

ntegration of Wisdom

Innovation

## The Transdisciplinary Federation of Science and Technology NPO

### Foundation and aims

Forty academic societies that encompass a wide range of humanities and sciences formed a coalition to develop and promote "transdisciplinary science," which constitutes the basics of technology, such as statistics, simulation, optimization, informatics, and design science, to promote integration of natural sciences, humanities, social sciences, and engineering. The federation pursues various activities aimed at stressing the importance of a horizontal axis and strengthening it in the face of the actual situation, in which science and technology continue to be vertically subdivided.

#### Organization

#### President<sup>.</sup> Hidenori Kimura from Riken Research

Vice Presidents:

Koichiro Deauchi from the University of Tohoku Yoshifumi Yasuoka from the National Institute for Environmental Studies, NIES

#### Membership:

57,000 in 40 academic societies Offices:

Located in Bunkyo Ward, Tokyo, and Suita City, Osaka

## A summary of activities and achievements

Publication of an academic journal

- "Transdisciplinary:": Following the first publication in April 2007,
- the journal has been issued twice a year. Symposiums:
  - Held on such themes as "The role of transdisciplinary science and technology in Japan's academic fields in the 21st century. "Aiming at advanced manufacturing that will lead the world," "Searching a technological strategy suited to an age of co-existence that connects human hearts," and "Transdisciplinary science and technology as well as mathematics -Working toward the creation of a new academic sphere."

#### Forums:

- Jointly hosted by SICE and Transdisciplinary Science and Technology Initiative (about six times a year).
- Investigation and research society: Focused on product development, design

Academic learning

process engineering, and transdisciplinary human resource development.

> Spread of transdisciplinary science and technology

- Project activities:
  - Multiple specialists in transdisciplinary fields who belong to different organizations jointly organize projects and pursue solutions to real problems facing companies.
  - Multiple member academic societies promote and support transdisciplinary research projects through these alliances.
- Making a road map to transdisciplinary science and technology This is designed to help with resource management (RM) in a combined field of control, simulation technology, human interface, and manufacturing.
- Policy proposals and commissioned research projects:

These include a proposal program for policies on science and technology entitled "The role and promotion of transdisciplinary science and technology (2003)," a research project, "A platform for transdisciplinary science and technology designed to construct next-generation system engineering," funded by subsidies from the Ministry of Education, Culture, Sports, Science and Technology, a research program, "The fusion of knowledge involving an innovation strategy" commissioned by the Cabinet Office as part of its comprehensive science and technology research project, (2007), the Nagano Declaration (2005) and a final report by the committee on intellectual property (2005).

Investigation and research society:

The society has been working to minimize and visualize risks, support communication for co-existence, and carry out research into medical interfaces.

Publication of the academic journal "Transdisciplinary"

Planning and co-sponsorship forums

Planning and hosting symposiums Investigation and research

Hosting Transdisciplinary

federation conferences

Hosting Transdisciplinary comprehensive symposiums

Investigation and research

- Social contribution through transdisciplinary science and technology External activities
  - **Project activities**

Policy proposals, commissioned investigations, etc.

Investigation and research

## Social and cultural systems

An alliance was formed with the Transdisciplinary Science and Technology Initiative (with industry)

#### Activities aimed at strengthening infrastructure

Transdisciplinary science and technology Deepening academic learning



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Japanese Society for the Science of Design	Japanese Soc	iety of Biofeedback Research
The Japan Society for Precision Engineering	The Robotics Society of Japan	creature
Design	Japanese Society of Biomechanic	The Society for Biotechnology, Japan
The Remote S <mark>ensing Society of Japan</mark>		Japan Society of Kansei Engineering
The Society of Instrument and Control Engineers	oronics Life	Kansei
The Virtual Reality	Society of Japan Society f	or Science on Form, Japan
Measurement Control	Human Interface Society	Japan Ergonomics Society
The Institute of Systems, Control and Information Engineers	Japan Copiety for	Information and Management
The Japan Society for Industrial and Applied Mathematics	Japan Society for	mormation and Management
	TraFST	The Behaviormetric Society of Japan
International Society for Mathematical Sciences	nber Societies	The Japa <mark>n Socie</mark> ty for Production Management
Mathematical principle The	e Japan Association of Real Option and Stra	ategy The Japanese Society for Quality Control
Japan Society for Fuzzy Theory and Intelligent Informatics		Management
Information Japanese Society of	Applied Statistics	Reliability Engineering Association of Japar
	The Japan Society for Manageme	
The Visualization Society of Japan Japan Statistical Society	The Japan Association for Social Info	Quality Engineering Society
Simulation	·	Association of Behavioral Economics and Finance
	The Japan Society fo <mark>r Science Policy and F</mark>	Research Management
The Japan Society for Computational Engineering and Science	Japan Society of Security Management	Social
Statistics		Japan Association of Simulation and Gaming
The Operations Research Society of Japa	Plan	Management
The operations rescal of boolety of super-		ndustrial Management Association
Japan Society of Simulation Technology The S	Society of Project Management	Japan Association for Management Systems

Transdisciplinary Federation of Science and Technology

# Transdisciplinary federation conferences:

First: 2005 in Nagano Second: 2007 in Kyoto Third: 2009 in Sendai Fourth: 2011 in Kanazawa Transdisciplinary Federation comprehensive symposiums: First: 2006 in Tokyo Second: 2008 in Tokyo Third: 2010 in Tokyo Investigation and research

society: Worked on the simulation and SQC, the construction of next-generation systems engineering, and the fusion of systems engineering with knowledge management An alliance was formed with the Transdisciplinary Science and Technology Initiative (consisting of corporate members)



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