

International & Transdisciplinary Symposium
on Advanced Future Studies

Beyond Boundaries

—Exploring the Creative Evolution of Transdisciplinary Studies—

February 8-10, 2017

International Research Unit of Advanced Future Studies
(IRU-AFS)

Yukawa Institute for Theoretical Physics
(YITP)

Kyoto University

Organizing Committee

Chair : Masatoshi Murase (Kyoto University)

Cynthia	Trevisan	(California State University)
Tae-Soo	Chon	(Pusan National University)
Ruprecht	Mattig	(TU Dortmund University)
Shin-ichi	Nakano	(Kyoto University)
Tadashi	Nishihira	(Kyoto University)
Kazuo	Nishimura	(Kyoto University)
Misao	Sasaki	(Kyoto University)
Arno	Suzuki	(Kyoto University)
Naohide	Tomita	(Kyoto University)
Toshinao	Tsunemi	(Kyoto University)
Eiichi	Yamaguchi	(Kyoto University)
Kazuyoshi	Yoshimura	(Kyoto University)

Venue: Panasonic Auditorium, Yukawa Hall, YITP on Feb.8-9
Clock Tower, Kyoto University on Feb.10

Organized by:

International Research Unit of Advanced Future Studies (IRU-AFS), Kyoto University

Yukawa Institute for Theoretical Physics (YITP), Kyoto University

Supported partly by: Grant-in-Aid for challenging Exploratory Research (No. 26560136)

Co-organized by:

International Research Unit of Integrated Complex System Sciences, Kyoto University

Beyond Boundaries:

Exploring the Creative Evolution of Transdisciplinary Studies

Scope:

We are living in the face of dramatically changing circumstances through the complex interactions between humans, organizations, societies, and so on. Our world is more global than ever; and thus it looks like a huge system involving systems nested within systems. By focusing on “external” agents, we have tried to solve serious problems, although, such intensive efforts have not succeeded very well. The reason for this is that some of our solutions have seemed to solve the existing problems at first, but eventually created further problems due to the chain of hidden causation. Even with a better understanding of the individual systems involved, we have hardly controlled the systems at all. Because of such self-nested structures, these systems often exhibit abrupt disruptions just like global financial crises and unexpected consequences even without natural disasters or human errors.

Certain features of these disruptions seem to be surprisingly consistent, despite the diversity of their details. It is now time to attack the unsolved problems on the basis of “transdisciplinary” discussions among different disciplines such as ecology, economics, cognitive science, and so on. In solving serious problems, we need radical new approaches instead of our habitual way of thinking. Two different kinds of approaches have been studied in different fields. One is based on a system-design perspective: we should not intend to control systems for avoiding errors, but to design systems ready for failures. This is relating to an emerging field of “Resilience” (Zolli, 2012). Presumably, we will learn about dynamical features typical of resilient systems by studying living systems. Another is more or less a human-oriented approach, as we human beings are considered as parts of systems. It was pointed out that the central issue of our time across all system levels emerges from our “internal” condition (Scharmer, 2009). Without changing our thinking ways relating to our internal condition, we will not be able to solve serious problems.

The present “Transdisciplinary Symposium” will invite both approaches, as they are closely related to each other. It is our hope to develop new perspectives and new actions toward our future through stimulating discussions beyond different disciplines.

February 8 (Wednesday)

13 : 00-15 : 00

Session Chair: Tae-Soo Chon (Pusan National University, Korea)

Afternoon Session I : Learning How to Know Beyond Ourselves

15 : 00-15 : 20 Break (20 min)

15 : 20-16 : 40

Session Chair: Naohide Tomita (Kyoto University)

Afternoon Session II : Learning from Emergent Problems Beyond Believes

16 : 40-17 : 00 Break (20 min)

17 : 00-18 : 20

Tadashi Yagi (Faculty of Economics, Doshisha University)

Challenging Session I : Beyond Boundaries of Education and Science

18 : 30 Closing

February 9th (Thursday)

10 : 00-11 : 40

Session Chair: Kunio Yasue (Notre Dame Seishin University)

Morning Session I : How to Attack Emerging Paradoxes

11 : 40-13 : 00 Lunch (80 min.)

13 : 00-15 : 00

Session Chair: Cynthia Trevisan (California State University, U.S.A.)

Afternoon Session I : Understanding Complex Dynamics

15 : 00-15 : 30 Break (30 min.)

