

### 4.3. Research Assistants (RA) and Young Scientist Initiative A

The GCOE adopted 76 Research Assistants (RA) from among doctoral course students in the department of Physics, Astronomy, Mathematics and Philosophy in 2011. And also GCOE supported the encouragement research expenses as "Young Scientist Initiative A" for 53 students. The number of students who were adopted both RA and Initiative A is 38.

Their names and research titles are as listed below. Then, their research reports are the following. There were 57 publications, 291 presentations, and 1 awards by the 90 students of 91 Research Assistants and /or Young-Scientist-Initiative-A students.

No.	Name
	RA/Initiative A: Research-Title
1	<b>Aunuddin Syabba Vioktalamo</b> (Physics, D2) RA: "Investigation of stratified metal-dielectric metamaterial in optical regime"
2	<b>Kenta Abe</b> (Physics, D3) RA: "Study of the vibrational state of excited state involved in the primary process of photosynthesis by wavelength tunable ultrashort excitation pulse"
3	<b>Hiroki Iida</b> (Physics, D1) RA: "Systematic Study of Noncentrosymmetric Heavy-Fermion Ce-113 Superconductors" Initiative A: "Systematic Study of Noncentrosymmetric BaNiSn <sub>3</sub> Type Crystal-Structure Heavy-Fermion Superconductors"
4	<b>Yoshihisa Ishikawa</b> (Physics, D3) RA: "X-ray Multipole Refinement of BaTiO <sub>3</sub> by photo induced UV-irradiation"
5	<b>Keisuke Ito</b> (Physics, D1) RA: "Terahertz time-domain spectroscopy of large correlated triangular lattice systems"
6	<b>Toru Ito</b> (Physics, D1) RA/Initiative A: "Investigation of the topological order in the fractional quantum Hall effect"
7	<b>Yasuko Urata</b> (Physics, D1) RA: "A halo structure of <sup>31</sup> Ne by particle-rotor model" Initiative A: "A structure of neutron-rich nucleus by particle-rotor model"
8	<b>Daiki Endo</b> (Physics, D3) RA: "Crack Patterns in Largely Deformed Material"
9	<b>Tomohiro Oishi</b> (Physics, D2) RA/Initiative A: "Structure of proton-rich unstable nuclei"

10	<b>Yutaka Oya</b> (Physics, D2) RA: "Deformation of Amphiphilic Membrane Containing Polymers"
11	<b>Yuma Okazaki</b> (Physics, D3) RA: "Electron correlations in semiconductor mesoscopic structures" ..
12	<b>Daisuke Kawama</b> (Physics, D3) RA: "The analysis of Lambda hypernuclear spectroscopic experiment via $(e,e'K^+)$ reaction at JLab Hall-C"
13	<b>Chigusa Kimura</b> (Physics, D2) RA: "The double pion photoproduction on the deuteron"
14	<b>Toshiyuki Gogami</b> (Physics, D2) RA /Initiative A: "Medium heavy $\Lambda$ hypernuclear spectroscopic experiment by the $(e,e'K^+)$ reaction"
15	<b>Shogo Koshiya</b> (Physics, D3) RA/Initiative A: "EELS and SXES studies of electronic structures of quasicrystals and related alloys"
16	<b>Shuhei Sasa</b> (Physics, D1) RA/Initiative A: "New geometric interpretation of D-brane and DBI action"
17	<b>Zenmei Suzuki</b> (Physics, D2) RA: "Measurement of CP -violating angle $\varphi_3$ at Belle experiment"
18	<b>Yusuke Tanimura</b> (Physics, D1) RA/Initiative A: "Approach by variational principle for a relativistic point coupling model"
19	<b>Yoshiro Teshima</b> (Physics, D2) RA: "Boundary state analysis on the equivalence of T-duality and Nahm transformation in superstring theory"
20	<b>Masatoshi Toda</b> (Physics, D3) RA: "Rheological Study of Wormlike Micellar Systems Based on Particle-Field Hybrid Approach"
21	<b>Yoji Nakagawa</b> (Physics, D3) RA: "Study of light hypernuclei with the Stochastic Variational Method"
22	<b>Kentaro Negishi</b> (Physics, D1) RA/Initiative A: "Study of $B^0 \rightarrow DK^{*0}$ for $\phi$ measurement"
23	<b>Tatsuya Higashi</b> (Physics, D3) RA: "Numerical studies of quantum Hall systems"
24	<b>Hiraku Fukushima</b> (Physics, D1 ) RA/Initiative A: "On the Supersymmetry breaking and the early Universe"

