

3.3. GCOE Sponsoring Events

The GCOE has sponsored /co-sponsored the 127 events which are including conferences, seminars, and lectures for young scientists (students) and/or civilian in 2008-2012 fiscal year. (See the table in section 3.1) The events in 2012 fiscal year are listed below

No.	Date(s)	Event: Title Speaker(s)
1.	April 02, 2012	Seminar: "Search for nuclear phase diagram by high energy heavy ion reaction" Takao Sakaguchi (Dr./ Brookhaven National Laboratory, USA)
2.	April 19, 2012	Lecture in "Interdisciplinary Science beyond Particle-Matter Hierarchy" series: "Modern Particle Detectors" Patrick Achenbach (Dr. PD/ Institute of Nuclear Physic, University of Mainz, Germany)
3.	April 23, 2012	Seminar: "Extreme Phenomena in the Universe Explored by Highest Energy Cosmic Rays" Hiroyuki Sagawa (Associate Prof. / ICRR, University of Tokyo, Japan)
4.	April 27, 2012	Seminar: "An Equation of state for dark matter" Christian Fronsdal (Professor /Physics Dept., UCLA, USA)
5.	May 01, 2012	Seminar: "S-tau Atom collision and Big Bang Nucleosynthesis" Yasushi Kino (Associate Prof./ Dept. of Chemistry, Tohoku University, Japan)
6.	July 18, 2012	Seminar: "Interplay of relativity and three-nucleon force effects in nucleon-deuteron elastic scattering and breakup" Henryk Witala (Professor/ Jagellonian University, Poland)
7.	July 26, 2012	Seminar: "Carrier dope and superconductivity in early-element materials" Susumu Saito (Professor/ Dept. of Physics, Tokyo Institute of Technology, Japan)
8.	Aug. 24, 2012	Symposium on Reflection of Fukushima nuclear power plant disaster and the form of "science and society" 1. "Science technology and etic after 3.11" Keiichi Noe (Professor/ Tohoku University, Japan) 2. "Values of science in Japan after the disaster"

	Hiromi Yokoyama (Associate Prof./ University of Tokyo, Japan)
	3. "Ethical Problems in Nuclear Accident"
	Kiyotaka Naoe (Associate Prof./ Tohoku University, Japan)
9. Aug. 28, 2012	Seminar: "Risk Analysis" 1. "How are we going to face indefiniteness of science?" Andrew Stirling (Professor/ SPRU, University of Sussex, England) 2. "Indefiniteness of science and the law" Peter McClellan (Justice/ Supreme Court of New South Wales, Australia)
10. Sep. 06, 2012	Seminar: "Searches for ultra-high energy cosmic neutrinos with the IceCube and ARA experiments" Aya Ishihara (Research fellowship for young Scientist, JSPS/ Chiba University, Japan)
11. Oct. 04, 2012	Seminar: "LHC Higgs Signatures from Extended Electroweak Gauge Symmetry" Tomohiro Abe (Dr./ Tsinghua University, Beijing, China)
12. Oct. 23, 2012	Seminar: "Condensed Matter Colloquium; Measurement of Hawking Radiation from a horizon" W. G. Unruh (Professor/ University of British Columbia, Canada)
13. Dec. 12-14, 2012	International Workshop on Partial Differential Equation: "Nonlinear Dispersive Equations and Fluid Mechanics -Well-posedness and Smoothing Effect-"
14. Dec. 18, 2012	Seminar: "Condensed Matter Colloquium; Interaction between nematic colloids and its structure formation" Yasuyuki Kimura (Professor/ Dept. of Physics, Kyushu University Japan)
15. Jan. 11, 2013	Seminar: "A non-specialist's role for the risk assessment of science technology – on the food safety in Japan after the world war II -" Takako Nakajima (Lecturer/ International Christian University)
16. Jan. 28, 2013	Seminar: "Recent topics and KEK Detector Technology Project" Junji Haba (Professor/ KEK, Japan)
17. Feb. 20, 2013	Seminar: "Double beta decays study with NEMO3 and SuperNEMO" Emmanuel Chauveau (Dr./Researcher/ Research Center for Neutrino Science -RCNS, Tohoku University, Japan)
18. Feb. 22, 2013	Seminar: "Kaon photoproduction on the nucleon and deuteron" Terry Mart (Prof./ Departemen Fisika, FMIPA, Universitas Indonesia)

Mar. 12, 2013	Lecture : “ To study as a director of Max-Plank Institute for Astrophysics” Eiichiro Komatsu (Professor/Director of the Department of Physical Cosmology, Max-Planck-Institut für Astrophysik, Germany)
20. Mar. 04-06, 2013	The 5th GCOE International Symposium on “Weaving Science Web beyond Particle-Matter Hierarchy”
21. Mar. 16-18, 2013	The 2nd Geometry Workshop: “Minimal submanifolds and mean curvature flow”-

Details of each event

(1) Seminar: "Search for nuclear phase diagram by high energy heavy ion reaction"

Date & Time: April 2 (Mon) 2012,

16:00-17:30

Place: Room 745, 7F "Sogoto" Bldg.,

Faculty of Science

Speaker: **Takao Sakaguchi** (Dr./ Brookhaven National Laboratory, USA)

Title: "Search for nuclear phase diagram by high energy heavy ion reaction"



Dr. Takao Sakaguchi

Inquiries: Hirokazu Tamura (Department of Physics)

(2) Seminar: "A spin-selective Kondo-insulator – The ferromagnetic state in the Kondo lattice model"

Date & Time : April 19 (Thu) 2012,

16:30-18:00

Place: Room 745, 7F "Sogoto" Bldg., Faculty of Science

Speaker : **Robert Peters** (Dr./ Kyoto University, Japan)

Title : "A spin-selective Kondo-insulator – The ferromagnetic state in the Kondo lattice model"



Dr. Robert Peters

Abstract : The Kondo lattice model has been intensively studied for the last thirty years as a fundamental model for heavy fermions, Kondo insulators, and transition metals, e.g. the manganites. Yet, the understanding is far from complete.

In this talk I will analyze in detail the ferromagnetic state in the Kondo lattice model. We found that even in the ferromagnetic state for low fillings, Kondo screening plays an essential role in stabilizing the ferromagnetic state at zero temperature leading to very interesting properties: while the majority-spin electrons are metallic, the minority-spin electrons form an insulating state. The gap in the spectral function can be traced back to the existence of a commensurate situation for the minority electrons, which is produced by a cooperation between the conduction electrons and the localized spins. I will examine the

properties of this ferromagnetic state in infinite dimensions using dynamical mean field theory as well as in one dimension using the density matrix renormalization group. Establishing the properties of this ferromagnetic state in infinite and one dimension, we can conclude that this intriguing state is ubiquitous for the antiferromagnetic coupled Kondo lattice model.