15 : 30-17 : 00

Session Chair: Brian Orr (Bastyr University, U.S.A.)

Ecology Group Special Panel Discussions

17 : 00-17 : 20 Break (20 min)

17 : 20-18 : 20

Session Chair: David McAvity (The Evergreen State College)

Afternoon Session II : Creative Problem Solving in Diverse Disciplines

18 : 30 Banquet (Out of the Campus, see the Map at the end page)

Venue: Food Café “Sako Boon” ④ on the Map (see Last Page)

Fee: 2000 Japanese Yen for Each

February 10th (Friday)
Venue: Clock Tower (2nd Floor)

10 : 00-11 : 40

Session Chair: Elizabeth Kriesten (St. Peter's Boys High School, New York City)

Morning Session I : Beyond Oppositions Toward New Synthesis

11 : 40-13 : 00 Lunch (80 min.)

13 : 00-14 : 30

Session Chair: Kohmei Kadowaki (Kyoto University)

Challenging Session II : Creative Thinking Beyond Various Problems

14 : 30 - 15 : 00 Break (30 min)

15 : 00-16 : 00 Panel Discussions

“Transdisciplinary Studies Beyond Boundaries”

Chair: Cynthia Trevisan (California State University, U.S.A.)

Panelists: Brian Orr (Bastyr University, U.S.A.)
 Noboru Hidano (Tokyo Institute of Technology, Japan)
 Ruprecht Mattig (TU Dortmund University, Germany)
 Tae-Soo Chon (Pusan National University, Korea)

16 : 00 Closing

Venue: Clock Tower (1st Floor)

“Challenging to Miracles—From Perspectives of Advanced Future Studies and Synergetic Studies of Space”

17 : 00 Doors Open

18 : 00-19 : 00 Kitaro Music Performance
 Commentary by Kazunari Shibata (in Japanese)

19 : 00-20 : 00 Panel Discussions (in Japanese)
 Panelists:
 Kitaro (Musician)
 Shizuka Sasaki (HANAZONO University)
 Kazunari Shibata
 (Kyoto University)

Moderator:
Masatoshi Murase (Kyoto University)

20 : 00 Closing

Program: February 8 (Wednesday)

13 : 00-15 : 00

Afternoon Session I : Learning How to Know Beyond Ourselves

Session Chair:

Tae-Soo Chon

(Pusan National University, Korea)

13:00-13:05

Opening Address

Misao Sasaki

(Yukawa Institute for Theoretical Physics, Kyoto University)

13:05-13:30

Five Elementary Processes in Co-evolution

Mastoshi Murase

(Yukawa Institute for Theoretical Physics, Kyoto University)

13:30-14:00

The Fate of Quantum Superposition

Cynthia Trevisan

(California State University, California Maritime Academy, U.S.A.)

14:00-14:30

Extended self: communication with others and within ourselves

Noboru Hidano

(Tokyo Institute of Technology)

14:30-15:00

Heritagemanagement as an act of compensation

– A new insight into knowledge transfer (see Abstract attached)

Shigemi Inaga

(International Research Center for Japanese Studies)

15:00-15:20

Break (20 min)

February 8th (Wednesday), Continued...

15 : 20-16 : 40

Afternoon Session II : Learning from Emergent Problems Beyond Believes

Session Chair:

Naohide Tomita

(Field of Clinical Engineering, Kyoto University)

15:20-15:40

The Evolutionary Origins of Autoimmune Disease:

What history tells us about emerging therapies

Brian Orr (Bastyr University, U.S.A.)

15:40-15:55

The Basic Problem of Nursing Job

Nami Imai

(Mie University, Faculty of Medicine, School of Nursing)

15:55-16:10

Aiming for efficient and safe venipuncture in fundamental nursing education

Keiko Fukuroku

(Mie University, Faculty of Medicine, School of Nursing)

16:10-16:25

Developing an Educational Methodology based on Learning from Failure

Tomoko Murase

(Japanese Red Cross Toyota College of Nursing)

16:25-16:40

A Shortcut to a Miraculous Discovery:

Potentialities of Body-Balance Communication

Kunio Yasue

(Notre Dame Seishin University)

16:40-17:00

Break (20 min)

February 8th (Wednesday), Continued...

