

Masaki TEZUKA (手塚 真樹)

Assistant Professor
Department of Physics I
Division of Physics and Astronomy
Graduate School of Science
Kyoto University

Kitashirakawa, Sakyo-ku, Kyoto 606-8502, Japan
E-mail: tezuka@scphys.kyoto-u.ac.jp
url: <http://cond.scphys.kyoto-u.ac.jp/~tezuka/>
Phone: +81-75-753-3798
Fax: +81-75-753-3819

Born: 18 January 1980 – Tokyo, Japan
Registered domicile (as it appears on the passport): Kyoto
Nationality: Japanese
Marital status: Married

Current position

Assistant Professor, Graduate School of Science, Kyoto University

Education

Graduate School of Science, University of Tokyo Ph.D., Physics	Tokyo, Japan March 2007
Graduate School of Science, University of Tokyo M.Sc., Physics	Tokyo, Japan March 2004
University of Tokyo B.Sc., Physics	Tokyo, Japan March 2002

Appointments Held

1. Research

Graduate School of Science, Kyoto University Assistant Professor (current position)	April 2010-present
Graduate School of Science, Kyoto University Research Fellow	October 2009-March 2010
Graduate School of Science, University of Tokyo JSPS Research Fellow-PD	April 2008-September 2009
Graduate School of Science, Tokyo Institute of Technology JSPS Research Fellow-PD	April 2007-March 2008

Graduate School of Science, University of Tokyo

Research Assistant

May 2004-February 2007**Graduate School of Frontier Sciences, University of Tokyo**

Research Assistant

April 2005-March 2006**2. Teaching****Faculty of Science, Kyoto University**Exercises for Statistical Mechanics C **October 2014 - March 2015, October 2015 - March 2016**Exercises for Electrodynamics 4 **October 2012 - March 2013, October 2013 - March 2014**Exercises for Analytic Mechanics 1 **April 2011 - September 2011**Special Study Course (Physical Science) Q11: Condensed Matter Theory **April 2010 - present****Faculty of Science, University of Tokyo**

Teaching Assistant, Exercises for Quantum Mechanics

October 2003 - March 2004**Grants and awards****Japan Society of the Promotion of Science**Grant-in-Aid for Encouragement of Young Scientists (B) (Project 26870284, 3 years, total direct cost 3.1M JPY) **FY2014 - FY2016****Japan Society of the Promotion of Science**

Research fellowship (3 years, with research funding 1.1M JPY per year)

FY2007 - FY2009**Japan Student Services Organization**

Interest-free scholarship loan (3 years, half-waiver of the obligation to repay awarded in 2007)

2004**Japan Scholarship Foundation**

Interest-free scholarship loan (2 years)

2002**The 37th International Mathematical Olympiad**

Bronze Medal

Mumbai, India**1996****Scholarly affiliation****The Physical Society of Japan**

Regular member

2004 - present

Steering Committee member of Division 11

April 2015 - March 2016

Steering Committee member of Division 8

April 2012 - March 2013**Journal Referees**

Physical Review Letters (> 15 manuscripts), Physical Review X, Physical Review A, Physical Review B, Physical Review E, New Journal of Physics, Journal of the Physical Society of Japan, Progress of Theoretical and Experimental Physics, International Journal of Modern Physics B and numerous conference proceedings

Languages*Japanese* (native speaker), *English* (fluent), *German* (intermediate), *French* (basic).

1. Refereed original journal articles

Jun'ichi Ozaki, [Masaki Tezuka](#), and Norio Kawakami: "Drag dynamics in one-dimensional Fermi systems" *Physical Review A* **92**, 023607 (2015). doi: 10.1103/PhysRevA.92.023607

[Masaki Tezuka](#), Antonio M. Garca-Garca, and Miguel A. Cazalilla: "Destruction of long-range order by quenching the hopping range in one dimension" *Physical Review A* **90**, 053618 (2014). doi: 10.1103/PhysRevA.90.053618

Fuyuki Matsuda, [Masaki Tezuka](#), and Norio Kawakami: "Topological Properties of Ultracold Bosons in One-Dimensional Quasiperiodic Optical Lattice" *Journal of the Physical Society of Japan* **83**, 083707 (2014). (Letter) doi: 10.7566/JPSJ.83.083707

Monodeep Chakraborty, [Masaki Tezuka](#), and B. I. Min: "Interacting-Holstein and extended-Holstein bipolarons" *Physical Review B* **89**, 035146 (2014). doi: 10.1103/PhysRevB.89.035146

[Masaki Tezuka](#) and Norio Kawakami: "Reentrant topological transitions with Majorana end states in one-dimensional superconductors by lattice modulation" *Physical Review B* **88**, 155428 (2013). doi:10.1103/PhysRevB.88.155428