R Peters, N Kawakami, T Pruschke: Phys. Rev. Lett. 108, 086402 (2012)

Inquiries: Yoshio Kuramoto (Department of Physics)

(3) Seminar: "Extreme Phenomena in the Universe Explored by Highest Energy Cosmic Rays"

Date: April 23 (Mon) 2012, 16:00-17:30

Place: Meeting Room, 2F, Neutrino-Center,
Tohoku University

Speaker: **Hiroyuki Sagawa** (Associate Prof. /
ICRR, University of Tokyo, Japan)

Title: "Extreme Phenomena in the Universe
Explored by Highest Energy Cosmic Rays"



Associate Prof. Hiroyuki Sagawa

Inquiries: Fumihiko Suekane (RCNS – Neutrino Center)

(4) Seminar: "An Equation of state for dark matter"

Date & Time: April 27 (Fri) 2012,
10:30-11:30

Place: Kawai Hall

Speaker: **Christian Fronsdal** (Professor/
Physics Dept., UCLA, USA)

Title: "An Equation of state for dark matter"



Prof. Christian Fronsdal

Abstract: Dark matter, believed to be present in many galaxies, is interpreted as a hydrodynamical system in interaction with the gravitational field and with nothing else. The gravitational field of our Galaxy can be inferred from observation of orbital velocities of the visible stars, in a first approximation in which the field is taken to be due to the distribution of dark matter only. An equation of state is determined by the gravitational field via the equations of motion. To arrive at an estimate of the distribution of dark matter in our galaxy, and simultaneously learn something about the gravitational field in the inner regions, the

following strategy was adopted:

1. The observed rotation curves suggest an expression for the newtonian potential, valid in the outer region.
2. The assumption of a quasi stationary, spherically symmetric distribution of dark matter then leads to a unique equation of state.
3. This equation of state is assumed to be valid all the way to the center (though of course the newtonian approximation is not).
4. Using this equation of state, together with Einstein's equations and the relativistic hydrostatic condition, we calculate the metric and the matter density throughout the galaxy. The solutions are regular all the way to the center; there is no indication of a structure of the type of a Black Hole.

The equation of state that is thus determined experimentally is of the type used by Chandrasekhar and others for the degenerate Fermi gas. In the approximation of weak fields the associated "sinh-Emden" equation, $\Delta\mu = a \sinh^4 \mu$ has a global, nonsingular solution.

Inquiries: Motoko Kotani (Mathematical Institute)

(5) Seminar: "S-tau Atom collision and Big Bang Nucleosynthesis"

Date & Time: May 1 (Tue) 2012,
16:00-17:30

Place: Meeting Room 2F Neutrino Center
(RCNS), Tohoku University

Speaker: **Yasushi Kino** (Associate Prof./ Dept.
of Chemistry, Tohoku University, Japan)

Title: "S-tau Atom collision and Big Bang
Nucleosynthesis"



Associate Prof. Yasushi Kino

Inquiries: Kunio Inoue (RCNS – Neutrino Center)

(6) Seminar: “Interplay of relativity and three-nucleon force effects in nucleon-deuteron elastic scattering and breakup”

Date & Time: July 18 (Wed) 2012, 17:00~18:30

Place: Room 745, 7F Sogoto, Faculty of Science

Speaker: **Henryk Witala** (Prof./ Jagellonian University, Poland)

Title: Interplay of relativity and three-nucleon force effects in nucleon-deuteron elastic scattering and breakup

Abstract: The relativistic formulation of the 3N scattering within Faddeev framework will be presented. It includes such relativistic features as proper relativistic energy-momentum relation, effects of boosting the NN potential and Wigner spin rotations when two-nucleon subsystem is boosted from 2N- to 3N-c.m. system. Effects caused by relativity on the Nd elastic scattering observables will be presented, particularly effects caused by relativity through the Wigner spin rotations on low energy A_y . A characteristic pattern according to which relativity reveals itself in breakup reaction will be discussed and comparison to some existing data shown. Interplay of relativity and three-nucleon force effects at higher energies and its implications will be discussed.

Inquiries: Kimiko Sekiguchi (Department of Physics)

(7) Seminar: “Condensed Matter Colloquium; Carrier dope and superconductivity in early-element materials”

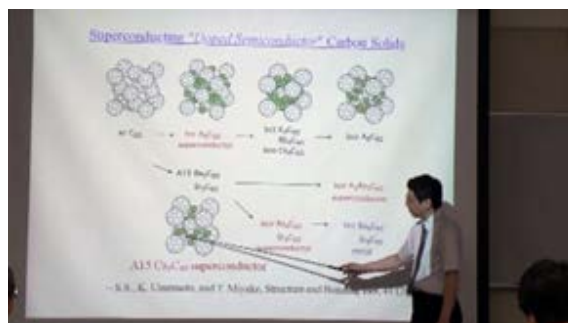
Date & Time: July 26 (Thu) 2012,

16:30-18:00

Place: Room 745, 7F “Sogoto” Bldg., Faculty of Science

Speaker: **Susumu Saito** (Professor/ Dept. of Physics, Tokyo Institute of Technology, Japan)

Title: “Carrier dope and superconductivity in early-element materials”



Prof. Susumu Saito

Inquiries: Yoshio Kuramoto (Department of Physics)

(8) Symposium on Reflection of Fukushima nuclear power plant disaster and the form of “science and society”

Date & Time: Aug. 24 (Fri) 2012, 13:00-18:00

Place: Room 205, and Room 745 at “Sogoto” Bldg., Faculty of Science

Program:

1. Lectures

(1) “Science technology and etic after 3.11”

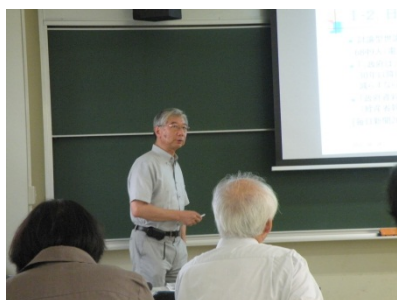
Keiichi Noe (Professor, Tohoku University, Japan)

(2) “Values of science in Japan after the disaster”

Hiromi Yokoyama (Associate Prof., University of Tokyo, Japan) :

(3) “Ethical Problems in Nuclear Accident”

Kiyotaka Naoe (Associate Prof., Tohoku University, Japan)



Prof. Keiichi Noe,



Associate prof. Hiromi Yokoyama,



Associate Prof. Kiyotaka Naoe

2. Discussion

Chairman: **Koji Nakai** (Chairman of ARS, Professor emeritus of KEK)

- About a statement of National diet of Japan, Fukusima Nuclera Accident Independent Investigation Commission (NAIIC)
- About a ARL proposal

Inquiries: Hirokazu Tamura (Department of Physics)

(9) Seminar: on "Risk Analysis"

Co-hosts : GCOE "Weaving Science beyond Particle-Matter Hierarchy" and Kiban-B of Grants-in-Aid for Science Research
"Historical thought and practical ethics"

Date & Time: Aug. 28 (Tue) 2012,
15:00-17:30

Place: Room 919, 9F, Faculty of Arts and Letters

Program: titles & speakers

1. "How are we going to face indefiniteness of science?"

