

The First KU-NCU Joint Workshop on Mesoscale

Modeling and Predictability

Date : 12 March -13 March, 2024

Venue : Science Building II room 713, NCU

Time	Day 1 (3/12 Tue.)
09:00~09:30	Registration at Science Building II, 7th Floor
09:30~09:50	Joint Opening Ceremony NCU President: Prof. Jing-Yan Jou College Dean Prof. Shu-Kun Hsu Department Chair: Prof. Shu-Chih Yang
09:50~10:00	Opening Sessions Prof. Tetsuya Takemi Prof. Shu-Chih Yang
10:00~10:10	Group Photo & Coffee Break
10:10~11:10	Keynote Speech Session chair: Prof. Shu-Chih Yang, NCU, Taiwan
10:10~10:40	Prof. Tetsuya Takemi (KU) “Hybrid Modeling of Mesoscale and Large-Eddy Simulations to Assess the Impacts of Extreme Weather at Urban Scales”
10:40~11:10	Prof. Yu-Chieng Liou (NCU) “A Brief Introduction of NCU Radar Meteorology Laboratory” “Research on Radar Data Application”
11:10~11:20	Coffee Break
11:20~12:00	Observation and Model Analysis (I) Session chair: Prof. Shu-Chih Yang, NCU, Taiwan
11:20~11:40	Prof. Takeshi Enomoto (KU) “Ensemble Sensitivity Analysis of High-Impact Weather”
11:40~12:00	Prof. Pay-Liam Lin (NCU) “An Investigation on Microphysical Characteristics of Taiwan's Mei-Yu Season Rainfall using GPM DPR”
12:00~12:45	Lunch Break
12:45~13:30	Visiting TEAM-R
13:30~14:20	Observation and Model Analysis (II) Session chairs: Prof. Wei-Yu Chang, NCU, Taiwan Prof. Takeshi Enomoto, KU, Japan
13:30~13:50	Prof. Wei-Yu Chang (NCU) “Investigating the Winter Orographic Precipitation Processes Lanyang Plain: A Case Study from YESR2021”

13:50~14:05	Mr. Tomoyasu Maekawa (KU) “Analysis of Vortex Tubes and Updraft Behavior by using Multiple Doppler Analysis for Proposing a Life-Stage Model of Linear Convective Systems”
14:05~14:20	Mr. Naoki Sawada (KU) “Potential Use of Seabird Biologging as Meteorological Observations”
14:20~14:30	Coffee Break
14:30~16:05	Data Assimilation Session chairs: Prof. Kao-Shen Chung, NCU, Taiwan Dr. Shu-Ya Chen, NCU, Taiwan
14:30~14:50	Prof. Shu-Chih Yang (NCU) “Recent Developments and Applications with the WRF-based High-Resolution Ensemble Data Assimilation”
14:50~15:10	Prof. Kao-Shen Chung (NCU) “Assimilation of Observable and Retrievable Weather Radar Information for Quantitative Precipitation Forecasts”
15:10~15:25	Ms. Saori Nakashita (KU) “Multiscale Ensemble Data Assimilation for Nesting Models”
15:25~15:45	Dr. Shu-Ya Chen (NCU) “The Cyclogenesis and Typhoon Predictions with the GNSS Radio Occultation Data Assimilation”
15:45~16:05	Dr. Pin-Ying Wu (MRI) “The Importance of Perturbation Rank for Ensemble Simulations and Sensitivity Analysis with 1000-member Ensembles”
16:05~16:20	Coffee Break
16:20~17:00	Planetary Boundary Layer Session chairs: Prof. Fang-Yi Cheng, NCU, Taiwan Dr. Seika Tanji, KU, Japan
16:20~16:40	Prof. Fang-Yi Cheng (NCU) “Characterization of PBL Structures Using Observation and High-Resolution WRF Simulation during T-POMDA Experiment”
16:40~17:00	Dr. Seika Tanji (KU) “Impacts of Building Arrangements on Turbulent Flows and Heat Transfer in Urban Surface Boundary Layers”
17:10~17:40	Roundtable Discussion
18:00~20:00	Welcome Banquet

Time	Day 2 (3/13 Wed.)
09:00~09:30	Registration at Science Building II, 7th Floor
09:30~10:50	Tropical Cyclone and Convective Systems (I) Session chairs: Prof. Ching-Yuang Huang, NCU, Taiwan Prof. Kosuke Ito, KU, Japan
09:30~09:50	Prof. Kosuke Ito (KU) “Three-Dimensional Fujiwhara Effect”
09:50~10:10	Prof. Ching-Yuang Huang (NCU) “Improvement on Typhoon Predictions with FORMOSAT-7/COSMIC-2 Radio Occultation Data”
10:10~10:30	Dr. Soichiro Hirano (KU) “Adjoint Sensitivity Analysis of Rapid Intensification of Tropical Cyclone Nammadol (2022)”
10:30~10:50	Mr. Kenta Irie (KU) “Heat Flux Modification Experiment for Summer Afternoon Rainfall in the Central Osaka Area”
10:50~11:00	Coffee Break
11:00~11:55	Tropical Cyclone and Convective Systems (II) Session chairs: Dr. Shao-Yi Lee, KU, Japan Dr. Akiyuki Ono, KU, Japan
11:00~11:20	Dr. Shao-Yi Lee (KU) “The Relationship between Monsoon Rainfall Extremes over Western Japan and Pacific SST Anomalies”
11:20~11:40	Dr. Akiyuki Ono (KU) “Precedent Phase Change of Multifractal Structure against Organizing Index of Linear-shaped Convection Systems”
11:40~11:55	Mr. Ryosuke Sakai (KU) “Clarification of the Formation Process of Linear Convective Heavy Rainfall Systems Using a Cloud Microphysics Scheme with Frozen Particles Added”
11:55~12:10	Closing Remarks Prof. Tetsuya Takemi Prof. Shu-Chih Yang
12:10~13:00	Lunch Break
13:00~17:00	Local Tour