



# **Transdisciplinarity: Joint Problem Solving among Science, Technology, and Society**

An Effective Way for Managing Complexity

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<i>Rudolf Häberli; Alain Bill, ABB Corporate Research Ltd, Baden-Dättwil; Walter Grossenbacher-Mansuy; Julie Thompson Klein; Roland W. Scholz, Swiss Federal Institute of Technology (ETH), Zurich; Myrtha Welti, Swiss Foundation Science et Cité, Berne</i> The International Transdisciplinarity Conference yields answers to four questions. What is transdisciplinarity? Why and where is it needed? What promotes good practices?	
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	<i>Rita Colwell, Director U.S. National Science Foundation (US NSF) and Robert Eisenstein, Assistant Director for Mathematical and Physical Sciences (US NSF), Arlington, Virginia, USA</i>	
	The deepening interconnections of science are evident in the interdisciplinary kaleidoscope of research that is fostered by new information technologies and the science of complexity at all scales, from the gene to the galaxy.	
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	<i>Michael Gibbons, Secretary General of the Association of Commonwealth Universities, London, UK and Helga Nowotny, Chair of Philosophy and Social Studies of Science, Swiss Federal Institute of Technology (ETH), Zurich</i>	
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public arena and the production of knowledge that is “socially robust.”

**3.4 The Responsibility of Science and Scientists . . . . . 81**

*Richard Ernst, Swiss Federal Institute of Technology (ETH), Zurich and Nobel Prize Winner in Chemistry*

Solving the urgent problems of our time requires scientists to assume responsibility in focused research, public teaching, and speaking out in the media and other forums.

**3.5 Mobilizing the Intellectual Capital of Universities . . . 94**

*Uwe Schneidewind, Institute for Business Administration, University of Oldenburg, Germany*

Transdisciplinarity is a new way to organize work within universities by mobilizing the “intellectual capital” to address complex problems and by promoting greater reflexivity.

**4 Interactive Sessions . . . . . 101**

**4.1 The Dialogue Sessions . . . . . 103**

*Julie Thompson Klein*

Dialogue Sessions were traditional paper presentations that documented and reflected on experiences in a wide variety of contexts.

**4.2 The Mutual Learning Sessions . . . . . 117**

*Roland W. Scholz*

Mutual Learning Sessions created collaborative laboratories with partners from private enterprise, politics, communities, NGO’s, and academia in eighteen different locations.

**4.3 The Idea Market . . . . . 130**

*Walter Grossenbacher-Mansuy*

The Idea Market was an open forum for exchanging new ideas, tools and experiences through traditional posters, video animation, and computer and model demonstrations.

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Members of the conference organising committee offer a synthesis of major lessons, exploring conceptual meanings, elements of good practice, and areas for follow-up.	
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<i>Hansjürg Mey, President of the Swiss Federal Commission for Universities of Applied Sciences, Berne; Sunita Kapila, International Development Research Center (IDRC), Nairobi, Kenya, with: Rainer Gerold, Director of Life Sciences and Quality of Life, Commission of the European Communities, Brussels; Jan Eric Sundgren, President of Chalmers University, Göteborg, Sweden; Rolf Wespe, SAFEL, Berne</i>	
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The new relationship of research and problem-solving crosses traditional boundaries of disciplines, organizations, and sectors of society through cooperative and collaborative actions on local, regional, and international scales.	