Andrew Stirling (Professor/ SPRU, University of Sussex, England)

2. "Indefiniteness of science and the law"

Peter McClellan (Justice/ Supreme Court of New South Wales, Australia)



P. McClellan (Justice), A. Stirling (Professor)
(from left)

Inquiries: Kiyotaka Naoe (Philosophy/Ethics, Faculty of Arts and Letters)

(10) Seminar: "Searches for ultra-high energy cosmic neutrinos with the IceCube and ARA experiments"

Date & Time: Sept. 6 (Thu) 2012,
16:30-18:00

Place: Meeting room, 2F Neutrino Center (RCNS), Tohoku University

Speaker: **Aya Ishihara** (Research fellowship for young Scientist of JSPS, Chiba University, Japan)

Title: "Searches for ultra-high energy cosmic neutrinos with the IceCube and ARA experiments"



Dr. Aya Ishihara

Abstract: Cosmic neutrino is becoming a key probe for exploring the high energy universe. These neutrinos are expected to be produced by interactions of high energy hadronic (proton or nuclei) beams from cosmic accelerators with surrounding photons and/or matters. Because of its unique nature being undeflected in the galactic or extra-galactic magnetic fields and being transparent to the photon filled universe, cosmic neutrinos are expected to give direct information about the highest energy accelerators. IceCube is a cubic kilo-meter scale, deep-ice Cherenkov-light neutrino detector at the geographical South Pole. Detector

construction was completed by the end of 2010. In this talk I will present the first results from the fully completed IceCube detector on searches for ultra-high energy neutrinos above PeV energy region, followed by description of the new next generation neutrino detector, Askaryan Radio Array (ARA), being constructed at the same IceCube site at the South Pole. The ARA experiment measures cosmic neutrino flux in the highest energy region where the cosmogenic (GZK) neutrinos are expected. ARA detects the coherent Cherenkov radio pulses from the electromagnetic cascades induced in interactions of neutrinos with Antarctic ice with approximately 600 radio antennas at the depth of 150~200 m below the ice surface covering the surface area of 150 km².

Inquiries: Kunio Inoue (RCNS – Neutrino Center)

(11) Seminar: “LHC Higgs Signatures from Extended Electroweak Gauge Symmetry”

Date & Time: Oct. 04 (Thu) 2012,

15:30-16:30

Place: Room 1023, 10F “Sogoto” Bldg., Faculty of Science

Speaker: **Tomohiro Abe** (Dr., Tsinghua University, Beijing, China)

Title: “LHC Higgs Signatures from Extended Electroweak Gauge Symmetry”



Dr. Tomohiro Abe

Inquiries: Daisuke Nomura

(12) Seminar: “Condensed Matter Colloquium; Measurement of Hawking Radiation from a horizon”

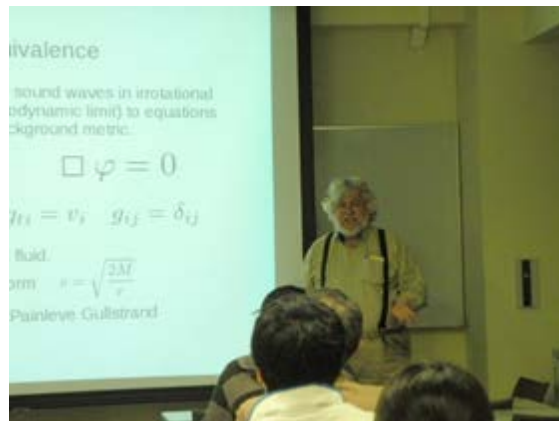
Date & Time: October 23 (Tue) 2012, 16:30-18:00

Place: Room 745, 7F “Sogoto” Bldg., Faculty of Science

Speakers: Speaker : **W. G. Unruh** (Professor/ University of British Columbia, Canada)

Title : “Measurement of Hawking Radiation from a horizon”

Abstract: In 1981 I argued that the physics of sonic horizons in a fluid flow were the same as that for fields around a black hole if the fluid flowed faster than sound at some surface. Such sonic horizons (dumb holes, from “deaf and dumb” meaning unable to speak) would be expected to emit quantum noise with a thermal spectrum by exactly the same arguments Hawking used to predict that black holes emit thermal radiation. Due to the dispersion relation of waves in fluids, one can perform the inverse experiment with “white hole” analogs, and because of the relation



Prof. W.G. Unruh

between stimulated and spontaneous radiation discovered by Einstein, relate the classical characteristics of the scattering of radiation from one of these time-reversed black hole, to the quantum noise. We have carried out such an experiment in which we measured the radiation from such a horizon to surface waves in a water flow and showed that the emission was thermal, as predicted by Hawking for black holes.

Inquire: Masahiro Hotta (Dept. of Physics)

(13) International Workshop on Partial Differential Equation:

Nonlinear Dispersive Equations and Fluid Mechanics - Well-posedness and Smoothing Effect -

Days: Wednesday, December 12 2012, to

Friday, December 14 2012

Place: Mathematical Hall (Kawai Hall),

Tohoku University

Organizing committee:

Takayoshi Ogawa (Tohoku University)

Jun-ichi Segata (Tohoku University)

Masaya Maeda (Tohoku University)



“Opening”, Prof. T. Ogawa

web :

<http://tams.math.tohoku.ac.jp/workshop/NDEFM2012.html>

International Conference

Nonlinear Dispersive Equations and Fluid Mechanics

---Well-posedness and Smoothing Effect---

In honor of Professor Gustavo Ponce's sixtieth birth year



December 12 (Wed.) - December 14 (Fri.) 2012

Place: Mathematical Hall (Kawai Hall)
Mathematical Institute
Tohoku University

Banquet: December 13, 2012

Organizing Committee

Masaya Maeda (Tohoku Univ.)
Takayoshi Ogawa (Tohoku Univ.)
Junichi Segata (Tohoku Univ.)

Scientific Committee

Tohru Ozawa (Waseda Univ.)
Yoshio Tsutsumi (Kyoto Univ.)

Invited Speakers

Gustavo Ponce (UC Santa Barbara)
Nakao Hayashi (Osaka Univ.)
Naoyasu Kita (Miyazaki Univ.)
Hideo Kozono (Waseda Univ.)
Satoshi Masaki (Hiroshima Univ.)
Hideo Takaoka (Hokkaido Univ.)
Yasusi Taniuchi (Shinshu Univ.)
Takeshi Wada (Kumamoto Univ.)

Short communications

Shingo Ito (Tokyo Univ. Science)
Tsukasa Iwabuchi (Chuo Univ.)
Kota Uriya (Tohoku Univ.)

This conference is supported by the following funds
Global COE Tohoku University
"Weaving Science Web beyond Particle-Matter Hierarchy"
JSPS Grant-in-aid for Scientific Research
Basic Research A (T.Ogawa) \#20244009

Information

Mathematical Institute, Tohoku University, Aoba, Sendai 980-8578, Japan
TEL : 022-795-6374 (T. Ogawa)
E-mail : ogawa@math.tohoku.ac.jp

Program:

Wednesday, 12 December 2012	
13:55–13:59	Opening: Takayoshi Ogawa (Tohoku University)
14:00–14:50	Naoyasu Kita (University of Miyazaki) Blowing-up solution to some nonlinear Schrödinger equation with complex coefficient
15:00–15:25	Shingo Ito (Tokyo University of Science) Estimates on modulation spaces for Schrödinger evolution operators with a potential
15:30–15:55	Tsukasa Iwabuchi (Chuo University) Ill-posedness for the Schrödinger equations with quadratic nonlinearity in one and two space dimensions
<i>Tea break</i>	
16:10 – 16:35	Kota Uriya (Tohoku University) Asymptotic behavior of solutions to a nonlinear Schrödinger system in two space dimensions
16:40 – 17:05	Noboru Chikami (Tohoku University) The local existence and blow-up criterion of the compressible Navier-Stokes-Yukawa system
17:20 – 18:10	Hideo Takaoka (Hokkaido University) Almost sure global well-posedness for the periodic derivative NLS equation
Thursday, 13 December 2012	
10:00–10:50	Nakao Hayashi (Osaka University) Modified scattering operator for the derivative nonlinear Schrödinger equation
11:00–11:50	Satoshi Masaki (Hiroshima University) On minimal nonscattering solution for focusing mass-subcritical NLS equation
<i>Lunch break</i>	
14:00–14:50	Makoto Nakamura (Tohoku University) Energy solutions for dissipative wave equations with weighted nonlinear terms
15:00–15:50	Hideo Kozono (Waseda University) Inhomogeneous boundary value problem of the stationary Navier-Stokes equations in multi-connected domains
16:00–16:50	Gustavo Ponce (University of California, Santa Barbara) Decay and uniqueness properties of solutions to dispersive equations
19:00–	<i>Banquet</i>