25	<b>Takao Fujii</b> (Physics, D2) RA: "Research of Kaon photoproduction process in the threshold region"
26	<b>Sho Furuhashi</b> (Physics, D3) RA: "Analysis of human behavior by complex network approaches"
27	<b>Kenji Hosomi</b> (Physics, D3) RA: "Development of a new Ge detector array Hyperball-J for hypernuclear gamma-ray spectroscopy experiments"
28	<b>Daisuke Morikawa</b> (Physics, D3) RA/Initiative A: "The electrostatic potential and crystal structure analysis of the strongly correlated materials using convergent-beam electron diffraction"
29	<b>Yuki Yamaki</b> (Physics, D2) RA: "Impurity effect on charge/orbital/spin order in a layered manganite $\text{La}_{0.5}\text{Sr}_{1.5}\text{MnO}_4$ "
30	<b>Satoshi Yamazaki</b> (Physics, D1) RA: "Study of Superconductivity and Magnetism in Fullerenes" Initiative A: "Superconductivity Mechanism in Organic compounds"
31	<b>Fumiya Yamamoto</b> (Physics, D1) RA: "Improvement of the detector systems for Neutral Kaon Spectrometer 2"
32	<b>Shusaku Yusa</b> (Physics, D2) RA/Initiative A: "Role of non-collective excitations in heavy-ion reaction around the Coulomb barrier"
33	Takayuki Watanabe (Physics, D2) RA: "Study about optical response of GaAs micromechanical cantilever"
34	<b>Masanori Watahiki</b> (Physics, D2) RA/Initiative A: "Coupled spin and orbital degrees of freedom in geometrical frustration compounds investigated by neutron scattering and radiation beam"
35	<b>Masahiro Yoshida</b> (Physics, D3) Initiative A: "Study of the charge structures in two-leg ladder cuprate using resonant inelastic x-ray scattering"
36	<b>Kouji Uematsu</b> (Physics, D2) Initiative A: "Terahertz beam control via laser induced gas plasma"
37	<b>Mitsutoshi Nakamura</b> (Physics, D2) Initiative A: "Theoretical consideration and phenomenological theory in Supersymmetry Breaking Models"
38	<b>Nobuhiko Mitoma</b> (Physics, D2) Initiative A: "Electronic state tuning of graphene using metallic particles"

39	<b>Ahmad Ridwan Tresna Nugraha</b> (Physics, D1) Initiative A: "Coherent phonons in carbon nanotubes"
40	<b>Md. Mahbubul Haque</b> (Physics, D1) Initiative A: "TEM/EELS study of polyyenes inside single wall carbon nanotube"
41	<b>Thiago Junqueira De Castro Bezerra</b> (Physics, D1) Initiative A: "Double Chooz: A Search for the Neutrino Mixing Angle $\theta_{13}$ "
42	<b>Huynh Kim Khuong</b> (Physics, D1) Initiative A: "Investigation of the impurity effects on the Dirac cone states of (122) materials, $AE(Fe_{1-x}M_xAs)_2$ (AE = Ba, Sr, Ca; M = Co, Ni, Cu) "
43	<b>Kenta Takahashi</b> (Physics, D1) Initiative A: "Research of Transmission-line STJ Detector for Terahertz Band"
44	<b>Brian O'neil Beckford</b> (Physics, D3) RA: "Study of the strangeness photoproduction process in the threshold energy region"
45	<b>Shinobu Sekine</b> (Physics, D1) Initiative A: "Theoretical research for the property change in the propagation of crack tip in polymer material"
46	<b>Kenji Tsutsumi</b> (Physics, D1) RA/Initiative A: "Research of magnetic excitation for high- $T_c$ cuprates of widely electron doped system"
47	<b>Shinsuke Fukaya</b> (Physics, D1) RA: "Creation of a spontaneous movement vesicle and elucidation of structural change dynamics in the vesicle"
48	<b>He Qinghua</b> (Physics, D1) RA: "A Test for Uniformity of BGO Crystals to be Used For an EM Calorimeter"
49	<b>Phan Thi Nhu Quynh</b> (Physics, D1) Initiative A: "Electronic state of potassium doped polyacene"
50	<b>Xu Benda</b> (Physics, D1) Initiative A: "Observation of $^7\text{Be}$ Solar Neutrinos with KamLAND"
51	<b>Amin Vakhshouri</b> (Physics, D1) Initiative A: "Real-Space Observation of Electronic Structure of Low-Dimensional Systems in High Magnetic Field"
52	<b>Rihei Endo</b> (Physics, D3) RA/Initiative A: "Optical response of photonic crystal with self-similar structure"
53	<b>Nami Uchikata</b> (Astronomy, D2) RA: "Quasinormal modes of AdS black holes" Initiative A: "Stability of AdS black holes"

