

The 21st Century COE Program of Tohoku University

COE International Symposium

**Exploring New Science by  
Bridging Particle-Matter  
Hierarchy**

March 5 (Fri) - March 7 (Sun), 2004

Multimedia Education and Research Building  
(Kawauchi-North Campus of Tohoku University)

## PROGRAM

March 5 (Friday), 2004

10:00-10:40 A. Suzuki  
*The 21st Century COE Program: Exploring New Science by  
Bridging Particle-Matter Hierarchy*

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10:40-11:00 Coffee Break

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Chairperson: Y. Shibata

11:00-12:10 H. Amann  
*Coagulation-Fragmentation Models*

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12:10-13:30 Lunch

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Chairperson: T. Fujita

13:30-14:00 T. Kawakatsu  
*Dynamical Self-Consistent Field Theory for  
Inhomogeneous Dense Polymer Systems  
-- Bridging between Microscopic Chain Structures and  
Dynamics of Mesoscopic Domains --*

14:00-14:30 D. D. Sarma  
*Semiconducting Nanoparticles: Flexible Properties out  
of Tunable Sizes*

14:30-15:00 Y. Murakami  
*Orbital Ordering Studied by Resonant X-Ray Scattering*

15:00-15:30 T. Takahashi  
*Bogoliubov Quasiparticle in High-Tc Superconductors  
Observed by Angle-Resolved Photoemission Spectroscopy*

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15:30-15:50 Coffee Break

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Chairperson: Y. Nagashima

15:50-16:20 T. Moroi  
*Particle Physics, Cosmology, and Supersymmetry*

16:20-16:50 T. Buchert  
*Cosmological Parameters are 'dressed'  
-- a Key to Bridging the 'Dark Energy' Gap ?*

16:50-17:20 Y. Suto  
*Weighing the Universe; Baryons, Dark Matter and Dark  
Energy*

March 6 (Saturday), 2004

Chairperson: H. Kamimura

9:30-10:40 M.S. Dresselhaus  
*Perspectives on Nanoscience*

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10:40-11:00 Coffee Break

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Chairperson: M. Tachiki

11:00-12:10 F. Steglich  
*Kaleidoscope of Heavy Electrons: Superconductivity,  
Magnetism, Quantum Critical Points*

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12:10-13:30 Lunch

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Chairperson: N. Kawano

13:30-14:00 M. Kotani  
*Electron Transfer on a Crystal Lattice with and without  
Magnetic Field*

14:00-14:30 T. Hattori  
*Renormalization Group Approach to a Generalization of  
the Law of Iterated Logarithms for One-Dimensional  
(Non-Markovian) Stochastic Chains*

14:30-15:00 D. Chae  
*On the Multi-string Solutions of the Einstein equations  
Coupled with the Maxwell-Higgs System*

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15:00-15:20 Coffee Break

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Chairperson: Y. Nagai

15:20-15:50 T. Kobayashi  
*Nuclear Physics using RI Beams*

15:50-16:20 H. Saio  
*eliioseismology and Solar Models*

16:20-16:50 J. Shirai  
*KamLAND: Neutrinos from Reactors to the Earth and  
the Sun*

16:50-17:20 P. Payre  
*The Antares Neutrino Telescope*

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18:00- Banquet  
(6<sup>th</sup> floor, Multimedia Education and Research Building)

March 7 (Sunday), 2004

Chairperson: J. Nishimura

9:30-10:40 S. Pakvasa

*Neutrinos:Yesterday, Today and Tomorrow*

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10:40-11:00 Coffee Break

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Chairperson: O. Hashimoto

11:00-12:10 L.S. Cardman

*Nuclear Physics - Nature on the Femptometer Scale*

12:10-12:20 Closing: Y. Kuramoto

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