Friday, 14 December 2012	
10:10–11:00	Takeshi Wada (Kumamoto University) Smoothing effects for Schrödinger equations with electro-magnetic potentials and applications to the Maxwell-Schrödinger Equations
11:10–12:00	Yasushi Taniuchi (Shinshu University) Uniqueness of backward asymptotically almost periodic-in-time solutions to Navier-Stokes equations in unbounded domains

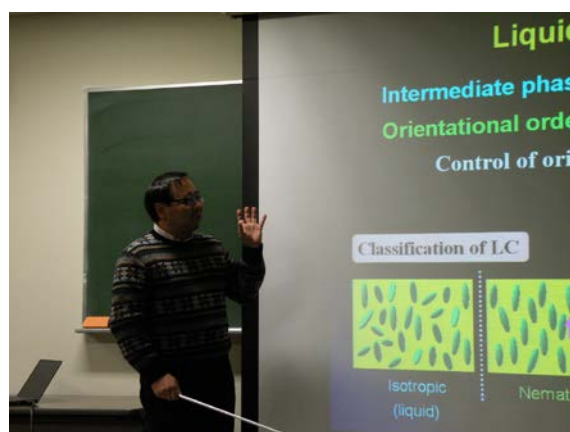
(14) Seminar: “Condensed Matter Colloquium; Interaction between nematic colloids and its structure formation”

Date: December 18 (Tue) 2012, 16:20-17:50

Place: Room 721, 7F “Sogoto” Bldg., Faculty of Science

Speaker: **Yasuyuki Kimura** (Professor, Dept. of Physics, Kyushu University Japan)

Title : “Interaction between nematic colloids and its structure formation”



Prof. Y. Kimura

Inquire: Toshihiro Kawakatsu (Dept. of Physics)

(15) Seminar: “A non-specialist's role for the risk assessment of science technology – on the food safety in Japan after the world war II”

Date & Time: Jan. 11, 2013 16:30-18:00

Place: Room 204, “Sogoto” Bldg, Faculty of Science

Speaker: **Takako Nakajima** (Lecturer./ International Christian University)

Title: “A non-specialist's role for the risk assessment of science technology – on the food safety in Japan after the world war II -”



Dr. T. Nakajima

Inquire: Tsuyoshi Hondou (Dept. of Physics)

(16) Seminar: “Recent topics and KEK Detector Technology Project”

Date: January 28 (Mon) 2013, 16:20-17:50

Place: Room 721, 7F “Sogoto” Bldg., Faculty of Science

Speaker: **Junji Haba** (Professor, KEK, Japan)

Title : “Recent topics and KEK Detector Technology Project”



Prof. J. Haba

Inquire: Hirokazu Tamura (Dept. of Physics)

(17) Seminar: "Double beta decays study with NEMO3 and SuperNEMO"

Date & Time: Feb.20 (Wed), 2013, 16:30-18:00

Place: Meeting room, 2F, Neutrino Center (RCNS)

Speaker: **Emmanuel Chauveau**

(Dr./Researcher , Research Center
for Neutrino Science -RCNS)

Title: "Double beta decays study with
NEMO3 and SuperNEMO"



Dr. E. Chauveau

Abstract: The recently completed NEMO3 experiment was devoted to search for neutrinoless double beta decay as well as to investigate two-neutrino double beta decay with seven different isotopes and using an unique technology of tracker + calorimeter. The design of its successor SuperNEMO has been finalised and the construction of the first module is taking place during this year. A summary of latest results with NEMO3 and the status of SuperNEMO will be presented.

Inquire: Fumihiko Suekane (Research Center for Neutrino Science)

(18) Seminar: "Kaon photoproduction on the nucleon and deuteron"

Date & Time: Feb 20 (Fri) 2013, 10:30-11:30

Place: Room 745, 7F "Sogoto" Bldg., Faculty of Science

Speaker: **Terry Mart** (Prof. / Departemen Fisika, FMIPA, Universitas Indonesia)

Title: "Kaon photoproduction on the nucleon
and deuteron"



Prof. T. Mart

Abstract: Recently, there has been a great interest in the electromagnetic production of kaon. There are several motivations behind this interest, two of them are the search for missing and narrow nucleon resonances. Missing resonances are the resonances which have been predicted by certain quark models but not yet identified by the Particle Data Group. Narrow resonance is the non-strange

partner of pentaquark that has been predicted by the soliton model. It was also reported that the production on neutrons can provide a strong support for these resonances. Thus, it is important to consider the production on the deuteron, especially the K^0 electroproduction for which the charge K^0 form factor can be explored. In this talk, I will review some achievements made in the kaon photoproduction (K^+ and K^0) on the nucleon and deuteron. A number of phenomenological aspects related to these productions, such as the narrow nucleon resonance and the K^0 charge form factor, will be also discussed

Inquire: Hiroki Kanda (Dept. of Physics)

(19) Lecture: "To study as a director of Max-Planck Institute for Astrophysics"

Date: March 12 (Mon) 2013, 15:00-16:00

Place: Seminar room, 8F Physics Bldg., Faculty of Science

Speaker: **Eiichi Komatsu** Professor/Director of the Department of Physical Cosmology,
Max-Planck-Institut für Astrophysik, Germany

Title : (Tentative) "Results from the Wilkinson Microwave Anisotropy Probe (WMAP) Observations"

Cohost: Graduate School of Science and GCOE "Weaving Science Web beyond Particle-Matter Hierarchy", Tohoku University.

Inquire:

(20) Symposium: The 5th GCOE International Symposium on "Weaving Science Web beyond Particle-Matter Hierarchy"

Date & Time: March 4 (Mon) - 6 (Wed) 2013

Place: Faculty of Science, Aobayama Campus of Tohoku University

Banquet: March 4 (Mon) 2013, 18:30-20:00

Number of participants: 156 (non-Japanese 21)

Outline: The aim of this Symposium is to explore new science frontiers through "Weaving Science Web beyond Particle-Matter hierarchy" among physics - astrophysics - mathematics - philosophy.

The 5th GCOE International Symposium Organizing Committee:

*(Chairman) Kunio Inoue, Program Leader

Organizing Committee (Extended steering committee of GCOE program):

- **Kunio Inoue** (Particle Physics, Tohoku Univ.)*
- **Toshifumi Futamase** (Astrophysics, Tohoku Univ.)
- **Ken-ichi Hikasa** (Particle Physics, Tohoku Univ.)

- **Yoshiro Hirayama** (Condensed Matter Physics, Tohoku Univ.)
- **Motoko Kotani** (Mathematics, Tohoku Univ.)
- **Yoshio Kuramoto** (Condensed Matter Physics, Tohoku Univ.)
- **Kiyotaka Naoe** (Philosophy, Tohoku Univ.)
- **Takayoshi Ogawa** (Mathematics, Tohoku Univ.)
- **Takashi Takahashi** (Condensed Matter Physics, Tohoku Univ.)
- **Hirokazu Tamura** (Nuclear Physics, Tohoku Univ.)
- **Masahiro Yamaguchi** (Particle Physics, Tohoku Univ.)