17 : 00-18 : 30

Challenging Session I : Beyond Boundaries of Education and Science

Session Chair:

Tadashi Yagi

(Faculty of Economics, Doshisha University)

17:00-17:15

Aspects of a book report in Japanese elementary schools

Nana Isobe (Graduate School of Education, Kyoto University)

17:15-17:30

The fish in the fish: An introduction to the study of fish skeleton

Iki Murase

(Atmosphere and Ocean Research Institute, The University of Tokyo)

17:30-17:45

Experience of Suffering: Focusing on the Insight of Mieko Kamiya

Miho Takakura (Graduate School of Education, Kyoto University)

17:45-18:00

The ethical teleology in S. Freud's Psychoanalysis: Focusing on the concept of "Self-regard"

Yuho Goto (Graduate School of Education, Kyoto University)

18:00-18:30

Free Discussions

18:30

Closing

February 9th (Thursday)

10 : 00-11 : 40

Morning Session I : How to Attack Emerging Paradoxes

Session Chair:

Kunio Yasue

(Notre Dame Seishin University)

10:00-10:20

No-mind and no-body:

Toward the whole energy of the Field of no-mind and no-body

Tadashi Nishihira

(Graduate School of Education, Kyoto University)

10:20-10:40

Inferring behavior adaptability and monitoring in response to anthropogenic and natural variability

Tae-Soo Chon

(Pusan National University, Korea)

10:40-11:00

What is “abnormal” (paradoxical relationship in a living thing)

Naohide Tomita

(Field of Clinical Engineering, Kyoto University)

11:00-11:20

Can I observe brain activity by lights?

Yuusuke Iso

(Graduate School of Informatics, Kyoto University)

11:20-11:40

Using Attachment Theory to explore the natural parameters of critical thinking in the human psyche

Elizabeth Kriesten

(St. Peter's Boys High School, New York City)

11:40-13:00

Lunch (80 min.)

February 9th (Thursday), Continued...

13 : 00-15 : 00

Afternoon Session I : Understanding Complex Dynamics

Session Chair: Cynthia Trevisan

California State University, California Maritime Academ)

13:00-13:15

Dimensions of Change within the Economics Mainstream

Tadashi Yagi

(Faculty of Economics, Doshisha University)

13:15-13:30

Rethinking psychology: Conscious, unconscious, and body

Masao Yogo

(Faculty of Psychology Director of *Affective Sciences*, Harris Science Research Institute, Doshisha University)

13:30-13:45

How Parenting Affects Children's Futures

— Empirical Study in Japan —

Kazuo Nishimura

(Institute of Economic Research, Kyoto University)

13:45-14:00

Two Player Social Dilemmas

Max Thom

(The Evergreen State College)

14:00 - 14:30

The Evolutionary Dynamics of Identity and Perception

David McAvity

(The Evergreen State College)

14:30-14:45

On the Origin and Evolution of Caffeine-Containing Plants:

Exploring the Boundaries of Ecology, Chemistry, and Taxonomy

Adam Negrin (City University of New York, Lehman College)

14:45-15:00

Cooperators vs cheats in spatially structured environments

Kohmei Kadowaki (Center for Ecological Research, Kyoto University)

15:00-15:30

Break (30 min.)

February 9th (Thursday), Continued...

15 : 30-17 : 00

**Ecology Group Special Panel Discussions:
What biodiversity/ecological studies tell us**

Session Chair:

Brian Orr

(Bastyr University, U.S.A.)

15:30-15:50

Lake plankton, organisms with high biodiversity and interaction

Shin-ichi Nakano

(Center for Ecological Research, Kyoto University)

15:50-16:05

Basis of evolution of organisms

Atsushi Yamauchi

(Center for Ecological Research, Kyoto University)

16:05-16:20

How plants can create biodiversity of associated organisms

Takayuki Ohgushi

(Center for Ecological Research, Kyoto University)

16:20-16:35

Information-interaction networks mediated by plant volatiles

Junji Takabayashi

(Center for Ecological Research, Kyoto University)

16:35-17:00

Panel Discussions (25 min)

17:00 - 17:20

Break (20 min)

February 9th (Thursday), Continued...

17 : 20-18 : 20

Afternoon Session II : Creative Problem Solving in Diverse Disciplines

Session Chair:
David McAvity
(The Evergreen State College)

17:20-17:35

Itinerant-Electron Magnetism: from Localized to Itinerant
Kazuyoshi Yoshimura (Graduate School of Science, Kyoto University)

17:35-17:50

Abductive Way of Creating Science-based Industries: Comparison
between Japan and U.S.A.

