

# Divisional Major Achievements

Divisions	Achievements
Graduate School / Faculty of Arts and Letters	Results from the JSPS project "Medicine and Morality" were offered to hospitals as the "Clinical Medicine Examination System." The Yubikan Lectures were continued and "Cultures Considered in Terms of Food," a collection of the lectures, was published. Publication began of the half-yearly magazine, Thoughts and Ideas, intended for the students and general public.
Graduate School / Faculty of Education	"High School Educators in Comparative Perspective: Japan and USA" in the International Symposium for the Centenary Anniversary of Tohoku University. The 42nd "Institute for Educational Leadership" for Primary and Secondary School Teachers in the Tohoku District including the Niigata Prefecture.
Graduate School / School of Law	International Seminar held on "Citizenship, Diversity and Gender: Japan, Canada, and France in Comparative Perspective." Symposium on "The Academic Frontier of Olympe de Gouges" held (Organized by Tohoku University COE program). Symposium on "Dwindling Birthrate, Aging Society, and Gender Equality" organized by the Science Council of Japan (supported by COE).
Graduate School of Economics and Management / Faculty of Economics	Tohoku University's first endowed professorship (Small & Medium Enterprises Policy) in a faculty of humanities or social science was established. The International Graduate Student Forum "Economic Development, Governance and Regional Cooperation in East Asia" was held. Professor Omura coordinated Tohoku University's participation in the clean development mechanism (CDM) project in the coke industry in Shanxi (China).
Graduate School / Faculty of Science	Evolution of the pseudogap from Fermi arcs to the nodal liquid in High Tc superconductors. A.C.Cope Scholar Award for Prof. Yoshinori Yamamoto. Two expository lectures were presented at Kawai Hall for those high school students and teachers who are interested in mathematics. Prof. Takashi Shioya was awarded the Mathematical Society of Japan Geometry Prize 2006 for "the sequence of research achievements related to Alexandrov space."
Graduate School / School of Medicine	Establishment of Cancer Medical Science. Prof. Hideki Katagiri received the 3rd JSPS Prize. Prefrontal Cortex Involved in Future Planning and Its Execution Process at the Cell Level. Discovery of novel neuronal signals from the liver which improve obesity and diabetes. We found that green tea consumption was associated with reduced mortality due to all causes and due to cardiovascular disease.
Graduate School / School of Dentistry	The 2nd International Symposium for Interface Oral Health Science. The Regional Oral Health Promotion Office cooperated with Miyagi Prefecture and Sendai City. The Regional New Consortium Project: Development of a 3-D Visualization System of Dental Occlusion. The establishment of Edo man in the central Tohoku region by measurement science of tooth crown.
Graduate School of Pharmaceutical Sciences / Faculty of Pharmacy and Pharmaceutical Sciences	The 50th Anniversary Ceremony of the Founding. Prof. Yoshiharu Iwabuchi received "The Japanese Society for Process Chemistry 2006 Award for Excellence." Associate Prof. Takayoshi Ohkubo received "Young Investigator Award of the Japan Epidemiological Association in 2006."
Graduate School / School of Engineering	Prof. Koji Kato selected as Japan Academy Laureate. Technological achievement of enhanced light extraction from light emitting diode using subwavelength grating (Prof. Kazuhiro Hane G). Divisions: Graduate School of Engineering / School of Engineering Main achievements or topics: Prof. Tatsuo Uchida and Research Associate Takahiro Ishinabe succeeded to develop an ultra-low power, high performance, reflective liquid crystal display. World's first direct synthesis of p-nitrophenyl glycosides (Prof. Shin-ichiro Shoda G). 0.5GHz precision coherent THz wave revealed molecular defects in organic Materials (Prof. Yutaka Oyama G). Criteria of human loss with inundation depths obtained by analysis at Banda Ache by the 2004 Indian ocean tsunami (Prof. Fumihiko Imamura G). Promotion of lifespan extension of traditional and modern houses by improvement of thermal insulation and airtightness (Prof. Hiroshi Yoshino G).
Graduate School of Agricultural Science / Faculty of Agriculture	Role of phosphoSer-Pro Isomerase Pin1 on Cancer & Alzheimer's Disease, & Drug Discovery. Associate Prof. Yuichi Ogawa succeeded in discrimination of pigments by means of the terahertz spectroscopy technique. An international symposium entitled "Advances in Bioscience and Biotechnology for Future Bioindustry" was held. An international symposium entitled "Frontiers in Rice Science - From Gene to Field" was held.

