

News

“Second IPMU Building” Completed

As previously reported in IPMU NEWS No.11, p. 24, IPMU’s “Second Building” or “Annex,” included in the Government’s stimulus package in fiscal 2009, has been under construction since April of last year. The IPMU “Annex” is not a single building, however, but rather a part of the larger building shared by three institutes. This building, named “the Second General Research Building,” was originally planned to be completed within fiscal 2010, but the Tohoku Region Pacific Coast Earthquake that occurred on March 11, 2011 caused some delay in construction, so it was completed at the end of April. The pictures below show the exterior appearance of this building and its location relative to the IPMU Building.



The Second General Research Building



The IPMU Research Building and the Second General Research Building

At the corner on the ground floor of IPMU wing of this building is located IPMU’s “Astronomical Information Center.” It will function as an analysis and information center for the data to be obtained from the IPMU initiatives for astronomical observations. It will also showcase the IPMU activities—such as researchers’ meetings and computer work—to the public. People outside can enjoy looking at these scenes as well as the data projected on a number of large screens through transparent glass wall. The picture below shows the inside of the Astronomical Information Center.



Astronomical Information Center

Science Café: The Universe 2011

“Science Café: The Universe 2011” was held at the Tamarokuto Science Center in Nishi-Tokyo City, jointly sponsored by IPMU and the Tamarokuto Science Center on April 23, May 28, and June 25.

In this series, three easy-to-understand lectures in Astronomy, Mathematics, and Particle Physics were given: IPMU Professor Hiroshi Karoji spoke on “The Subaru Telescope and Dark Energy” on April 23, IPMU Assistant Professor Satoshi Kondo “On Galois Theory” on May 28, and IPMU Associate Professor Shigeki Matsumoto on “Producing Dark Matter in Terrestrial Experiments” on June 25. In this series of the Science Café, a relaxed atmosphere is particularly emphasized so that attendees can talk with the lecturers in a friendly manner. To ensure this atmosphere, the number of attendees was limited by lottery to

within 100 people for each lecture.

Having started in 2009, this year’s Science Café was third in this series. So far, eleven lectures, one per day, were given in total. This series of Science Café will be held every year.



Prof. Hiroshi Karoji gave a lecture on April 23



Prof. Satoshi Kondo gave a lecture on May 28



Prof. Shigeki Matsumoto gave a lecture on June 25

Shigeki Sugimoto Receives 16th JPS Award for Academic Papers on Physics

IPMU Professor Shigeki Sugimoto won the 16th JPS (The Physical Society of Japan) Award for Academic Papers on Physics with his coauthors Hiroyuki Hata, Tadakatsu Sakai, and Shinichiro Yamato for their paper entitled “Baryons from Instantons in Holographic QCD.” They proposed a method for analyzing baryons using superstring theory, and showed that the baryon spectrum calculated with this method qualitatively reproduces the experimentally observed spectrum well. The awards ceremony took place on April 9, 2011.

Hidetoshi Ohno Awarded AIJ Prize 2011 for his Design of IPMU Research Building

Professor Hidetoshi Ohno of the Graduate School of Frontier Sciences, The University of Tokyo, was awarded the AIJ (The Architectural Institute of Japan) Prize 2011 for Design for his achievement in the design of the IPMU research building.

The AIJ Prize for Design is awarded for an excellent achievement, which contributes to the advancement and development of the science, technology, and art related to architecture, in the category of the architectural design of recent buildings (including garden, interior, and other designs), mainly completed in Japan.

The prize was awarded in recognition of the integrated powers in form, in design, and in details including furniture, as a facility for research, and also, in particular, of the embodiment of “powers of place,” namely, the “prime power” of architectural work, which the architect put into these “projections” under various restrictions. This architect’s attempt was highly evaluated. The awards ceremony took place on May 30, 2011.