Eiichi Yamaguchi
(Shishu-kan, Graduate School of Advanced Integrated Studies in
Human Survivability)

17:50-18:05

Decrease in the number of scientists and journal articles in Physics
in Japan - with relation to a "knowledge and person" circulation
model

Hideki Iijima
(Technology and Innovation Management, Graduate School of Policy
and Management, Doshisha University)

18:05-18:20

Exploring the fate of the Universe: using creative connections
between gravitational waves, dark energy, and education

Joseph Fedrow
(Yukawa Institute for Theoretical Physics, Kyoto University)

18:30 Banquet

Venue: Food Café “Sako Boon” ④ on the Map (see Last Page)

Fee: 2000 Japanese Yen for Each

February 10th (Friday)

Place: Clock Tower (2nd Floor)

10 : 00-11 : 40

Morning Session I : Toward New Synthesis Beyond Oppositions

Session Chair:

Elizabeth Kriesten

(St. Peter's Boys High School, New York City)

10:00-10:40

Transcultural Dynamics: Gains and Losses in Education

Ruprecht Mattig

(Faculty of Education, Psychology, and Sociology, TU Dortmund University, Germany)

10:40-10:55

Modern economics that has spawned an era of the Anthropocene

Ryuichi Fukuhara

(Graduate School of Economics, Doshisha University)

10:55-11:10

Emergence of a learning community among high school students

Toshinao Tsunemi

(Office of Community Relations, Graduate School of Science, Kyoto University)

11:10-11:25

Disappearing Japanese houses: their contribution to protect the environment

Arno Suzuki

(Graduate School of Science, Kyoto University)

11:25-11:40

Practice of Body-Balance Communication for Self-Establishment

Kazunori Yokota and Kunio Yasue (Notre Dame Seishin University)

11:40-13:00

Lunch (80 minutes)

February 10th (Friday), Continued...

13 : 00-14 : 30

Challenging Session II : Creative Thinking Beyond Various Problems

Session Chair:

Kohmei Kadowaki

(Center for Ecological Research, Kyoto University)

13:00-13:15

Mystery of How Our Brain Modulates Motions: A review on circuitry of the basal ganglia

Takayuki Noro (School of Medicine, Kyoto University)

13:15-13:30

Seismo-acoustic signals of Strombolian eruption at Aso volcano, Japan

Kyoka Ishii (Graduate School of Science, Kyoto University)

13:30-13:45

Physics as a Physical Phenomenon — Beyond the Objectivity —

Hayato Arai (School of Science, Kyoto University)

13:45-14:00

Creative Instabilities in the Universe

Michele Oliosi Pasco

(Yukawa Institute for Theoretical Physics, Kyoto University)

14:00 - 14:15

The Feature of Holistic Education in Japan: Based on

Activities of Japan Holistic Education Society in 20 years

Masato Fukuwaka (Graduate School of Education, Kyoto University)

14:15 - 14:30

The Prelude to Kokinwakashu

Yoh Sonobe (Faculty of integrated human studies, Kyoto University)

14:30 - 15:00

Break (30 min)

February 10th (Friday), Continued...

15:00-16:00

Panel Discussions

Beyond Boundaries —Toward Transdisciplinary Advanced Future Studies—

Chair:

Physicist & Mathematician

Cynthia Trevisan (California State University, U.S.A.)

Panelists:

Ecologist

Tae-Soo Chon (Pusan National University, Korea)

Medical Doctor

Brian Orr (Bastyr University, U.S.A.)

Human Scientist

Noboru Hidano (Tokyo Institute of Technology, Japan)

Philosopher

Ruprecht Mattig (TU Dortmund University, Germany)

16 : 00

Closing

Place: Clock Tower (1st Floor)

“Challenging to Miracles—From Perspectives of Advanced Future Studies and Synergetic Studies of Space”

17:00

Doors Open

18:00-19:00

Kitaro Music Performance

Music by Kitaro

Commentary by Kazunari Shibata

(Kwasan and Hida Observatories, Graduate School of Science,
Kyoto University)

19:00-20:00

Panel Discussions (in Japanese)

Panelists:

Kitaro (Musician)

Shizuka Sasaki (HANAZONO University)

Kazunari Shibata

(Kwasan and Hida Observatories, Graduate School of Science,
Kyoto University)

Moderator:

Masatoshi Murase

(Yukawa Institute for Theoretical Physics, Kyoto University)

20:00

Closing