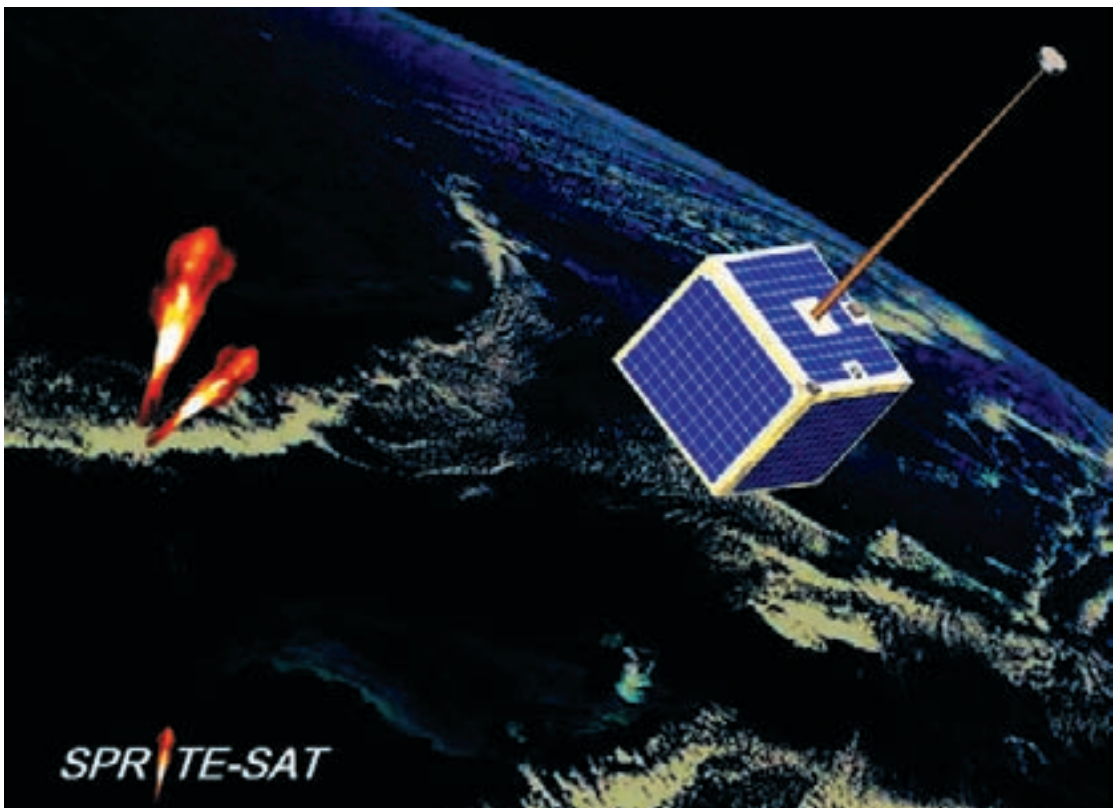


# The Beginning of the Future for Mankind from Ideal Collaboration Providing Intellectual Resources to the World through University-Industry Cooperation

## SPRITE-SAT: A Low-cost Short-period Project Made Possible By Academia-Industry Collaboration



The Department of Geophysics, Graduate School of Science, and the Department of Aerospace Engineering, Graduate School of Engineering have cooperated with each other to carry out the SPRITE-SAT project for an ultra-compact scientific satellite with a total weight in the order of 50 kg. It is planned to be launched as a piggyback satellite of the large satellite of the Japan Aerospace Exploration Agency (JAXA), GOSAT, at the Tanegashima Space Center in January 2009.

Manufacturing an ordinary space satellite costs billions to tens of billions yen, and sometimes takes more than 10 years from planning to launch. With SPRITE-SAT project, however, the costs of the development, making and installing

the satellite and the ground-based facilities have been covered mainly with a grant-in-aid for Specially Promoted Research (about ¥350 million/4 years). It has taken only about four years from the planning to the launch, and only one year from the start of assembly to the completion of the satellite. Such a rapid development, enabling us to lead in the international scientific research field, was achieved by the joint work of highly motivated students / professors in university and staff from private companies. The project would not be feasible without the cooperation of flexible companies with sophisticated technologies including system design, communication equipment, extension mechanisms, and on-board observation equipment of the satellite.