The IPMU Research Building

The Architectural Institute of Japan presented Professor Ohno a commemorative plaque with his name in relief, a work of a famous contemporary sculptor, Ryokichi Mukai. It has been fixed to one of the columns in the colonnade of the IPMU building.

For those who are interested in the design of the IPMU building, we refer to

“Spiraling Academia - A Memorandum for the Design of the New IPMU Research Building” written by Professor Ohno in IPMU NEWS No. 8, page 4 – 9.



Commemorative plaque presented to Prof. Toshihide Ohno

Focus week on Astrophysics of Dark Matter

This Focus Week was held at IPMU from May 30 to June 3, 2011. For details, see p. 26.

Future Workshop: 2011 IPMU School and Workshop on Monte Carlo Tools for LHC

The “2011 IPMU School and Workshop on Monte Carlo Tools for LHC” will be held from September 5 to 10, 2011 at Yukawa Institute for Theoretical Physics, Kyoto University.

IPMU Seminars

1. “Electroweak baryogenesis in the MSSM revisited”
Speaker: Eibun Senaha (NCTS)
Date: Mar 31, 2011
2. “Soft Leptogenesis and Gravitino Dark Matter in Gauge Mediation”
Speaker: Norimi Yokozaki (The University of Tokyo)
Date: Apr 06, 2011
3. “A new method to identify AGNs and the nature of low-luminosity AGNs”
Speaker: Masayuki Tanaka (IPMU)
Date: Apr 07, 2011
4. “SUSY Gauge Theories on Squashed Three-Spheres”
Speaker: Kazuo Hosomichi (YITP)
Date: Apr 12, 2011
5. “Asymmetry in Type Ia Supernovae:

An Origin of Their Observational Diversities?”

Speaker: Keiichi Maeda (IPMU)

Date: Apr 14, 2011

6. “Geometric entropy and confinement/deconfinement transition in $d=4$ QCD like theories”
Speaker: Mitsutoshi Fujita (IPMU)
Date: Apr 19, 2011
7. “Jets at weak and strong coupling”
Speaker: Yoshitaka Hatta (Tsukuba University)
Date: Apr 20, 2011
8. “On the construction of the virtual fundamental class”
Speaker: Masahiro Futaki (University of Tokyo)
Date: Apr 20, 2011
9. “Supernova Explosions in Dense Circumstellar Medium”
Speaker: Takashi Moriya (IPMU)
Date: Apr 21, 2011
10. “Quantized integrable systems, matrix models and AGT correspondence”
Speaker: Kazunobu Maruyoshi (SISSA)
Date: Apr 26, 2011
11. “The Unification of Forces”
Speaker: Koichi Hamaguchi (IPMU)
Date: Apr 27, 2011
12. “Information content in cosmological observables”
Speaker: Masahiro Takada (IPMU)
Date: Apr 28, 2011
13. “Small Black-Holes and Higher Spin States in Heterotic String”
Speaker: Massimo Bianchi (University of Rome)
Date: May 17, 2011
14. “Natural selection of inflationary vacuum required by infra-red regularity and gauge-invariance”
Speaker: Takahiro Tanaka (YITP)
Date: May 18, 2011
15. “The Supernova Origin of Galactic Cosmic Rays”
Speaker: Yasunobu Uchiyama (SLAC/Stanford)
Date: May 18, 2011