Local Committee:

- **Kunio Inoue** (Particle Physics, Tohoku Univ.)*
- **Tsuguhiko Asakawa** (Particle Physics, Tohoku Univ.)
- **Satoshi Heguri** (Condensed Matter Physics, Tohoku Univ.)
- **Takeshi Koike** (Nuclear Physics, Tohoku Univ.)
- **Shumpei Masuda** (Condensed Matter Physics, Tohoku Univ.)
- **Kazushige Nakagawa** (Mathematics, Tohoku Univ.)
- **Joji Nasu** (Condensed Matter Physics, Tohoku Univ.)
- **Mariko Nihei** (Philosophy, Tohoku Univ.)
- **Daisuke Nitta** (Astrophysics, Tohoku Univ.)
- **Daisuke Nomura** (Particle Physics, Tohoku Univ.)
- **Tosiaki Omori** (Mathematics, Tohoku Univ.)
- **Mikito Tanaka** (Astrophysics, Tohoku Univ.)
- **Yuken Miyasaka** (Mathematics, Tohoku Univ.)
- **Naoto Yokoi** (Particle Physics, Tohoku Univ.)

Invited Speakers:

Plenary session:

(Condensed Matter Physics)

Thomas Pruschke (Condensed Matter Physics / Prof. Dr. , Universität Göttingen, Germany)

“Coherence and Correlations – Electrons in Motion”

Hidefumi Hiura (Condensed Matter Physics / Dr., Chief Scientist, NEC Smart Energy Lab., Japan)

“Direct Formation of Graphene on Insulator by Liquid Phase Growth”

(Particle /Nuclear Physics)

Osamu Jinnouchi (Particle Physics / Associate Professor, Tokyo Institute of Technology, Japan)

“The discovery of the new particle at LHC and a recent news about its identity”

Hidekatsu Nemura (Nuclear Physics / Associate Prof., University of Tsukuba, Japan)

“Hyperonic potentials from lattice QCD and toward an application to few-body problems”

Makiko Nio (Particle Physics / Researcher, RIKEN Nishina Center, Japan)

“Tenth-order QED calculation of the lepton anomalous magnetic moments and precision determination of the fine-structure constant”

(Astrophysics)

Yasuyuki Tanaka (Astrophysics / Assistant Prof., Hiroshima University, Japan)

“Fermi-LAT results of extragalactic sky in MeV/GeV range ”

Toru Yamada (Astronomy / Professor, Tohoku University, Japan)

“Toward Observing Earliest Galaxy Formation”

(Mathematics)

Tohru Ozawa (Mathematics / Professor, Waseda University, Japan)

“Sharp Morawetz estimates”

Takashi Shioya (Mathematics / Professor, Tohoku University, Japan)

“Metric measure geometry of high-dimensional spaces”

(Philosophy)

Kunitake Ito (Philosophy / Professor, Kyoto University, Japan)

“From the particle-matter hierarchy to the anthropic fine tuning”

Parallel session:

(Condensed Matter Physics)

Satoshi Heguri (Condensed Matter Physics / Assistant Prof., Tohoku University, Japan)

“Magnetic Properties of aromatic hydrocarbon compounds”

Shintaro Hoshino (Condensed Matter Physics / JSPS postdoctoral fellow, Tohoku University, Japan)

“Itinerant-localized transition in heavy-electron systems”

Shumpei Masuda (Condensed Matter Physics / Assistant Prof., Tohoku University, Japan)

“Rapid control of Bose-Einstein Condensates with less disturbance”

Joji Nasu (Condensed Matter Physics, /Assistant Prof., Tohoku University, Japan)

“Orbital Dynamics coupled with Jahn-Teller phonons in Strongly Correlated Electron System”

Kohei Nishiyama (Condensed Matter Physics / PhD student, University of Hyogo, Japan)

“Pressure effect on insulating gap structure in intermediate valence compound SmB_6 ”

Anton Potočnik (Condensed Matter Physics / PhD student, University of Ljubljana, Slovenija)

“How unconventional are conventional fulleride superconductors?”

Tatsuro Yuge (Condensed Matter Physics / Researcher, Osaka University, Japan)

“Thermodynamic relation in nonequilibrium steady state”

Ruth Zadik (Condensed Matter Physics / PhD student, Durham University, England)

“Superconductivity in highly expanded A_3C_{60} : strongly correlated molecular systems”

Kaya Wei (Condensed Matter Physics / PhD student, University of South Florida ,USA)

“Thermoelectric Materials Research for Power Conversion and Refrigeration Applications”

(Particle /Nuclear Physics)

Hiroyuki Abe (Particle Physics / Associate Prof., Waseda University, Japan)

“Extra dimensions and a mass hierarchy of elementary particles”

Tsuguhiko Asakawa (Particle Physics / Assistant Prof., Tohoku University, Japan)

“D-branes in Generalized Geometry”

Hirokazu Kawamura (Nuclear Physics / Assistant Prof., CYRIC, Tohoku University, Japan)

“Search for electric dipole moment of the electron with laser-cooled radioactive atoms”

Yuichiro Kiyo (Particle Physics / Associate Prof., Juntendo University, Japan)

“Top quark mass determination near threshold at ILC”

Takeshi Koike (Nuclear Physics, /Assistant Prof., Tohoku University, Japan)

“Gamma-ray spectroscopy of sd-shell Lambda hypernuclei at J-PARC”

Daisuke Nomura (Particle Physics / Assistant Prof., Tohoku University, Japan)

“Status of hadronic contributions to lepton $g-2$ ”

Koutaro Shirotori (Nuclear Physics / Assistant Prof., RCNP, Osaka University, Japan)

“Spectroscopy of excited charmed baryons at the J-PARC high-momentum beam line”

(Astrophysics)

Katsuhiro Hayashi (Astrophysics / PhD student, Hiroshima University, Japan)

“Study of the Galactic cosmic-rays and the interstellar matter using Fermi Gamma-ray Space Telescope”

Daisuke Nitta (Astrophysics, /Assistant Prof., Tohoku University, Japan)

“Cross skewness of redshifted galaxy distribution”

Mikito Tanaka (Astrophysics / Assistant Prof., Tohoku University, Japan)

“The Design Study of the Andromeda Galactic Halo Survey based on Subaru/Hyper Suprime-Cam and NB515 Narrowband Filter”

Nami Uchikata (Astrophysics / PhD student, Tohoku University, Japan)

“New solutions of charged regular black holes and their stability”

(Mathematics)

Tsukasa Iwabuchi (Mathematics / Assistant Prof., Chuo University, Japan)

“Global solutions for the Navier-Stokes equations in the rotational framework”

Kensaku Kinjo (Mathematics /Researcher, University of Tokyo, Japan)

“Hessian elliptic curves and cubic arithmetic-geometric mean over 3-adic fields”

Yuken Miyasaka (Mathematics /Assistant Prof., Tohoku University, Japan)

“Honda theory for formal groups of abelian varieties of GL_2 -type”

Kazushige Nakagawa (Mathematics / Assistant Prof., Tohoku University, Japan)

“The Phragmén–Lindelöf theorem for L^p -viscosity solutions of nonlinear weakly coupled elliptic systems”

Toshiaki Omori (Mathematics /Assistant Prof., Tohoku University, Japan)

“On the existence of harmonic maps via exponentially harmonic maps”

Keisuke Yoshii (Mathematics /PhD student, Tohoku University, Japan)

