

# The Third International Workshop on Prevention and Mitigation of Meteorological Disasters in Southeast Asia

## PROGRAM

March 1 (Mon) - 3 (Wed), 2010

Room H-202, Ritsumeikan Asia Pacific University, Beppu, Japan

### March 1 (Mon)

08:15 Bus leaves Nishitetsu Resort Inn Beppu for APU

09:00 Registration

#### Opening session (Chair: Sanga-N. KAZADI)

09:15 Sanga-N. KAZADI (APU, Japan)

Welcome, opening remarks, and logistics

09:20 Takashi NISHIGAKI (JST, Japan)

Welcome address

09:30 Malcolm J. M. COOPER (APU, Japan)

Welcome address

09:40 Shigeo YODEN (DG/Kyoto U., Principal Investigator, Japan)

International collaborations on prevention and mitigation of meteorological disasters in Southeast Asia

10:10 Indratmo SOEKARNO (ITB, Vice President, Indonesia)

Flood protection in Bandung - West Java due to Citarum River

10:40 (Coffee break)

#### Opening session - continued (Chair: Kazuo SAITO)

11:00 Naoyuki HASEGAWA (Head of Office Int. Affairs/JMA, Japan)

Regional cooperation in meteorological services in Asia and the Pacific

11:30 Mu MU (IAP/CAS, China)

A comparison study on adaptive observation approaches: Singular vector, conditional nonlinear optimal perturbation and ensemble transform Kalman filter

12:00 Kaoru TAKARA (DPRI/Kyoto U., Leader of GCOE-ARS, Japan)

Sustainability science for a resilient society adaptable to extreme weather conditions

12:30 <<< Group photo >>>

12:40 (Lunch)

Set up of posters

**Session I: High-impact weather - prediction and analysis** (Chair: Tieh Yong KOH)

- 14:00 Tetsuo NAKAZAWA (MRI/JMA, Japan)  
How does the global ensemble forecast data detect high-impact weather events?
- 14:30 Venkata Bhaskar Rao DODLA (Jackson State U., US)  
A new strategy for improvement in the prediction of tropical cyclone intensity and movement using FDDA and vortex initialization
- 15:00 Introduction of posters
- 15:30 (Coffee break)

**Session I: - continued** (Chair: Tri Wahyu HADI)

- 16:00 Fredolin TANGANG (National U. of Malaysia, Malaysia)  
Impact of the Madden-Julian Oscillation (MJO) on the maritime continent's rainfall
- 16:30 Samsul BAHRI (Weather Modification Unit/BPPT, Indonesia)  
The use of radar for weather modification in order to mitigate weather and climate disaster in Indonesia
- 17:00 (End of the first day sessions)
- 17:20 Bus leaves APU for Hotel New Tsuruta
- 18:00 Banquet at Hotel New Tsuruta
- 20:00 End of Banquet

**March 2 (Tue)**

- 08:15 Bus leaves Nishitetsu Resort Inn Beppu for APU

**Session II: Tropical disturbances** (Chair: Takehiko SATOMURA)

- 09:00 Chun-Chieh WU (National Taiwan U, Taiwan)  
Targeted observation, data Assimilation, and tropical cyclone dynamics and predictability
- 09:30 Yoshinori SHOJI (MRI/JMA, Japan)  
Data assimilation of GPS PWV for Myanmar cyclone NARGIS
- 09:50 Krushna Chandra GOUDA (CSIR/CMMCS, India)  
Prediction of tropical cyclone over Bay of Bengal using NHM high resolution model
- 10:10 Hari Prasad DASARI (U. of Evora, Portugal)  
Numerical prediction and dynamical analysis of a super cyclonic system over north Indian Ocean
- 10:30 (Coffee break)

**Session II: - continued** (Chair: Chun-Chieh WU)

- 11:00 Takeshi ENOMOTO (JAMSTEC, Japan)  
Precursory signals of typhoon genesis in analysis ensemble spread
- 11:30 Palikone THALONGSENGCHANH (LMNRRRI/PMO, Lao PDR)  
Flood event on meteorological disaster "TC Ketsana's Case FY 2009" in Lao PDR
- 11:50 Thanh NGO-DUC (AMO/NHMS, Vietnam)  
Extreme climate events in Vietnam - tropical cyclones and heavy rainfall phenomena observed in the past
- 12:10 Shigenori OTSUKA (DG/Kyoto U., Japan)  
Decision support system for prevention and mitigation of meteorological disasters based on ensemble NWP data: an experimental use for the forecasts of Nargis
- 12:30 (Lunch)