16. “Yangian symmetry in deformed WZNW models on squashed spheres”
Speaker: Kentaroh Yoshida (Kyoto University)
Date: May 24, 2011
17. “Recent results from ATLAS at the LHC”
Speaker: Junichi Tanaka (University of Tokyo)
Date: May 25, 2011
18. “Gravitational Lenses of the Dark Universe”
Speaker: Adam Amara (ETH-Zurich)
Date: May 26, 2011
19. “ $6=3+3$ ”
Speaker: Masahito Yamazaki (Princeton University)
Date: May 31, 2011
20. “Quantum Field Theory and the Analytic S-Matrix, Redux”
Speaker: Jacob Bourjaily (Princeton University)
Date: Jun 01, 2011
21. “Some recent results on microstate geometries”
Speaker: Jan de Boer (University of Amsterdam)
Date: Jun 01, 2011
22. “(Astro)-supercolliders: growing black holes in galaxy mergers”
Speaker: John Silverman (IPMU)
Date: Jun 03, 2011
23. “Cosmology, Scalar Fields and Hydrodynamics”
Speaker: Alexander Vikman (CERN)
Date: Jun 03, 2011
24. “An X-ray – infrared study of AGN unification and selection”
Speaker: Murray Brightman (MPE)
Date: Jun 07, 2011
25. “Cosmology Results from the Atacama Cosmology Telescope”
Speaker: David Spergel (Princeton University/IPMU)
Date: Jun 08, 2011
26. “Refined topological string for Omega background”
Speaker: Yu Nakayama (Caltech)
Date: Jun 14, 2011
27. “Challenges in Fukushima and Japan”
Speaker: Mihoko Nojiri (IPMU)
Date: Jun 15, 2011
28. “The high-z interplay between annihilating DM and the IGM”
Speaker: Marco Valdes (Pisa)
Date: Jun 16, 2011
29. “Multiple brane solutions in Open String Field Theory”
Speaker: Martin Schnabl (Prag)
Date: Jun 20, 2011
30. “Thermo-dynamical limit function’s seminar”
Speaker: Yoshio Sano (National Institute of Informatics)
Date: Jun 20, 2011
31. “Product formula for p-adic epsilon factors”
Speaker: Tomoyuki Abe (IPMU)
Date: Jun 21, 2011
32. “Maxwell’s Demon: Introduction to Information Thermodynamics”
Speaker: Masahito Ueda (University of Tokyo)
Date: Jun 22, 2011
33. “Dark matter distribution in cluster from strong+weak lensing”
Speaker: Masamune Oguri (IPMU)
Date: Jun 23, 2011
34. “Recent advances in modular representation theory of the symmetric groups”
Speaker: Shunsuke Tsuchioka (IPMU)
Date: Jun 28, 2011
35. “Statistical Symmetry Breaking in the CMB”
Speaker: Jiro Soda (Kyoto Univ.)
Date: Jun 29, 2011
36. “Impact of Large θ_{13} on Flavor Physics”
Speaker: Morimitsu Tanimoto (Niigata Univ.)
Date: Jun 30, 2011

Personnel Changes

New Principal Investigator
Professor Toshiyuki Kobayashi of

the Graduate School of Mathematical Sciences, now also holds the position of Principal Investigator at IPMU as of June 1, 2011. Previously, he held a joint appointment at IPMU as Senior Scientist. His research area is Mathematics, and his research interests will be published in the next issue of IPMU NEWS, in the Our Team section.



Moving Out

IPMU Assistant Professor Yuji Tachikawa moved to the Institute for Advanced Study as a long-term member. He was at IPMU from November 1, 2010 to April 9, 2011. This time he left IPMU temporarily, and he will be appointed at IPMU again in the near future.

Also, the following three IPMU postdoctoral fellows left IPMU to work at other institutes. Their time at IPMU is shown in the square brackets:

Kai Wang [September 1, 2008 – May 31, 2011] moved to Zhejiang University in China as a Research Professor.

Michael Pichot [October 1, 2008 – June 30, 2011] moved to the Department of Mathematics and Statistics, McGill University in Canada as an Assistant Professor.

Jiayu Tang [November 1, 2008 – June 30, 2011] moved to The Chinese University of Hong Kong as a postdoctoral fellow.

Erratum

There is a correction in IPMU News, No. 13, p. 23, right column. In the second paragraph, under the headline “Personnel Changes,” the correct time at IPMU for Fuminobu Takahashi is December 1, 2007—January 31, 2011. (This correction does not apply to the web version of IPMU NEWS, No. 13.)