

Innovations that lead the way to a New Society

Effective organization and management that can forge a splendid future

Center for Innovative Integrated Electronic Systems completed

In April 2013, the "Center for Innovative Integrated Electronic Systems" (established in October 2012) was completed at the Aobayama New Campus, which was funded wholly by the private sector.



Exterior of the Center for Innovative Integrated Electronic Systems

This center has already started industry-university joint research projects in a wide variety of integrated electronics fields such as for next-generation semiconductor memory, high-performance printed-circuit board technology, packaging technology, and image processing technology. In the field of next-generation semiconductor memory, the center has a program for R&D of spin-transfer torque magnetic random access memory (STT-MRAM) where Tohoku University leads the world. The center was the first among Japanese universities to develop a trial 300 mm-wafer process line and is working on R&D together with domestic and overseas semiconductor device/equipment companies, universities and research institutions.

It is expected that the center will become a worldwide R&D base for integrated electronic technologies, and play a leading role in the "Reconstruction of Tohoku and Regeneration of Japan" through various industry-university joint research projects and cultivation of highly talented human resources in such an environment. Consequently, the center will contribute to enhancing the international competitive power of Japan in this field and create new industries which will lead to the realization of an energy-saving society in the future.

The center has received official support from Miyagi Prefecture through utilization of the system of special zones for the promotion of private investment (information service related industries) that was applied for jointly by the Miyagi prefectural government and municipal governments in the prefecture. The center has also received official support from Sendai City through an amount corresponding to the fixed property tax, etc., according to an agreement made by Tohoku University and Sendai City.



Completion ceremony

Frontier Research Institute for Interdisciplinary Sciences inaugurated

On April 1, 2013, the Frontier Research Institute for Interdisciplinary Sciences was inaugurated, integrating the Center for Interdisciplinary Research and Institute for Synergistic Interdisciplinary Research and the International Advanced Research and Education Organization. On April 30, the signboard hanging ceremony was held.

The Frontier Research Institute for Interdisciplinary Sciences consists of three educators' organizations, the Managing and Planning Section, the Advanced Research Section and the Innovative Research Section. The institute plans to attract young researchers currently enrolled at graduate schools or research institutes of Tohoku University, to develop and promote interdisciplinary research, combining different field's works.

By integrating the features and roles of both former organizations, the new body possesses an extremely strong approach to advanced interdisciplinary research, in which both organizations have already had a firm foundation. With this strong base of advanced research, the institute is expected to actively support and nurture young researchers.



20th anniversary of the Graduate School of Information Sciences

The ceremony marking the 20th anniversary of the foundation of the Graduate School of Information Sciences (GSIS) was held on November 30, 2012. GSIS was established in April 1993 as Japan's first graduate school in information science and was also the first independent graduate school at Tohoku University. There were nearly 100 participants including special guests, alumni, and those involved inside and outside the University. Masanao Ozawa, Professor at Nagoya University who is a former professor of the Graduate School of Information Sciences, made a speech entitled "Quantum information technology and uncertainty principle" on "Ozawa's Inequality" principle which is a world-class discovery that corrects the uncertainty principle.



Panel discussion



Congratulatory address by President Satomi

A special panel discussion on "The role of information science in building our society in the future" was held with five professors in the Graduate School introducing details of their present research projects and offering a glimpse of the future from their work. Discussion was held on the contributions and potential for building a future society that can be created from the information sciences.

Institute for Materials Research established a logo for its 100th anniversary

Institute for Materials Research (IMR) was established in 1916 by Dr. Kotaro Honda as the 2nd Division of the Provisional Institute of Physical and Chemical Research and will celebrate its 100th anniversary in 2016. To date, IMR has been conducting both basic and applied research on a variety of materials such as semiconductors, ceramics, compounds, organic materials, and composite materials including metals. It has also been working to create new materials that will benefit society as well as to nurture and educate human resources. IMR plans to hold anniversary events such as a commemoration ceremony and open house on May 21, 2016. For these projects, IMR accepted entries for a commemorative logo from the general public, and the logo was selected from 765 candidates. The design represents the "tradition" of IMR in the form of the building at the time of its foundation and the "future" for realizing a fulfilling life by a continuous straight line. The logo conveys the message that past tradition and history can create the future. Mr. Koichi Oide, who is a teacher at the Interior Department of the Miyagi Technical High School, created the logo.



TOPICS Tohoku University has retained the first position for "Overall Rating" in University Rankings for 9 years running

Japanese University Ranking by Asahi Shimbun

According to the "University Rankings 2014" published by Asahi Shimbun, Tohoku University ranks first for "Overall Rating" for 9 years running as ranked by senior high schools in Japan and first for "Greatest Improvement After Entering University" for 7 years running. It can be said that this reputation comes from the daily effort put into education and research, students' achievements, career guidance, etc., by Tohoku University.

University Rankings (evaluation from senior high schools)

Overall Rating	Ranks 1st for 9 consecutive years
Greatest Improvement After Entering University	Ranks 1st for 7 consecutive years

Academic paper citation ranking

Thomson Reuters, an American company that is the world's leading source of intelligent information, annually releases the rankings of research institutions based on number of citations in published academic papers. This year, Tohoku University ranked in the world's top 30 following last year in terms of academic paper citations. It was ranked 6th in materials science, 12th in physics, and 28th in chemistry. These results reflect one of Tohoku University's fundamental principles, that of "Research First."

6th in the world (2nd in Japan)	in materials science
12th in the world (2nd in Japan)	in physics
28th in the world (6th in Japan)	in chemistry

Compilation period: January 1, 2002 to December 31, 2012 (11 years)