



以下、各年度のシンポジウムの開催場所と日時をまとめておく。

- IIASA - Kyoto University The First Joint International Seminar on Applied Analysis and Synthesis of Complex Systems, June 28-29, 2004, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

- IIASA - Technische Universität München - Kyoto University, The Second Joint International Seminar on Applied Analysis and Synthesis of Complex Systems, June 30-July 1, 2005, Technische Universität München, München, Germany

- IIASA - Kyoto University The Third Joint International Seminar on Applied Analysis and Synthesis of Complex Systems, June 29-30, 2006, International Institute for Applied Systems Analysis, Laxenburg, Austria

- IIASA - Kyoto University The Fourth Joint International Seminar on Applied Analysis and Synthesis of Complex Systems, June 28-29, 2007, International Institute for Applied Systems Analysis, Laxenburg, Austria

(2) International Workshop 2004 on Air-Sea Interactions with Gas Transfer

October 25-26, 2004

Kyoto University Clock Tower Centennial Hall

Kyoto University, Kyoto, JAPAN

Chairman:

S. Komori (Kyoto Univ.)

Secretaries:

K. Nagata (Kyoto Univ.)

T. Yamaguchi (Kyoto Univ.)

This workshop was organized to discuss what is important in the studies on air-sea interactions with gas transfer and how to precisely estimate the air-sea gas exchange rate which strongly influences the reliability of the future global carbon cycle. In order to exchange most exciting and new information in this field, we invited eight speakers from both abroad and home who are internationally recognized as leading scientists. Furthermore, to hold enough time for discussion, we limited the presentations in this workshop to only invited talks and asked one chairperson to chair one invited talk. As a result, we were able to have sufficient discussion on very interesting problems related to heat, mass and momentum transfer at the air-sea interface. Finally, we acknowledge financial support by the 21st

Century Center of Excellence Program for Research and Education on Complex Functional Mechanical Systems and we also thank all the invited speakers and participants in this workshop.

Monday, October 25

9:15 ~ 9:20 Welcome Address

Opening Session

Session Chair: Dr. K. Nagata (Kyoto University, JAPAN)

9:20-9:35 Introduction of the COE Program

Prof. K. Tsuchiya, Leader of the 21st Century COE Program
(Kyoto University, JAPAN)

9:35-10:15 Introduction of our COE Project on Gas Transfer Across the Air-Water Interface

Prof. S. Komori (Kyoto University, JAPAN)

Session 1

Session Chairs: Prof. H. Ueda (Kyoto University, JAPAN)

Prof. Y. Sakai (Nagoya University, JAPAN)

10:30-11:10 Turbulent Flow Above and Below Wind Wave Surfaces

Prof. J. C. R. Hunt (University College London, UK)

11:30-12:10 The Effect of Wind Forcing on Air-Water Gas Transfer

Prof. S. Banerjee (University of California, Santa Barbara, USA)

Session 2

Session Chairs: Prof. I. Nezu (Kyoto University, JAPAN),

Dr. Y. Suzuki (Japan Weather Association, JAPAN)

14:00-14:40 On the Role of Micro-Scale Breaking Waves in Air-Sea Momentum Flux and Gas Exchange

Prof. M. L. Banner (The University of New South Wales, AUSTRALIA)

15:00-15:40 The Windsea Reynolds Number as the Fundamental Controlling Parameter for Air-Sea Boundary Processes

Prof. Y. Toba (Emeritus Professor of Tohoku University, JAPAN)

Session 3

Session Chair: Dr. N. Mori (Osaka City University, JAPAN)

16:30-17:10 Improving Global Air-Sea CO₂ Flux Estimates through Better Parameterization of Gas Transfer

Prof. R. H. Wanninkhof

(The National Oceanographic and Atmospheric Administration, USA)

19:00-21:00 **Dinner at the Japanese-style restaurant near the Hotel Fujita,
'Ganko Takasegawa Nijo-en'**

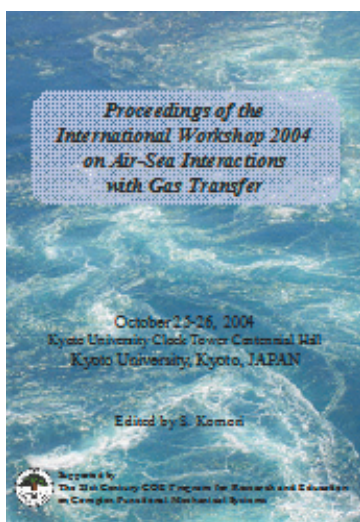
Tuesday, October 26

Session 4

- Session Chairs: Prof. T. Kunugi (Kyoto University, JAPAN)
Prof. D. Zhao (Ocean University of China, CHINA)
- 9:30 -10:10 Using the Net Air-Water Flux as a Proxy Tracer for Gas Exchange
Prof. W. E. Asher (University of Washington, USA)
- 10:30-11:10 Laboratory and Field Studies on Air-Water Mass Transfer
Prof. W. R. McGillis (Columbia University, USA)
- 11:30-12:10 Air-Sea Interface, Wind-Waves, Heat and Gas Exchange, and Satellite-Based Remote Sensing
Prof. H. Kawamura (Tohoku University, JAPAN)

Closing Remarks

- 12:30 ~ 12:45 Prof. Y. Toba (Emeritus Professor of Tohoku University, JAPAN)
- 14:30-17:00 **Tour to Katsura Imperial Villa and Katsura New Campus for the Graduate School of Engineering, Kyoto University**



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