“Determinacy of Games in Second Order Arithmetic”

(Philosophy)

Mariko Nihei (Philosophy/ PhD student, Tohoku University, Japan)

“Rethinking the Duhem-Quine these: the gap between material-experimental holism and semantic-theoretical holism”

Hiroyuki Akatsuka (Philosophy/ PhD student, Tohoku University, Japan / University of Innsbruck, Austria)

“The Moment when art becomes the art --on the Problem of the relationship between art and history and human-being in Heidegger's Philosophy”



Prof. Kunio Inoue, “Opening”



Prof. T. Pruschke,
introduced by Prof. Y. Kuramoto



“Poster session”



“Poster session”

Program:

March 4 Monday	
Plenary Session –Condensed Matter Physics, Particle Physics, Mathematics Main Lecture Hall	
	(Chairman) <i>Y. Kuramoto</i>
10:00 – 10:10	“Opening address” Kunio Inoue (GCOE program leader / Chairman of Organizing Committee)
10:10 – 11:00	Thomas Pruschke (Condensed Matter Physics / Prof. Dr. , Universität Göttingen, Germany) “Coherence and Correlations – Electrons in Motion”
11:00 – 11:20	<i>Coffee Break</i>
	(Chairman) <i>M. Yamaguchi</i>
11:20 – 12:10	Makiko Nio (Particle Physics / Researcher., RIKEN Nishina Center, Japan) “Tenth-order QED calculation of the lepton anomalous magnetic moments and precision determination of the fine-structure constant”
	(Chairman) <i>Jun-ichi Segata</i>
12:10 – 13:00	Tohru Ozawa (Mathematics / Professor, Waseda University, Japan) “Sharp Morawetz estimates”
13:00 – 14:00	<i>Lunch</i>
Parallel Session A – Condensed Matter Physics Room203	
	(Chairman) <i>J. Nasu</i>
14:00 – 14:35	Shintaro Hoshino (Condensed Matter Physics / JSPS postdoctoral fellow, Tohoku University) “Itinerant-localized transition in heavy-electron systems”
14:35 – 15:10	Shumpei Masuda (Condensed Matter Physics / Assistant Prof., Tohoku University, Japan) “Rapid control of Bose-Einstein Condensates with less disturbance”
15:10 – 15:25	<i>Coffee Break</i>

15:25 – 16:00	(Chairman) <i>S. Masuda</i> Joji Nasu (Condensed Matter Physics / Assistant Prof., Tohoku University, Japan) “Orbital Dynamics coupled with Jahn-Teller phonons in Strongly Correlated Electron System”
	Tatsuro Yuge (Condensed Matter Physics / Researcher, Osaka University, Japan) “Thermodynamic relation in nonequilibrium steady state ”
Parallel Session B – Astrophysics Room204	
14:00 – 14:35	(Chairman) <i>D. Nitta</i> Mikito Tanaka (Astrophysics / Assistant Prof., Tohoku University, Japan) “The Design Study of the Andromeda Galactic Halo Survey based on Subaru/Hyper Suprime-Cam and NB515 Narrowband Filter”
	Nami Uchikata (Astrophysics / PhD student, Tohoku University, Japan) “New solutions of charged regular black holes and their stability”
15:10 – 15:25	<i>Coffee Break</i>
15:25 – 16:00	(Chairman) <i>M. Hattori</i> Daisuke Nitta (Astrophysics / Assistant Prof., Tohoku University, Japan) “Cross skewness of redshifted galaxy distribution”
	Katsuhiro Hayashi (Astrophysics / PhD student, Hiroshima University, Japan) “Study of the Galactic cosmic-rays and the interstellar matter using Fermi Gamma-ray Space Telescope”
16:35 – 17:10	
Parallel Session C – Mathematics Room303	
14:00 – 14:30	(Chairman) <i>K. Nakagawa</i> Tsukasa Iwabuchi (Mathematics / Assistant Prof., Chuo University, Japan) “Global solutions for the Navier-Stokes equations in the rotational framework”
	Keisuke Yoshii (Mathematics / PhD student, Tohoku University, Japan) “Determinacy of Games in Second Order Arithmetic”
15:00 – 15:30	Yuken Miyasaka (Mathematics / Assistant Prof., Tohoku University, Japan) “Honda theory for formal groups of abelian varieties of GL ₂ -type”
15:30 – 15:40	<i>Coffee Break</i>
15:40 – 16:10	(Chairman) <i>K. Miyasaka</i> Kensaku Kinjo (Mathematics / Researcher, University of Tokyo, Japan) “Hessian elliptic curves and cubic arithmetic-geometric mean over 3-adic fields”
	Toshiaki Omori (Mathematics / Assistant Prof., Tohoku University, Japan) “On the existence of harmonic maps via exponentially harmonic maps”

16:40 – 17:10	Kazushige Nakagawa (Mathematics / Assistant Prof., Tohoku University, Japan) “The Phragmén–Lindelöf theorem for L^p -viscosity solutions of nonlinear weakly coupled elliptic systems”
Poster Session Entrance-hall 2F and Room205	
17:20 – 18:20	Entrance-hall 2F: Exhibit = odd number of Poster no. 1~31 Room 205 : Exhibit = odd number of Poster no. 33~85
18:30 – 20:00	Banquet at Campus Cafeteria

March 5 Tuesday

Plenary Session – Mathematics, Astrophysics, Philosophy

Main Lecture Hall

09:20 – 10:10	Hidekatsu Nemura (Nuclear Physics / Associate Prof., University of Tsukuba, Japan) “Hyperonic potentials from lattice QCD and toward an application to few-body problems” (Chairman) <i>H. Tamura</i>
10:10 – 11:00	Takashi Shioya (Mathematics / Professor, Tohoku University, Japan) “Metric measure geometry of high-dimensional spaces” (Chairman) <i>M. Kotani</i>
11:00 – 11:20	<i>Coffee Break</i>
11:20 – 12:10	Yasuyuki Tanaka (Astrophysics / Assistant Prof., Hiroshima University, Japan) “Fermi-LAT results of extragalactic sky in MeV/GeV range” (Chairman) <i>T. Futamase</i>
12:10 – 13:00	Kunitake Ito (Philosophy / Professor, Kyoto University, Japan) “From the particle-matter hierarchy to the anthropic fine tuning” (Chairman) <i>K. Noe</i>
13:00 – 14:00	<i>Lunch</i>
Parallel Session A – Condensed Matter Physics Room203	