**Session III: Heavy precipitation and microphysics** (Chair: Thi Xin KIEU)

- 13:30 Takehiko SATOMURA (DG/Kyoto U., Japan)  
Toward the mitigation of water disaster in countries in the Indochina Peninsula
- 14:00 Juneng LIEW (National U. of Malaysia, Malaysia)  
Numerical investigation of a severe afternoon thunderstorm over west coast of Peninsular Malaysia
- 14:20 Tetsuya TAKEMI (DPRI/Kyoto U., Japan)  
Representation of extreme weather events in convection-resolving simulations at 100-m resolution
- 14:40 Siriluk CHUMCHEAN (Mahanakorn U. of Technology, Thailand)  
Bangkok rainfall forecasting system: An operational radar and RTC application
- 15:00 (Coffee break)

**Session III: - continued** (Chair: Hirohiko ISHIKAWA)

- 15:30 Seon Ki PARK (Ewha Womans U., Korea)  
Characteristics of fog occurrence over the Korean Peninsula
- 16:00 Ryoji NAGASAWA (NPD/JMA, Japan)  
Problem of cloud overlap in the radiation calculation in the JMA Nonhydrostatic Model
- 16:20 Chee-Kiat TEO (Nanyang Tech. U., Singapore)  
Nadir correction to AIRS radiances
- 16:40 Hiromu SEKO (MRI/JMA, Japan)  
Data assimilation of side-looking radio occultation by observing system simulation experiment
- 17:00 (End of the second day sessions)
- 17:20 Bus leaves APU for Nishitetsu Resort Inn Beppu

### March 3 (Wed)

08:15 Bus leaves Nishitetsu Resort Inn Beppu for APU

#### **Session IV: Mesoscale NWP** (Chair: Seon Ki PARK)

09:00 Kazuo SAITO (MRI/JMA, Japan)

Achievement of MRI for the International Research for Prevention and Mitigation of Meteorological Disasters in Southeast Asia

09:30 Takuya KAWABATA (MRI/JMA, Japan)

Cloud-resolving 4D-Var with Radar and GPS data

09:50 Masaomi NAKAMURA (MRI/JMA, Japan)

Projection of the change in future extremes around Japan using a nonhydrostatic regional model

10:10 Santi SUMDIN (TMD, Thailand)

The conversion operational Unified Model output to GrADS and GIS data for weather forecasting activities in Thai Meteorological Department

10:30 (Coffee break)

#### **Session IV: - continued** (Chair: Tetsuya TAKEMI)

11:00 Tri Wahyu HADI (ITB, Indonesia)

Multiscale precursors of extreme weather and climatic events in Indonesia: Process study and experimental predictions

11:30 Wai-kin WONG (Hong Kong Observatory, Hong Kong)

Development of an operational rapid update non-hydrostatic NWP and data assimilation systems in the Hong Kong Observatory

11:50 Shugo HAYASHI (MRI/JMA, Japan)

Statistical verification of short range forecasts by NHM and WRF-ARW over Southeast Asia and Japan areas

12:10 Tieh Yong KOH (Nanyang Tech. U., Singapore)

Improved diagnostics for NWP verification

12:30 (Lunch)

#### **Session V: Global to regional scales and applications** (Chair: Hiromu SEKO)

13:30 Hirohiko ISHIKAWA (DPRI/Kyoto U., Japan)

Reproduction of hazardous weather in Asia in 2009 using dynamic downscaling from global analysis

14:00 Kumarethiran SUBRAMANIAM (MMD, Malaysia)

Performance of ensemble prediction for numerical weather prediction (NWP) models during the northeast monsoon over Peninsular Malaysia

- 14:20 Shozo YAMANE (Doshisha U., Japan)  
Properties of ensemble perturbations evolving in an atmospheric general circulation model
- 14:40 Zhina JIANG (LaSW/CAMS, China)  
A New Approach to the Generation of Initial Perturbations for Ensemble Prediction: Conditional nonlinear optimal perturbations
- 15:00 (Coffee break)

**Session V:** - continued (Chair: Shigeo YODEN)

- 15:30 Ivonne Milichristi RADJAWANE (ITB, Indonesia)  
Sea level rise assessment in the northern part of Java coastal area
- 16:00 Yoichi ISHIKAWA (DG/Kyoto U., Japan)  
Formation of ocean surface barrier layer simulated by high-resolution atmosphere-ocean coupled model
- 16:20 Rita Tisiana Dwi KUSWARDANI (Ocean University of China, China)  
The effects of surface waves on the upper ocean and climate system and its application to the development of an ocean forecast system in Indonesian Seas

**Closing**

- 16:40 Yoshinori SHOJI (MRI/JMA, Japan)  
Report on the 16th Session of the Asia-Pacific Regional Space Agency Forum and the first Asia Oceania Region Workshop on GNSS
- 16:50 Shigeo YODEN (DG/Kyoto U., Japan)  
Summary
- 17:00 (End of the workshop)
- 17:20 Bus leaves APU for Nishitetsu Resort Inn Beppu

