

Physical Society of Japan

Every year the Physical Society of Japan presents the Award for the Encouragement of Young Physicists for young researchers who have made outstanding achievements in their early research careers. The winners of this year were recently decided by the board meeting of JPS based on the selection of committees established in 19 divisions of the Society. The maximum number of the winners from each division has been determined based on the number of talks at the annual assemblies in the past three years. All the winners are to give an award lecture at the next general assembly of the Society scheduled in March 2013. Here is the list of the winners and their research topics based on the divisions from which they have been nominated.

Theoretical Particle Physics:

Minoru Nagai (University of Tokyo)
 “On electric dipole moment in supersymmetric models”
 Kazuya Yonekura (Institute for Advanced Study)
 “On anomaly puzzle in supersymmetric gauge theory”

Experimental Particle Physics:

Yasuyuki Okumura (Nagoya University)
 “The top-quark pair-production cross-section measurement in the dilepton final states at proton-proton collisions with $\sqrt{s}=7$ TeV ”
 Kodai Matsuoka (Kyoto University)
 “Measurement of the Neutrino Beam with the Muon Monitor and the First Result of the T2K Long-Baseline Neutrino Oscillation Experiment”
 Takayuki Yamazaki (University of Tokyo)

“Direct Measurement of the Hyperfine Transition of Positronium using High Power Sub-THz Radiation”

Theoretical Nuclear Physics:
 Takayasu Sekihara (Institute of Particle and Nuclear Studies, High Energy Accelerator Research Organization (KEK))

“Study of the structure of Λ (1405) resonance from the electromagnetic form factors in chiral dynamics”

Wataru Horiuchi (Department of Physics, Faculty of Science, Hokkaido University)

“*Ab initio* study of the photoabsorption of ^4He ”

Shinsuke Yoshida (Division of Physics, Faculty of Pure and Applied Sciences, University of Tsukuba)

“Study of three-gluon correlation functions in single spin asymmetries”

Experimental Nuclear Physics:

Masaki Sasano (RIKEN Nishina Center for Accelerator-Based Science)

“Gamow-Teller Transition Strengths from ^{56}Ni ”

Megumi Niikura (Department of Physics, School of Science, The University of Tokyo)

“First direct lifetime measurement of the 2^+_1 state in $^{72,74}\text{Zn}$ ”

Cosmic Ray and Astrophysics:

Satoru Katsuda (RIKEN)

“Research of X-Ray measured dynamics of young Supernova Remnant”

Takayuki Saito (Max-Planck-Institut für Physik)

“Study of the high energy gamma-ray emission from the Crab pulsar”

Yuichiro Sekiguchi (Yukawa Institute for Theoretical Physics, Kyoto University)

“General relativistic simulation with realistic microphysics”

Beam Physics:

Yoshitaka Taira (National Institute of Advanced Industrial Science and Technology (AIST))

“Feasibility study of ultra-short gamma ray pulse generation by laser Compton scattering and its application”

Shigeki Tokita (Institute for Chemical Research, Kyoto University)

“Study of ultrafast electron diffraction method and laser-plasma interaction”

Division 1 (Atoms, molecules etc.):

Takeshi Fukuhara (Max-Planck-Institut für Quantenoptik)

“Production of Quantum Degenerate Gases”

Masakazu Yamazaki (Institute of Multidisciplinary Research for Advanced Materials, Tohoku University)

“Study on Molecular Orbitals by Multidimensional Electron Spectroscopy”

Yu Watanabe (Yukawa Institute for Theoretical Physics, Kyoto University)

“Formulation of Uncertainty Relations by Using Quantum Estimation Theory”

Division 2 (Plasma):

Hiroe Igami (National Institute for Fusion Science,)

“Optimization of electromagnetic wave launching and plasma conditions for electron Bernstein wave heating”

Mitsuru Honda (Japan Atomic Energy Agency)

“Neoclassical response of a torque and a radial electric field due to a non-ambipolar radial current in tokamak plasmas”

Division 3 (Magnetism):

Shigeki Onoda (Condensed Matter Theory Laboratory, RIKEN)

“Studies on anomalous Hall effects from ferromagnets to chiral spin liquids”

