific Physics Conference (APPC12) by Physical Society of Japan, [JPS Conf. Proc. Vol.1, 013056 \(2014\)](#).
- C1. Kouichi Hagino, Hiroyuki Sagawa, and [Tomohiro Oishi](#), “DINEUTRON CORRELATION IN THE GROUND STATE AND E1 EXCITATIONS OF BORROMEAN NUCLEI”, [Modern Physics Letters A, Vol.25, 1842-1845 \(2010\)](#).

D. その他出版物 (査読なし)

- D8. [Tomohiro Oishi](#), “Instruction of my personal computing library”, [arXiv: 2312.15017 \(2023\)](#).
- D7. Esra Yuksel, [Tomohiro Oishi](#), and Nils Paar, “Nuclear Equation of State in the Relativistic Point-Coupling Model Constrained by Excitations in Finite Nuclei”, [Universe Vol. 7 \(3\), page 71 \(2021\)](#).
- D6. [大石知広](#) 「海外通信：イタリアの古都 Padova から」、原子核研究 Vol. 63 (2), page 4-7 (2019).
- D5. [Tomohiro Oishi](#), Supplemental note for “Two-fermion emission from spin-singlet and triplet resonances in one dimension”, [arXiv: 1810.05521 \(2018\)](#).
- D4. [Tomohiro Oishi](#), and Lorenzo Fortunato, “Correlation Energy of Proton-Neutron Subsystem in Valence Orbit”, [arXiv: 1706.06115 \(2017\)](#).

- D3. Lorenzo Fortunato, and Tomohiro Oishi, “Diagonalization scheme for the many-body Schrodinger equation”, [arXiv: 1701.04684 \(2017\)](https://arxiv.org/abs/1701.04684).
- D2. 大石知広 「スーパーRA としての研究活動と将来の展望」、Outreach journal by the GCOE programme in Tohoku University, Vol. 15, p9 (2012).
- D1. Tomohiro Oishi, Kouichi Hagino and Hiroyuki Sagawa, “Analysis of ^{17}Ne nucleus by three-body model and di-proton correlation”, 原子核研究 Vol. 55 (suppl. 1), page 63-66 (2011).

E. 競争的研究資金（科研費など）

なし。

F. その他研究資金、フェローシップなど

- F8.** 2022 年度湯川特別研究員 対象者：大石知広 財源：公益財団法人湯川記念財団
期間： 2022 年 5 月から 2024 年 4 月まで。 金額： 33 万円／月（給与）＋年間 17 万円（研究支援費）。
- F7.** Post-doctoral fellowship in the University of Zagreb, Croatia.
期間： September, 2021 – April 2022.
財源：“Exotic Nuclear Structure and Dynamics” (project No. TTP-2018-07-3554, director: Prof. Kosuke Nomura) by Croatian Science Foundation and Ecole Polytechnique de Lausanne.
代表者： Prof. Kosuke Nomura (Univ. of Zagreb, Croatia)
配分金額： 1100 ユーロ／月（給与）＋年間 2000 ユーロ（研究支援費）。
- F6.** Post-doctoral fellowship in the University of Zagreb, Croatia.
期間： September, 2018 – August, 2021.
財源： [1] “Structure and Dynamics of Exotic Femtosystems” (project ID: IP-2014-09-9159) by Croatian Science Foundation; [2] “QuantiXLie Centre of Excellence” (project ID: KK. 01.1.1.01) by Croatian Government and the European Union.
代表者： Prof. Nils Paar (Univ. of Zagreb, Croatia)
配分金額： 1100 ユーロ／月（給与）＋年間 2000 ユーロ（研究支援費）。
- F5.** Post-doctoral fellowship in the University of Padova, Italy
期間： September, 2016 – August, 2018.
財源：“Inter-disciplinary Applications of Nuclear Theory: from atoms and molecules to stars” (project code: PRAT no. CPDA154713).
代表者： Prof. Lorenzo Fortunato (Univ. di Padova, Italy)
配分金額： 1950 ユーロ／月（給与）＋年間 3000 ユーロ（研究支援費）。
- F4.** Post-doctoral fellowship in Helsinki Institute of Physics and University of Jyväskylä, Finland
期間： April, 2014 – August, 2016.
財源： [1] Finland Distinguished Professor Programme (FiDiPro) 2012; [2] Centre of Excellence Programme 2012-2017 in Nuclear and Accelerator Based Programme at JYFL.
代表者： [1] Prof. Jacek Dobaczewski (Univ. of York, UK, and Univ. of Jyväskylä, Finland); [2] Dr. Markus Kortelainen (Univ. of Jyväskylä, Finland).
配分金額（上記 2 点の合算）： 3100 ユーロ／月（給与）＋年間 1000 ユーロ（研究支援費）
- F3.** （学内研究支援予算）東北大学大学院理学研究科「卓越した大学院拠点」2013 年度リサーチアシスタント
期間： 2013 年 5 月から 2014 年 2 月まで。 金額： 6.1 万円／月（給与）＋年間 10 万円（研究支援費）。
- F2.** （学内研究支援予算）東北大学 GCOE プログラム「物質階層を紡ぐ科学フロンティアの新展開」2012 年度スーパーリサーチアシスタント
期間： 2012 年 6 月から 2013 年 3 月まで。 金額： 8.8 万円／月（給与）＋年間 20 万円（研究支援費）。

F1. (学内研究支援予算) 東北大学 GCOE プログラム「物質階層を紡ぐ科学フロンティアの新展開」2011 年度
リサーチアシスタント

期間：2011 年 5 月から 2012 年 3 月まで。 金額：6.0 万円／月（給与）＋年間 10 万円（研究支援費）。