		(Chairman) <i>J. Nasu</i>
14:00 – 14:35	Ruth Zadik (Condensed Matter Physics / PhD student, Durham University, England) “Superconductivity in highly expanded A3C60: strongly correlated molecular systems”	
14:35 – 15:10	Satoshi Heguri (Condensed Matter Physics / Assistant Prof., Tohoku University, Japan) “Magnetic Properties of aromatic hydrocarbon compounds”	
15:10 – 15:25	<i>Coffee Break</i>	
		(Chairman) <i>S. Heguri</i>
15:25 – 16:00	Kohei Nishiyama (Condensed Matter Physics / PhD student, University of Hyogo, Japan) “Pressure effect on insulating gap structure in intermediate valence compound SmB ₆ ”	
16:00 – 16:35	Anton Potočnik (Condensed Matter Physics / PhD student, University of Ljubljana, Slovenija) “How unconventional are conventional fulleride superconductors?”	
16:35 – 17:10	Kaya Wei (Condensed Matter Physics / PhD student, University of South Florida, USA) “Thermoelectric Materials Research for Power Conversion and Refrigeration Applications”	
Parallel Session B – Particle Physics Room204		
		(Chairman) <i>D. Nomura</i>
14:00 – 14:35	Hiroyuki Abe (Particle Physics / Associate Prof., Waseda University, Japan) “Extra dimensions and a mass hierarchy of elementary particles”	
14:35 – 15:10	Tsuguhiko Asakawa (Particle Physics / Assistant Prof., Tohoku University, Japan) “D-branes in Generalized Geometry”	
15:10 – 15:25	<i>Coffee Break</i>	
		(Chairman) <i>T. Asakawa</i>
15:25 – 16:00	Yuichiro Kiyo (Particle Physics / Associate Prof., Juntendo University, Japan) “Top quark mass determination near threshold at ILC”	
16:00 – 16:35	Daisuke Nomura (Particle Physics / Assistant Prof., Tohoku University, Japan) “Status of hadronic contributions to lepton g-2”	
		(Chairman) <i>K. Naoe</i>
14:00 – 14:35	Mariko Nihei (Philosophy/ PhD student, Tohoku University, Japan) “Rethinking the Duhem-Quine these: the gap between material-experimental holism and semantic-theoretical holism”	

14:35 – 15:10	Hiroyuki Akatsuka (Philosophy/ PhD student, Tohoku University, Japan / University of Innsbruck, Austria) “The Moment when art becomes the art --on the Problem of the relationship between art and history and human-being in Heidegger's Philosophy”
15:10 – 15:25	<i>Coffee Break</i>
15:25 – 16:00	(Chairman) K. Hagino Koutaro Shirotori (Nuclear Physics / Assistant Prof., RCNP, Osaka University, Japan) “Spectroscopy of excited charmed baryons at the J-PARC high-momentum beam line”
16:00 – 16:35	Takeshi Koike (Nuclear Physics / Assistant Prof., Tohoku University, Japan) “Gamma-ray spectroscopy of sd-shell Lambda hypernuclei at J-PARC”
16:35 – 17:10	Hirokazu Kawamura (Nuclear Physics / Assistant Prof., CYRIC, Tohoku University, Japan) “Search for electric dipole moment of the electron with laser-cooled radioactive atoms”
Poster Session Entrance-hall 2F and Room205	
17:20 – 18:20	Entrance-hall 2F: Exhibit = even number of Poster no. 2~32 Room 205: Exhibit = even number of Poster no. 34~86

March 6 Wednesday

Plenary Session –Particle Physics, Astrophysics, Condensed Matter Physics

Main Lecture Hall

	(Chairman) K. Hikasa
09:20 -10:10	Osamu Jinnouchi (Particle Physics / Associate Professor, Tokyo Institute of Technology, Japan) “The discovery of the new particle at LHC and a recent news about its identity”
10:10 – 10:30	<i>Coffee Break</i>
	(Chairman) M. Hattori
10:30 – 11:20	Toru Yamada (Astrophysics / Professor, Tohoku University, Japan) “Toward Observing Earliest Galaxy Formation”

	<i>(Chairman) K. Tanigaki</i>
11:20 – 12:10	Hidefumi Hiura (Condensed Matter Physics / Dr., Chief Scientist, NEC Smart Energy Lab., Japan) “Direct Formation of Graphene on Insulator by Liquid Phase Growth”
12:10 – 12:20	Kunio Inoue (Chairman of Organizing Committee) – “Closing address”

Poster Presentations:

P-No	Title / Name (major, position)
1	Tatsuya Higashi (Physics, D3), “Ground state phase diagram of interacting Dirac electrons in graphene under magnetic field”
2	Kenji Hosomi (Physics, D3), “Gamma-ray spectroscopy of $^{11}_{\Lambda}\text{B}$ and $^{12}_{\Lambda}\text{C}$ ”
3	Brian O'neil Beckford (Physics, D3), “ Λ photoproduction on a deuteron at threshold energies”
4	Yasuhiro Takemoto (Physics, D3), “Observation of the 7Be Solar Neutrinos with KamLAND”
5	Tomohiro Oishi (Physics, D3), “Time-dependent approach to two-proton radioactivity and di-proton correlation”
6	Yutaka Oya (Physics, D3), “Dynamic Theory for Polymer-Containing Bio-Membranes”
7	Chigusa Kimura (Physics, D3), “The $\gamma d \rightarrow \pi^+ \pi^- d$ reaction in the energy region of $0.7 \leq E_{\gamma} \leq 1.1$ GeV”
8	Zenmei Suzuki (Physics, D3), “Study of $B \rightarrow DK$, $D \rightarrow K_S \pi$ for the measurement of CP -violating angle ϕ_3 , and $D^{*-} \rightarrow D \pi$, $D \rightarrow K_S K \pi$ for the modeling of $D \rightarrow K_S K \pi$ Dalitz plane”
9	Yoshiro Teshima (Physics, D3), “The relationship between various analytical techniques of T-duality”
10	Takao Fujii (Physics, D3), “Exclusive study of Λ photoproduction in the threshold region”
11	Takayuki Morioka (Physics, D3), “Development for Pulse High Field for Neutron Diffraction at J-PARC”
12	Yuki Yamaki (Physics, D3), “Dopant dependence of x-ray induced phase transition in impurity doped layered manganites”
13	Shusaku Yusa (Physics, D3), “Role of noncollective excitations in low-energy heavy-ion reactions”
14	Takayuki Watanabe (Physics, D3), “Study about frequency response of an AlGaAs/GaAs heterostructured cantilever with optical actuation”
15	Masanori Watahiki (Physics, D3), “Crystalline electric field study in $\text{Nd}_2\text{Ir}_2\text{O}_7$ with

	metal-insulator transition”
16	Hiroki Iida (Physics, D2), “Search for a field-induced quantum critical point in CeRhSi ₃ ”
17	Toru Ito (Physics, D2), “The new type of the fractional quantum Hall effect in N=1 Landau level”
18	Yasuko Urata (Physics, D2), “Reaction cross sections of the deformed halo nucleus ³¹ Ne”
19	Shuhei Sasa (Physics, D2), “Generalized geometric approach to non-geometric space”
20	Satoshi Yamazaki (Physics, D2), “Continuous Time Quantum Monte Carlo study of strong coupling superconductivity in Holstein-Hubbard model”
21	Fumiya Yamamoto (Physics, D2), “Study of double delta photoproduction on the deuteron target”
22	Kenji Tsutsumi (Physics, D2), “Research for Magnetic Excitation of Bi2201-System of Dilution Dope by Pulse Neutron Scattering”
23	He Qinghua (Physics, D2), “Double neutral pion photoproduction”
24	Wen Yin (Physics, D1), “Beyond the standard model :aspects of supersymmetry”
25	Shinichi Kato (Physics, D1), “The Study of the Painting Injection including the Space Charge Effect for the High-Intensity Proton Accelerator”
26	Taku Kikuchi (Physics, D1), “Anisotropic magnetic response in Kondo lattice with antiferromagnetic order”
27	Hioroki Kobayashi (Physics, D1), “Neutron scattering study on <i>f</i> electron states of Pr based compounds”
28	Yutaro Shoji (Physics, D1), “Peccei-Quinn invariant extension of the NMSSM with a Higgs mass of 125 GeV”
29	Akihiko Sekine (Physics, D1), “Electron Correlation Induced Spontaneous Symmetry Breaking in a Strongly Spin-Orbit Coupled System”
30	Su Chang Choi (Physics, D1), “The roles of excess Fe for magnetic in antiferromagnetic metalFe _{1+δ} Sb”
31	Yusuke Tsuchikawa (Physics, D1), “The $\gamma n \rightarrow K^0 \Lambda$ reaction studied with an electromagnetic calorimeter FOREST”
32	Tomohiro Hayamizu (Physics, D1), “Development of laser-cooled Fr atom source for the electron Electric Dipole Moment search”
33	Stefane Yu Matsushita (Physics, D1), “Surface phonon dispersion on the hydrogen-terminated Si(110)-(1×1) surface”
34	Hisayoshi Muraki (Physics, D1), “Hopf algebraic symmetry of effective theory of string in H-flux background”
35	Kenkoh Sugihara (Physics, D1), “Rheology of block copolymer droplets”
36	Yu Murao (Physics, D3), “Impurity effects on dislocation dynamics in Ge”
37	Huynh Kim Khuong (Physics, D2), “Multi-band model analysis of transport properties of