### Systematic Collaboration with Private Sectors (Active Academia-Industry Collaboration with Collaboration Agreements)

Date of conclusion	Name of organization	Purpose of Collaboration
August 3, 2007	Japan Aerospace Exploring Agency (JAXA)	To further joint research, exchange researchers, cultivate young researchers through collaboration courses at graduate schools, etc., and use mutual research facilities/equipment.
July 25, 2008	Central Institute for Experimental Animals	To promote joint research, exchange researchers, cultivate young researchers, and use mutual research facilities/equipment.
July 28, 2008	Nippon Telegraph and Telephone Corporation (NTT)	To promote joint research, exchange researchers, cultivate young researchers, and use mutual research facilities/equipment.



## Initiation of a Graduate Course titled "Local Economic and Financial Theory" sponsored by The 77 Bank.

The 77 Bank and Tohoku University initiated a sponsored course titled "Local Economic and Financial Theory" at the Graduate School of Economics. Both sides concluded an Academia-Industry Collaboration agreement in January 2007, to cooperate in contribution with the communities and revitalize the local economy. This course was begun under the agreement. It will begin with two subjects of "Local Economic Theory" and "Local Financial Theory" as in the graduate courses this October.



## New Research Facilities for "Brain Training" were Opened

Professor Ryuta Kawashima at the Institute of Development, Aging and Cancer, who supervised the creation of "DS Training for Grown-ups to Train the Brain," a big-hit game software product for mobile phones, showed new facilities equipped with measuring equipment to observe changes in blood current in the brain, and so on, opened to the public in April 2008. This is the second case of a result of academia-industry collaboration led by Professor Kawashima, following the first case where animal experimental faculties were constructed in 2007.



## Achievements Reported at the Conference for the Promotion of Collaboration among Business, Academia, and Government

The Conference for the Promotion of Collaboration among Business, Academia, and Government, hosted by the Office of Cabinet of Ministers, etc., commends those who have shown great achievements and contributed in taking a leading role for industry-academia-government collaboration. Two professors at Tohoku University were commended with a People of Merit Award in 2007. Professor Hiroshi Takahashi, who was commended in the following year, was evaluated highly and was presented with the Minister of Land, Infrastructure, Transport and Tourism Award.

### Minister of Science and Technology Policy Award

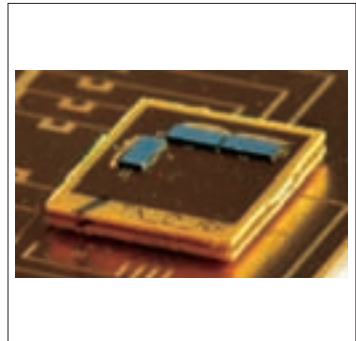
Kazuo Hokkirigawa, Professor, Graduate School of Engineering, Tohoku University  
Sanwa Oil & Fat Co., Ltd.  
Prefact Co., Ltd.



Development and applications of multi-functional carbon materials RB ceramics made from rice bran

### Minister of Education, Culture, Sports, Science and Technology Award

Kazuo Tsubouchi, Professor, Research Institute of Electrical Communication, Tohoku University  
NEC Corporation  
Mitsubishi Electric Corporation



Development of a next-generation mobile Internet terminal through academia-industry collaboration

### Minister of Land, Infrastructure, Transport and Tourism Award

Hiroshi Takahashi, Professor, Graduate School of Environmental Studies, Tohoku University  
Mori Institute for Environmental Technology Co., Ltd.  
Bon Terrain Research Committee



Recycling technology for high water content sludge using Fiber-Cement-Stabilized Soil Method called "Bon Terrain Method"