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Graduate School of International Cultural Studies	Japan-China-Korea Academic Exchange Forum: "Japanology in East Asia-Language, Literature, and Ideology." Lecture Meeting on European Culture: "Language Education in the European Union."
Graduate School of Information Sciences	Advanced ICT Educational Program supported by MEXT was adopted, and ICT International Workshop was held. The robotics groups finished second in 4-leg robot and rescue leagues at RoboCup Japan contest. Four members received prizes from Minister of MEXT as outstanding and young science researchers.
Graduate School of Life Sciences	Identification of a gene essential for hydrotropism in roots. Identification of invasion pathways for trematode parasites and their exotic snail hosts. New enzyme discovery to inhibit melanin transport in melanocytes.
Graduate School of Environmental Studies	4th Environmental Technical Symposium: "Think again the basics on Manufacturing." 12th Environment Forum: "Soil Pollution and Geosphere Informatics 2007."
Institute for Materials Research	Prof. Inoue was awarded The Prime Minister Prize for development of industry-academia-government collaboration. Development of a new technique for growing a high-quality polycrystalline Si ingot for solar cells. Quantum Hall-effect in polar oxide heterostructures. Success in Fundamental Understanding of Materials Formation from Atoms by Accurate Numerical Calculation.
Institute of Development, Aging and Cancer	Development of daily intervention methods for prevention of cognitive decline. Discovery of the novel protein regulating intracellular membrane traffic.
Institute of Fluid Science	Emeritus Professor Hidesato It was elected Person of Cultural Merits in 2006. The 1st Japan Korea Student Workshop was held (Prof. Tokuyama).
Research Institute of Electrical Communication	Prof. Masataka Nakazawa received Thomson Scientific Laureate in 2006. Prototype 2Mbit non-volatile RAM chip employing spin-transfer torque writing. Mobile broadband wireless access demonstration using latest technology.
Institute of Multidisciplinary Research for Advanced Materials	Establishment of Alliance between RIEC-Hokudai, CRL-TIT, and Sanken-Osaka Univ. and IMRAM-Tohoku Univ. Cooperation Laboratories between NIMS and IMRAM-Tohoku Univ. Stricter Selection of Focus on Nitrides as a Novel Material.
Center for Northeast Asian Studies	Development of land mine detection sensor ALIS and its test in mine affected countries. The center started joint volcanic research among Japan-China-Korea. New Efforts for Japan-Russia Technology Transfers.
New Industry Creation Hatchery Center (NICHe)	The Tokyo Electron Ltd. (TEL) decided to open a new plant in the suburbs of Sendai, and that will enhance closer business-cooperation with Prof. Ohmi's research group. The NICHe was selected as one of the four cooperative universities in Japan by the National Institute of Information and Communications Technology (NICT), and its responsibility includes taking charge of Tohoku, Kanto and Koshinetsu areas. The construction of the Tohoku University Business Incubator (T-Biz) sponsored by Small & Medium Enterprises and Regional Innovation - JAPAN (SMRJ) started.
Center for the Advancement of Higher Education	The "Introductory Seminar" project of Liberal Arts program were selected as MEXT "Support Program for Distinctive University Education." Established a practical English learning program, which realized the improvement of English language proficiency among excellent students.
Tohoku University Library	The Library published "Tutorial of Information Search for Tohoku University Students: Arts & Humanities/Social science." The Library published "Guide to Academic Information Search - for Students of Tohoku University." "TOUR: Tohoku University Repository" opened to the public.
Tohoku University Hospital	Completion of east ward and a move to east ward. Establishment of Emergency Center. Establishment of Cancer Center. Establishment of Medical Cooperation meeting.
Biomedical Engineering Research Organization (TUBERO)	A venture company originating from TUBERO "G-Angstrom" was established.