## Poster presentations

<b>March 1 (Mon)</b> 12:40-14:00	Set up of posters
15:00-15:30	Introduction of posters
in every breaks	Poster sessions
<b>March 3 (Wed)</b> 15:00-15:30	put back of posters

- P-1 Taiichi HAYASHI (DPRI/Kyoto U., Japan)  
Recent research trend of heavy rainfall and severe local storm in the northeastern Indian subcontinent
- P-2\* Hitoshi HIROSE (DG/Kyoto U., Japan)  
Comparison between cloud cover variations from satellite observations and those from surface observations
- P-3\* Kosuke ITO (DG/Kyoto U., Japan)  
Estimation of air-sea fluxes in a tropical cyclone by using variational method with an intermediate atmosphere-ocean coupled mode
- P-4 Thi Xin KIEU (Vietnam National U. at Hanoi, Vietnam)  
On some tests of rainfall forecast using NHM in Vietnam
- P-5\* Yoshiaki MIYAMOTO (DPRI/Kyoto U., Japan)  
Axisymmetric and asymmetric processes of tropical-cyclone vortex during the rapid intensification phase
- P-6 Findy RENGGONO (Weather Modification Unit/BPPT, Indonesia)  
Precipitating cloud observed by C-band radar at Sorowako, Indonesia
- P-7\* Naoaki SAITO (DG/Kyoto U., Japan)  
Interaction between thermal convection and mean flow in a rotating system
- P-8 Tri Handoko SETO (Weather Modification Unit/BPPT, Indonesia)  
Weather modification technology for flood prevention in Indonesia
- P-9 Widada SULISTYA (Centre for Public Meteorology/BMKG, Indonesia)  
Indonesian extreme weather
- P-10 Fredolin TANGANG (National U. of Malaysia, Malaysia)  
Simulation of heavy precipitation episode over eastern Peninsular Malaysia using MM5: Sensitivity to cumulus parameterization schemes
- P-11 Palikone THALONGSENGCHANH (LMNRRI/PMO, Lao PDR)  
TC Ketsana's effect in Lao (FY2009)
- P-12\* Nurjanna Joko TRILAKSONO (DG/Kyoto U., Japan)  
Study of heavy rainfall during Jakarta flood event January-February 2007
- P-13\* Hiroki YAMAMOTO (DG/Kyoto U., Japan)  
Laboratory experiments on two coalescing axisymmetric turbulent plumes in a rotating fluid
- P-14\* Ryuji YOSHIDA (DPRI/Kyoto U., Japan)  
A Numerical simulation of tropical cyclogenesis with MCS merger

\* GCOE-ARS graduate students

# Open Symposium on Meteorological Disasters and Adaptable Society in the Asia-Pacific Region

## PROGRAM

March 4 (Thu), 2010

Room-H202, Ritsumeikan Asia Pacific University, Beppu, Japan

### March 4 (Thu)

08:45 Bus leaves Nishitetsu Resort Inn Beppu for APU

**Open Symposium** (Chair: Sanga-N. KAZADI)

10:00 Sanga-N. KAZADI (APU, Japan)

Opening remarks

10:10 Shigeo YODEN (DG/Kyoto U., Japan)

International collaborations on prevention and mitigation of meteorological disasters in Southeast Asia

10:30 Shunso TSUKADA (APU, Japan)

Socio-economic implications of meteorological disasters and possible measures to mitigate their impacts

10:50 Tieh Yong KOH (Nanyang Tech. U., Singapore)

Towards a mesoscale observation network in Southeast Asia

11:10 Toshitaka TSUDA (RISH/Kyoto U., Research Leader of GCOE-ARS, Japan)

Fusion of science and engineering for extreme weathers and global warming

11:30 Takashi NISHIGAKI (JST, Japan)

Comments

11:40 Masahiro KOBAYASHI (JICA Kyushu, Japan)

Comments

11:50 Sanga-N. KAZADI (APU, Japan)

Closing remarks

12:00 (end of the Symposium)

12:15 – 13:15 **Lunch buffet** at the APU cafeteria

all participants are invited to have further discussions/conversations

13:30 – 18:00

**Field observations at some key spots related to Geohazards in and around Beppu**

## Schedule summary

	1 (Mon)	2 (Tue)	3 (Wed)	4 (Thu)
Bus leaves Hotel	8:15	8:15	8:15	8:45
morning (9:00-12:30)	(9:15-12:30) Opening session	(9:00-12:30) Session II	(9:00-12:30) Session IV	(10:00-12:00) Open Symposium
Lunch (12:30-13:30)	(12:30-12:40) Group photo			Lunch buffet at APU cafeteria
Afternoon (13:30-17:00)	(14:00-17:00) Session I	(13:30-17:00) Session III	(13:30-17:00) Session IV	(13:30-18:00) Field observation at Geo-hazard spots
Bus leaves APU	17:20	17:20	17:20	
Evening (18:00-20:00)	Banquet			