54	<b>Mariko Kubo</b> (Astronomy, D1) RA/Initiative A: "The galaxy formation in the high density region of the galaxies at redshift 3.1"
55	<b>Naonori Sugiyama</b> (Astronomy, D2) RA/Initiative A: "Theoretical Test of Inflation Scenario"
56	<b>Kazuya Fujio</b> (Astronomy, D2) RA: "Path Integral Analysis of Bianchi type I spacetime in Loop Quantum Cosmology"
57	<b>Takayuki Maebayashi</b> (Astronomy, D1) RA/Initiative A: "The origin of low-luminosity AGN/AGN-like activity in massive early-type galaxies"
58	<b>Satoshi Ueki</b> (Mathematics, D1) RA/Initiative A: "Lagrangian intersections and leaf-wise intersections"
59	<b>Kouta Uriya</b> (Mathematics, D1) RA/Initiative A: "Asymptotic behavior of a solution to the nonlinear Schrödinger system"
60	<b>Emi Osuka</b> (Mathematics, D1) RA/Initiative A: "A stochastic analysis for G-Brownian motion and its application to nonlinear heat equations"
61	<b>Mariko Ohara</b> (Mathematics, D1) RA/Initiative A: "On elliptic surfaces related to Beilinson's Tate conjecture"
62	<b>Toru Kajigaya</b> (Mathematics, D1) RA/Initiative A: "Research of submanifolds in symplectic manifolds and contact manifolds"
63	<b>Kotaro Kawai</b> (Mathematics, D1) RA/Initiative A: "The study of calibrations and G-structures"
64	<b>Kouichi Kimura</b> (Mathematics, D1) RA: "Homogeneous Reinhardt domains of Stein in $\mathbb{C}^n$ "
65	<b>Rena Tateda</b> (Mathematics, D1) RA/Initiative A: "Problems concerning the number of integral points in the theory of heights"
66	<b>Tomonori Nakayama</b> (Mathematics, D1) RA: "On the formal group and the cohomology"
67	<b>Keisuke Yoshii</b> (Mathematics, D1) RA/Initiative A: "Determinacy of Games in Second Order Arithmetic"
68	<b>Masaki Wada</b> (Mathematics, D1) RA/Initiative A: "On some properties for jump processes of variable order"
69	<b>Hiroko Yamamoto</b> (Mathematics, D1) RA/Initiative A: "Point concentration phenomenon in a least-energy solution of Neumann problem for a semilinear elliptic equation with variable coefficients"

70	<b>Kazumasa Inaba</b> (Mathematics, D2) RA: "Topology of plane curve singularities and links"
71	<b>Kazuaki Tajima</b> (Mathematics, D3) RA: "On the pre homogenous vector spaces defined over local fields"
72	<b>Yasuhito Nishimori</b> (Mathematics, D3) RA/Initiative A: "Large deviations weighted by multiplicative functionals and its applications"
73	<b>Masakuni Matsuura</b> (Mathematics, D3) RA: "Some Aspects of Stochastic Analysis Beginning from Penalization Problems" Initiative A: "Asymptotic Behavior of Symmetric Markov Process"
74	<b>Ahmad Termimi Bin Ab Ghani</b> (Mathematics, D3) RA/Initiative A: "Determinacy and Optimal Strategies of Network Games"
75	<b>Madoka Nakayama</b> (Mathematics, D3) RA: "Stationary solutions of a head regeneration model of hydra and its stability"
76	<b>Takanao Negishi</b> (Mathematics, D3) RA: "Study of periodic functions of several complex variables"
77	<b>Tadahisa Nara</b> (Mathematics, D3) RA "On estimates of the canonical height on elliptic curves and their rational points"
78	<b>Ning-Ning Peng</b> (Mathematics, D1) Initiative A: "Study on Algorithmic Randomness and distributional complexity of Game trees"
79	<b>Nobuaki Naganuma</b> (Mathematics, D1) RA/Initiative A: "Smoothness of densities of generalized locally non-degenerate Wiener functionals"
80	<b>Abdullah Kizilay</b> (Mathematics, D1) Initiative A: "Viscosity solutions on a Riemannian manifold"
81	<b>Kensaku Kinjo</b> (Mathematics, D3) RA: "Hypergeometric series over complete local fields"
82	<b>Toshihiro Horihata</b> (Mathematics, D3) RA: "Complex analysis and number theory within weak second order arithmetic"
83	<b>Harunori Monobe</b> (Mathematics, D3) RA: "On the stability of a free boundary problem with the curvature"
84	<b>Hiroshi Yoshikawa</b> (Mathematics, D1) RA:

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	<b>Yasuhiko Fujio</b> (Philosophy, D3)
85	RA/Initiative A: 1. "Study of the Significance of the "Highest Good" in Kant's Practical Philosophy" 2. "Philosophical or ethical research of implications of the introduction of science-technology into the society"
86	<b>Hiromichi Sugawara</b> (Philosophy, D3) RA/Initiative A: "Hume on Imagination in his Theory of Causation"
87	<b>Yuusuke Minegishi</b> (Philosophy, D2) RA/Initiative A: "An inquiry about the 'one's own' in Hegel's logic and Religionphilosophy"
88	<b>Masatoshi Echigo</b> (Philosophy, D1) RA/Initiative A: "On the theory of science in Husserl's phenomenology"
89	<b>Koki Tamura</b> (Philosophy, D1 ) RA: "Scientific Knowledge in Bergson's Philosophy"
90	<b>Marika HIRAMA</b> (Philosophy, D1 ) RA: "The formation of Heidegger's ontology: Life and speech in early Heidegger"
91	<b>Hiroyuki Akatuka</b> (Philosophy, D3) RA/Initiative A: "The problem of history in Heidegger's latter philosophy and the application to practical world"

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