Makoto Yoshida (Institute for Solid State Physics, University of Tokyo)
“NMR study of spin structure and unusual spin fluctuation in the frustrated antiferromagnets”

Division 4 (Semiconductors and mesoscopic systems):

Hideaki Obuse (Karlsruhe Institute of Technology, Institute of Nanotechnology)

“Pioneering work of topological insulator and Anderson transitions”

Michihisa Yamamoto (Graduate School of Engineering, the University of Tokyo)

“Pioneering work for quantum information sciences based on “flying qubit””

Division 5 (Optical properties of condensed matter):

Takashi Oka (Dept. of Applied Physics, The University of Tokyo)

“Theoretical study on the photoinduced cooperative responses of electronic systems under nonequilibrium condition”

Takuya Satoh (Institute of Industrial Science, The University of Tokyo)

“Ultrafast Coherent Control of Magnetic Materials Utilizing Ultrashort Light Pulses”

Hideki Hirori (Institute for Integrated Cell-Material Sciences, Kyoto University)

“Development of a New THz Light Source with Ultra High Intensity and Its Application for Nonlinear optical effects”

Division 6 (Metals, ultra-low temperatures, superconductivity):

OHMURA Satoshi (Department of Physics, Kyoto University)

“Ab initio molecular dynamics studies on covalent liquids at high tempera-

tures and high pressures”

MIZUSHIMA Takeshi (Graduate School of Natural Science and Technology, Okayama University)

“Theory for Majonara state of superfluid ^3He and cold atomic gases”

Division 7 (Molecular solids and organic conductors):

Satoru Konabe (Graduate School of Pure and Applied Sciences, University of Tsukuba)

“Theory of exciton many-body effects in carbon nanotubes”

Yuhei Miyauchi (Institute of Advanced Energy, Kyoto University / Japan Science and Technology Agency)

“Studies on the electronic structures and optical properties of single-walled carbon nanotubes.”

Takashi Yamamoto (Department of Chemistry, Graduate School of Science, Osaka University)

“Charge ordering and charge fluctuation in molecular conductors”

Division 8 (Strongly correlated electron systems):

OHGUSGI, Kenya (Institute for Solid State Physics, University of Tokyo)

“Study of strong electron correlation in 5d electron systems”

KIDA, Noriaki (Department of Advanced Materials Science, School of Frontier Sciences, University of Tokyo)

“Analysis and control of electromagnons by terahertz spectroscopy in oxide magnets”

KOTEGAWA, Hisashi (Department of Physics, Graduate School of Science, Kobe University)

“Study for the novel quantum phases of strongly correlated electron systems controlled by pressure”

TOKUNAGA, Yusuke (RIKEN Advanced Science Institute)

“Study of cross-correlated phenomena in strongly correlated electron systems”

Division 9 (Surfaces, interfaces, and

crystal growth):

Koichiro Yaji (Institute of Solid State Physics, University of Tokyo)

“Discovery of spin-split metallic surface states on a semiconductor”

Yasuo Yoshida (Institute of Solid State Physics, University of Tokyo)

“Direct observation and manipulation of single-atom spin and magnetic interaction by spin-polarized scanning tunneling microscopy”

Division 10 (Dielectrics, lattice defects etc.):

No one qualified.

Division 11 (Statistical physics, fluid and mechanics, applied mathematics):
Otsuki, Michio (Department of Physics and Mathematics, Aoyama Gakuin University)

“Jamming transition for sheared granular materials”

Furukawa, Shunsuke (Department of Physics, The University of Tokyo)

“Entanglement entropy in quantum many-body systems”

Miyazaki, Jun

(Advanced Ultrafast Laser Research Center, University of Electro-Communications)

“Experimental and theoretical studies on nonlinear and nonequilibrium systems”

Division 12 (Soft matter, chemical and bio physics):

Ikeda Atsushi (Laboratoire Charles Coulomb, Université Montpellier II)

“Study of glass and jamming transition based on a mean-field description”

Mitsutake Ayori (Department of Physics, Keio University)

“Development of generalized-ensemble algorithms and structural analysis for biomolecular systems”

Division 13 (Physics education, history, environmental physics):

No one qualified.