Alejandro M. Lobos, [Masaki Tezuka](#) and Antonio M. Garca-Garca: "Restoring phase coherence in a one-dimensional superconductor using power-law electron hopping" *Physical Review B* **88**, 134506 (2013). doi:10.1103/PhysRevB.88.134506

Jun'ichi Ozaki, [Masaki Tezuka](#) and Norio Kawakami: "Collision of one-dimensional fermion clusters" *Physical Review A* **86**, 033621 (2012). doi:10.1103/PhysRevA.86.033621

[Masaki Tezuka](#), and Norio Kawakami: "Reentrant topological transitions in a quantum wire / superconductor system with quasiperiodic lattice modulation" *Physical Review B* **85**, 140508(R) (2012). doi:10.1103/PhysRevB.85.140508

[Masaki Tezuka](#) and Antonio M. García-García: "Testing the universality of the many-body metal-insulator transition by time evolution of a disordered one-dimensional ultracold fermionic gas" *Physical Review A* **85**, 031602(R) (2012). doi:10.1103/PhysRevA.85.031602

[Masaki Tezuka](#) and Antonio M. García-García: "Stability of the superfluid state in a disordered 1D ultracold fermionic gas" *Physical Review A* **82**, 043613 (2010). doi:10.1103/PhysRevA.82.043613

[Masaki Tezuka](#) and Masahito Ueda: "Ground states and dynamics of population-imbalanced Fermi condensates in one dimension" *New Journal of Physics* **12**, 055029 (2010). doi:10.1088/1367-2630/12/5/055029

[Masaki Tezuka](#) and Masahito Ueda: "Density-Matrix Renormalization Group Study of Trapped Imbalanced Fermi Condensates" *Physical Review Letters* **100**, 110403 (2008). doi:10.1103/PhysRevLett.100.110403

[Masaki Tezuka](#), Ryotaro Arita and Hideo Aoki: "Phase diagram for the one-dimensional Hubbard-Holstein model: A density-matrix renormalization group study" *Physical Review B* **76**, 155114 (2007). doi:10.1103/PhysRevB.76.155114

[Masaki Tezuka](#): "An Improved Initialization Procedure for the Density-Matrix Renormalization Group" *Journal of the Physical Society of Japan* **76**, 053001 (Letter) (2007). doi:10.1143/JPSJ.76.053001

[Masaki Tezuka](#), Ryotaro Arita and Hideo Aoki: "Density-matrix renormalization group study of pairing when electron-electron and electron-phonon interactions coexist: effect of the electronic

band structure” *Physical Review Letters* **95**, 226401 (2005). doi:10.1103/PhysRevLett.95.226401

2. Refereed conference proceedings

Fuyuki Matsuda, Masaki Tezuka, and Norio Kawakami: “Correlation Effects in One-Dimensional Quasiperiodic Anderson-Lattice Model” *Physics Procedia* **75**, 245-251 (2015). doi: 10.1016/j.phpro.2015.12.030

Masaki Tezuka, Alejandro M. Lobos and Antonio M. Garcia-Garcia: “Restoring long-range order in one-dimensional superconductivity by power-law hopping” *JPS Conference Proceedings* **3**, 016004 (2014). doi:10.7566/JPSCP.3.016004

Fuyuki Matsuda, Masaki Tezuka, and Norio Kawakami: “Topological Properties of 1D Quasicrystal Bose-Mott Insulators” *JPS Conference Proceedings* **3**, 016013 (2014). doi:10.7566/JPSCP.3.016013

Jun’ichi Ozaki, Masaki Tezuka, and Norio Kawakami: “Quantum effects on one-dimensional collision dynamics of fermion clusters” *Journal of Physics: Conference Series* **400**, 012059 (2012). doi:10.1088/1742-6596/400/1/012059

Masaki Tezuka, Ryotaro Arita and Hideo Aoki: “Density-Matrix Renormalization Group Study of Phase Diagram in Systems with Strong Electron-Electron and Electron-Phonon Interactions”, *AIP Conference Proceedings* **850** (24th International Conference on Low Temperature Physics), 551-552 (2006) doi:10.1063/1.2354829

Masaki Tezuka, Ryotaro Arita and Hideo Aoki: “A DMRG study of correlation functions in the Holstein-Hubbard model”, *Physica B* **359-361** (Proceedings of the International Conference on Strongly Correlated Electron Systems), 708-710 (2005). doi:10.1016/j.physb.2005.01.20

3. Review articles

Masaki Tezuka: “Superfluidity in imbalanced systems — Fermi condensates observed in trapped neutral atoms” (in Japanese), *Bussei Kenkyu (Kyoto)* **95**, 34 (2010).

References

Available upon request.