

Young Scientist Award of the Physical Society of Japan

Every year, the Physical Society of Japan presents Young Scientist Awards to young researchers who have made outstanding achievements in their early research careers. This year's winners were recently decided by the board of directors of the JPS according to the recommendations from the selection committees established in 19 divisions of the JPS. The maximum number of winners from each division has been determined based on the number of talks given at the Annual Meetings in the past three years. All the winners are to give an award lecture at the next Annual Meeting of the JPS scheduled for March 2018. Here is the list of winners and their research topics.

Theoretical Particle Physics:

Tepei Kitahara (karlsruhe institute of technology)

“Improvements of theoretical prediction to the $\Delta S=1$ Kaon decay and effects from supersymmetric models”

Toshifumi Noumi (Graduate School of Science, Kobe University)

“Studies of the effects of a heavy scalar field to the inflation based on effective field theory”

Masazumi Honda (Weizmann Institute of Science)

“Borel Summability in Supersymmetric Field Theories”

Experimental Particle Physics:

Daisuke Kaneko (Kavli IPMU, UTIAS, the University of Tokyo)

“The final result of $\mu^+ \rightarrow e^+ \gamma$ search with the MEG experiment”

Sohtaro Kanda (RIKEN Nishina Center for Accelerator-Based Science)

“Direct Measurement of Muonium Ground State Hyperfine Splitting with High-intensity Pulsed Muon Beam”

Shigeki Hirose (University of Freiburg)

“Measurement of the Branching Fraction and Polarization of the τ Lepton in the Decay $\bar{B} \rightarrow D^* \tau^- \bar{\nu}_\tau$ at the Belle Experiment”

Theoretical Nuclear Physics:

Yusuke Tanimura (Department of Physics, Tohoku University)

“Description of spontaneous fission processes by time-dependent mean field theory with stochastic incorporation of initial fluctuations”

Naofumi Tsunoda (Center for Nuclear Study, The University of Tokyo)

“Multi-shell effective interactions based on realistic nuclear forces and application to neutron-rich nuclei”

Hajime Togashi (RIKEN Nishina Center)

“Nuclear equation of state for core-collapse supernova simulations with realistic nuclear forces”

Experimental Nuclear Physics:

Toshiyuki Gogami (Department of Physics, Tohoku University)

“Spectroscopy of neutron-rich hypernuclei from electron scattering”

Cosmic Ray and Astrophysics:

Yudai Suwa (Yukawa Institute for Theoretical Physics, Kyoto University)

“Theoretical studies on core-collapse supernovae and gamma-ray bursts from massive stars”

Toshihiro Fujii (ICRR, University of Tokyo)

“Study on the energy spectrum of ultrahigh-energy cosmic rays with the fluorescence detectors”

Gaku Mitsuka (RIKEN BNL Research Center)

“Study of very forward neutral pion production in high-energy hadron collisions”

Beam Physics:

Kei Fukushima (Michigan State University)

“Multiparticle simulation study of collective beam resonances in periodic strong-focusing lattices”

Division 1 (Atomic and Molecular physics, Quantum Electronics, Radiation):

Shun Uchino (RIKEN)

“Nonequilibrium dynamics of cold atom gases with internal degrees of freedom”

Yujiro Eto (National Institute of Advanced Industrial Science and Technology (AIST))

“Quantum properties of cold atoms with controlled spins and their application to quantum sensing”

Yuji Nakano (Rikkyo University)

“Quantum state control and fine spectroscopy of atoms using crystal fields”

Division 2 (Plasma):

Chanho Moon (Max-Planck Institute of Plasma Physics)

“Experimental Studies on Electron Temperature Gradient Instability in Magnetized Plasmas”

Shinya Maeyama (Graduate School of Science, Nagoya University)

“Study on multi-scale interactions between electron and ion scale turbulence”

Division 3 (Magnetism):

Kouta Kondou (RIKEN Center for Emergent Matter Science (CEMS))

“Observation and quantitative evaluation of spin to charge current conversion at bulk and interfaces”

Tokuro Shimokawa (Okinawa Institute of Science and Technology Graduate University)

“Theoretical and numerical studies of the quantum spin liquid and ferrimagnetism in frustrated magnets”

Masakazu Matsubara (Department of Physics, Tohoku University)

“Observation and optical tuning of functional domains in magnetic oxides”

Division 4 (Semiconductors, Mesoscopic Systems and Quantum Transport):

Ken Shiozaki (Condensed Matter Theory Laboratory, Riken)

“Classification of topological insulators and superconductors, and discovery of new topological phases”

Shingo Yonezawa (Department of Physics, Graduate School of Science, Kyoto University)

“Discovery of nematic superconductivity via thermodynamic measurements”

Division 5 (Optical Properties of Condensed Matter):

Takashi Arikawa (Division of Physics and Astronomy, Graduate School of Science, Kyoto University)

“Electron-state control in solids using coherent terahertz pulses”

Masaki Kobayashi (Center for Spintronics Research Network, Graduate School of Engineering, The University of Tokyo)

“Electronic structure analysis using synchrotron radiation for elucidation of mechanisms of ferromagnetism in magnetic semiconductors”

Division 6 (Metal Physics (Liquid Metals, Quasicrystals), Low Temperature Physics (Ultralow Temperatures, Superconductivity, Density Waves)):

Yusuke Nago (Department of Physics, Faculty of Science and Technology, Keio University)

“Experimental elucidations on generation mechanism of vortex and quantum turbulence in superfluid He”

Kazue Nishimoto (Institute of Multidisciplinary Research for Advanced Materials, Tohoku University)

“Studies on structural phase transitions in approximants of quasicrystals”

Division 7 (Molecular Solids):

Takayuki Isono (RIKEN)

“Systematic study of the magnetic properties of organic triangular-lattice spin-liquid materials”

Yuichi Kasahara (Department of Physics, Kyoto University)

“Superconducting states near superconductor-to-insulator transition in fullerides and layered nitrides”

Division 8 (Strongly Correlated Electron Systems):

Michito Suzuki (Center for Emergent Matter Science, RIKEN)

“First-principles calculation study for multipole degrees of freedom in solids”

Taro Nakajima (Center for Emergent Matter Science, RIKEN)

“Uniaxial stress control of electronic phases”

Division 9 (Surfaces & Interfaces, Crystal Growth):

Kenta Kuroda (Laser and Synchrotron Research Center, The Institute for Solid State Physics, The University of Tokyo)

“Spin-polarized surface states in topological insulators and their optical control studied by photoemission techniques”

Chun-Liang Lin (Department of Advanced Materials Science, Graduate School of Frontier Sciences, The University of Tokyo)

“Studies on structures and electronic states of silicene grown on Ag(111) surfaces”

Division 10 (Dielectrics, Ferroelectricity, Lattice Defects and Nanostructures, Phononic Properties, and X-ray and Particle Beams):

Yasuhiro Fujii (Department of Physical Sciences, Ritsumeikan University)

“Angle Resolved Light Scattering Spectroscopy”

Division 11 (Fundamental Theory of Condensed Matter Physics, Statistical Mechanics, Fluid Dynamics, Applied Mathematics, Socio- and Econophysics):

Masayuki Ochi (Department of Physics, Osaka University)

“Development of first-principles wave function theory for solid-state electronic structures”

Naoto Shiraishi (Faculty of Science and Technology, Keio University)

“Non-equilibrium thermodynamics, especially the trade-off relation between power and efficiency of heat engines”

Ken H. Nagai (School of Materials Science, Japan Advanced Institute of Science and Technology)

“Mathematical modeling of collective motion of self-propelled particles and its experimental verification”

Division 12 (Soft Matter Physics • Chemical Physics • Biophysics):

Hayato Shiba (Institute for Materials Research, Tohoku University)

“Development of Universal Fluctuations in Molecular Aggregates by Large-Scale Simulation”

Mafumi Hishida (Division of Chemistry, Faculty of Pure and Applied Science, University of Tsukuba)

“Studies on the Correlation between Hydration State and Self-Assembled Structure of Soft Matter by Terahertz Spectroscopy”

Kenji Mochizuki (Department of Chemistry, University of Utah)

“Studies on the Phase Transition of Water”

Division 13 (Physics Education, History of Physics, Environmental Physics):