	Ba(FeAs) ₂ "
38	Benda Xu (Physics, D2), "Analysis of ⁸⁵ Kr concentration in KamLAND with rollback technique"
39	Yusuke Yamada (Physics, D1), "Carrier transport in conducting polymer PEDOT:PSS thin films studied by temperature dependence of THz and infrared spectroscopy"
40	S.M. Haidar (Physics, D1), "Spin Pumping in High T _c Superconductor La _{1.85} Sr _{0.15} CuO ₄ thin films"
41	Kentaro Negishi (Physics, D2), "Study of the decay B ⁰ →DK* ⁰ for ϕ_8 measurement"
42	Wenjing MIN (Physics, D1), "Polaron dynamics properties with magnetic impurity in conjugated polymers "
43	Thomas James Kleeman (Physics, D1), "Electronic structure of Rb intercalated bilayer graphene"
44	Hui Shang (Physics, D1), "Gain Properties in Newly Synthesized Thiophene-Furan-Phenylene Co-oligomer Single Crystals"
45	Mariko Kubo (Astronomy, D2), "NIR spectroscopy of the NIR selected galaxies in the protocluster at z=3.09"
46	Masaki Takayama (Astronomy, D1), "On the pulsation modes of OSARGs in the LMC"
47	Sho Nakamura (Astronomy, D1), "Construction of Global Magnetic Field Structure Model in Spiral Galaxies with Three Dimensional Magneto-hydrodynamic Simulations"
48	Kohei Hayashi (Astronomy, D1), "The prolate dark halo of Andromeda galaxy"
49	Kazuya Fujio (Astronomy, D3), "Study of Bianchi type I spacetime in Loop Quantum Cosmology"
50	Takayuki Maebayashi (Astronomy, D2), "The UV-excess Property of LINER/Quiescent Early-type Galaxies"
51	Ken Mawatari (Astronomy, D1), "Search for red K – [3.6] > 2 galaxies revealed with the Spitzer SEDS survey"
52	Mohammad Akhlaghi (Astronomy, D1), "Test of significant size evolution of massive quiescent galaxies in MODS, without measuring the effective radius"
53	Ryunosuke Ozawa (Mathematics, D1), "An extension of observable diameter"
54	Yosuke Saito (Mathematics, D1), "Elliptic Ding-Iohara Algebra and the Free Field Realization of the Elliptic Macdonald Operator"
55	Kazuki Sato (Mathematics, D1), "Hasse principle for the Chow groups of zero-cycles on quadric fibrations"
56	Noboru Chikami (Mathematics, D1), "The study of the compressible flow with a Yukawa-type potential"
57	Kenta Tottori (Mathematics, D1), "The solution of the Homogeneous Complex Monge-Ampère equation corresponding to a geodesic in the space of Kähler metrics"

58	Yusuke Miura (Mathematics, D1), "Ultracontractivity for Markov semigroups and quasi-stationary distributions"
59	Shota Murakami (Mathematics, D1), "Generalized modal dependence logic"
60	Nobuaki Naganuma (Mathematics, D2), "Asymptotic error distributions of the Crank-Nicholson scheme for SDEs driven by fractional Brownian motion"
61	Abdullah Kizilay (Mathematics, D2), "Level Set Formulation of Curve Shortening Flow in a Riemannian Manifold"
62	Kota Uriya (Mathematics, D2), "Final state problem for the quadratic nonlinear Schrödinger system with mass resonance"
63	Kouichi Kimura (Mathematics, D2), "Homogeneous Reinhardt domains containing the origin in the complex 3-space"
64	Rena Tateda (Mathematics, D2), "On some results for covering systems of congruences"
65	Tomonori Nakayama (Mathematics, D2), "On the formal groups arising from algebraic varieties"
66	- - - -
67	Masaki Wada (Mathematics, D2), "Perturbation of Dirichlet forms and stability of fundamental solutions"
68	Hiroko Yamamoto (Mathematics, D2), "Locator function for concentration points of solutions of a reaction-diffusion equation in heterogeneous media"
69	Kazumasa Inaba (Mathematics, D3), "On deformations of singularities of mixed polynomials"
70	Kazuaki Tajima (Mathematics, D3), "On \mathbb{Z}_p -orbit spaces of certain prehomogenous vector spaces"
71	Yasuhito Nishimori (Mathematics, D3), "A localization of potentials"
72	Masakuni Matsuura (Mathematics, D3), "Penalizations for Generalized Feynman-Kac Functionals"
73	Ahmad Termimi Bin Ab Ghani (Mathematics, D3), "On the analysis of strategies in generalized stochastic reachability games"
74	Takanao Negishi (Mathematics, D3), "An application of periodic decompositions of functions holomorphic on convex polygonal domains"
75	Ning-Ning Peng (Mathematics, D2), "Characterization of \emptyset' -Schnorr randomness via relative randomness"
76	Satoshi Ueki (Mathematics, D2), "Deformations of isotropic submanifolds in Kähler manifolds"
77	Seunghwan Yang (Mathematics, D1), "Quasi-stationary distribution of Markov processes and its applications"
78	Xiaohan Wang (Mathematics, D1), "Optimal stopping and its applications to mathematical

	finance”
79	Hiromichi Sugawara (Philosophy, D3), “Hume's Eclectic Method on Logic”
80	Satoshi Nikaido (Philosophy, D3), “From heroism to the politics of dialogue”
81	Marika Hirama (Philosophy, D2), “Individuality and historicity of life - from Dilthey's middle and late speculations -”
82	Masatoshi Echigo (Philosophy,D2), “Formal Ontology in <i>Logical Investigations</i> ”
83	Katsuyuki Kuriyama (Philosophy, D1), “Comparative studies of the concept of organism between Bergson and Kant”
84	Tetsuya Yoshida (Philosophy, D1), “Frege on Unsaturatedness”
85	Tatsuya Mori (Physics, M1), “Performance Evaluation of Fine Pixel CCD Vertex Detector in ILC”

(21) The 2nd Geometry WorkshopLecture: The 2nd Geometry Workshop: “Minimal submanifolds and mean curvature flow”- “To study as a director of Max-Planck Institute for Astrophysics”

Dates: March 16 (Sat) -18 (Mon), 2013

Place: KKR Hakugin-so, Zao, Yamagata, Japan

Chairman of Organizer: Prof. Reiko Miyaoka (Mathematical Institute, Tohoku University)

Inquire: