

**THE SECOND INTERNATIONAL WORKSHOP OF THE
TYPHOON SCIENCE AND TECHNOLOGY RESEARCH CENTER,
YOKOHAMA NATIONAL UNIVERSITY**

YOKOHAMA NATIONAL UNIVERSITY EDUCATION AND CULTURE HALL
NOVEMBER 27–28 (AS OF NOV. 22)

PROGRAM

DAY 1: WEDNESDAY, NOVEMBER 27

09.10–10.00 OPENING CEREMONY, INTRODUCTION OF TRC, AWARD CEREMONY
CHAIR: JUN MATSUMOTO

10.00–10.10 BREAK

10.10–11.20 KEYNOTE LECTURE I: ROGER K. SMITH (LUDWIG-MAXIMILIAN U.)
CHAIR: MASAKI SATOH
Towards understanding the tropical cyclone life cycle

11.20–12.00 POSTER SESSION FLASH TALKS, CHAIR: JUN MATSUMOTO

12.00–13.00 LUNCH BREAK

13.00–14.10 POSTER SESSION CORE TIME (ODD NUMBERS)

14.10–15.20 KEYNOTE LECTURE II: JOHNNY C.L. CHAN (APTCRC; STI/CMA; CITY U. HK)
CHAIR: KOSUKE ITO
Changes in tropical cyclone characteristics near landfall

15.20–15.40 BREAK

15.40–16.30 SESSION I: CLIMATOLOGY, CHAIR: MASUO NAKANO

15.40–16.00 Chun-Chieh Wu (NTU) et al. (INVITED) Tropical cyclones in the western North Pacific under global warming: A dynamical downscaling approach

16.00–16.15 Haikun Zhao (Nanjing U.) et al. Decreasing global tropical cyclone frequency in CMIP6 historical simulations

16.15–16.30 Yi-Peng Guo (Nanjing U.) et al. Tropical cyclogenesis bias over the central North Pacific in CMIP6 simulations

16.30–16.45 BREAK**16.45–17.45 SESSION II: OBSERVATION, CHAIR: KAZUHISA TSUBOKI**

16.45–17.00 Asanobu Kitamoto (NII; YNU) et al. Machine learning for the Digital Typhoon dataset: Extensions to multiple basins and new developments in representations and tasks

17.10–17.15 Ziyao Sun (STI/CMA; APTCRC) et al. Application of multi-source microwave satellite data in Typhoon In-fa (2021) wind radii monitoring

17.15–17.30 Clément Combot et al. (Hokkaido U.) Temporal monitoring of tropical cyclones cold wake

17.30–17:45 Shuai Zhang (STI/CMA; APTCRC) et al. Microphysical variation of precipitation traveling inward along the principal rainband of Typhoon Ampil (2018)

17.45–18.00 PROF. HIROYUKI YAMADA MEMORIAL SESSION

CHAIR: HIRONORI FUDEYASU

Prof. Kosuke Ito (Kyoto U.; UNU)

Prof. Kazuhisa Tsuboki (Nagoya U.; YNU)

18.15–19.45 WELCOME RECEPTION**19.45 END OF DAY 1**

DAY 2: THURSDAY, NOVEMBER 28**9.00–10.10 KEYNOTE LECTURE III: DAVID S. NOLAN (U. MIAMI)****CHAIR: MUNEHICO YAMAGUCHI**

Non-propagating spiral waves in the tropical cyclone outflow

10.10–10.30 BREAK**10.30–12.20 SESSION III: DYNAMICS, CHAIR: YOSHIAKI MIYAMOTO**

10.30–10.50 Yuqing Wang (U. Hawaii) et al. (INVITED) Numerical study of the secondary eyewall formation in Hurricane Patricia (2015) over the eastern North Pacific

10.50–11.05 I.-I. Lin (NTU) Ocean and high impact tropical cyclones: Recent issues on category '6' and ocean internal tides

11.05–11.20 Masaki Satoh (U. Tokyo; YNU) et al. The relationship between TC wind profile and TC rainfall profile in DYMONDNICAM dataset

11.20–11.35 Junshi Ito (Tohoku U.) et al. Wind distribution in the eye of tropical cyclone revealed by a novel atmospheric motion vectors derivation

11.35–11.50 Marguerite Lee (U. Tokyo) et al. Understanding the impact a cold pool has on an approaching typhoon using NICAM

11.50–12.05 Kosuke Ito (Kyoto U.; YNU) et al. Can a pre-existing tropical cyclone generate another tropical cyclone?

12.05–12.20 Leo Vinour (Hokkaido U.) et al. Monitoring TC life cycle through the ventilation of eyewall convection: a perspective from realistic simulations

12.20–13.20 LUNCH BREAK**13.20–14.30 POSTER SESSION CORE TIME (EVEN NUMBERS)****14.30–16.20 SESSION IV: FORECAST, CHAIR: TAKESHI HORINOCHI**

14.30–14.50 Zifeng Yu (STI/CMA; APTCRC) (INVITED) Asymmetric rainfall forecasts and evolution in landfalling tropical cyclones

14.30–14.50 Munehiko Yamaguchi (MRI/JMA) et al. Typhoon track predictions using Pangu-Weather and JMA/GSM initial conditions

15.05–15.20 Gerry Bagtasa (U. Philippines) Impacts of rapidly intensifying tropical cyclones in the Philippines and a simple prediction method using machine learning

15.20–15.35 Garu Muni Wathsala (YNU; U. Moratuwa) et al. Enhanced detection and comparative analysis of typhoons, cyclones, and hurricanes across global ocean basins

15.35–15.50 Soichiro Hirano (Kyoto U.) et al. Adjoint sensitivity analysis of rapid intensification of Tropical Cyclone Nammadol

15.50–16.05 Timothy Kyle Pe (Ateneo de Manila U.) et al. Comparison of different methods in detecting and tracking of tropical depressions in the Philippine Sea using NCEP-GFS forecast model

16.05–16.20 Hiroaki Yoshioka (YNU) et al. Influence of drag coefficient for tropical cyclone intensification by numerical simulations

16.20–16.30 BREAK

16.30–17.50 SESSION V: HAZARD, CHAIR: NOBUHITO MORI

16.30–16.50 Eun Jeong Cha (KMA) et al. Role of midlatitude baroclinic condition in heavy rainfall events directly induced by tropical cyclones

16.50–17.05 Hironori Fudeyasu (YNU) et al. Introduction of Typhoonshot project and bay windbreak experiments

17.05–17.20 Oliver Hollingsaeter (OceanTherm) et al. Bubble curtain technology as tropical cyclone mitigation

17.20–17.35 Amit Singh (FMS) Case study of high waves in the South Pacific generated by Tropical Cyclone Harold in 2020

17.35–17.50 Kensuke Takenouchi (Kagawa U.) Simulated experience of typhoon disaster using the Video Ametore

17:50–18.10 DISCUSSION & CLOSING CEREMONY, CHAIR: PROF. JUN MATSUMOTO

18.10 END OF DAY 2

POSTER SESSION**SESSION VI: CLIMATOLOGY (C)**

- C-1 Xu Chen (U. Tokyo) et al. Large-scale environments underlying the extreme tropical cyclone activities over the western North Pacific in September 1959
- C-2 Xu Chen (U. Tokyo) et al. Tropical cyclone rainfall structure and its long-term trend over the western North Pacific
- C-3 Yoshiki Matsuo (Kyoto U.) et al. Probabilistic analysis of typhoon characteristics and variability under global warming based on SST ensemble simulations by atmospheric global climate model
- C-4 Sourav Bhowmik (BUET) et al. Climatology of environmental criteria for tropical cyclogenesis over the Bay of Bengal
- C-5 Tam Nguyen Ngoc-Min (USTH) et al. Revisiting the 1881 Haiphong Typhoon: Evaluating 20CR NOAA's efficacy in historical tropical cyclone detection
- C-6 Liang Shi (Fudan U.) et al. Mutating ENSO impact on Northwest Pacific tropical cyclones under global warming
- C-7 Tadamas Izumi (APU) et al. Relationships between typhoon track around Japan and the distribution of atmospheric pressure and sea surface temperature
- C-8 Jiwei Wu (Kyushu U.) et al. Increasing WNP Tropical cyclone-related extreme precipitation over East Asia during boreal summer associated with PDO Shift

SESSION VII: OBSERVATION (O)

- O-1 Clint Eldrick Petilla (Ateneo de Manila U., Manila O.) et al. The Unique Features of Typhoon Rai (2021): An observational study
- O-2 Meryl Regine Algodon (DOST/ASTI) et al. Stereophotogrammetric analysis of 2021 Tropical Cyclone Mindulle using Diwata-2 microsatellite and dropsonde data
- O-3 Naoko Kosaka (NTT) et al. Analysis of sea surface winds with autonomous surface vehicles under typhoons
- O-4 Naoko Kosaka (NTT) et al. Sea surface typhoon observations using autonomous surface vehicles in 2024
- O-5 Yusuke Umemiya (NTT) et al. Sensitivity analysis for effective observation with adjoint methods using WRFDA
- O-6 Navila Tabassum (YNU) et al. Utilizing explainable AI for early-stage analysis of typhoon development
- O-7 Udai Shimada (JMA) Estimation of the radius of maximum wind using passive O-8 microwave satellite data

- O-8 Gota Yamasaki (Kyoto U.) et al. Impact of data assimilation for typhoon-generated extreme wave based on drifting wave buoy observation
- O-9 Arthur Avenas (ESA) et al. Characterization of tropical cyclone dynamics from earth observation data synergy
- O-10 Alexis Mouche (Ifremer) et al. Contribution of C-band synthetic aperture radar to the monitoring of tropical cyclone
- O-11 Mirai Abe (YNU) et al. Estimation of the feasibility field experiments for typhoons based on maritime boundaries - from ELSI perspective

SESSION VIII: DYNAMICS (D)

- D-1 Yuto Kitano (YNU) et al. Sensitivity experiments on typhoon intensity and structure to the different concentration number of cloud particles
- D-2 Koki Iida (Kyoto U.) et al. Impacts of upper ocean cooling and ocean wave effects on typhoons
- D-3 Tomoe Nasuno (JAMSTEC) et al. Interactions between large-scale environment and TCs in the WNP
- D-4 Masato Sugi (Retired from MRI/JMA) et al. CISK vs. WISHE
- D-5 Rintaro Miyagi (U. Tokyo) et al. Interannual variability in potential impacts of upper ocean salinity on sea surface cooling induced by tropical cyclones in the northwestern Pacific
- D-6 Satoki Tsujino (MRI/JMA) et al. Is redistribution of vorticity due to barotropic instability a common mechanism of inner eyewall weakening in observed eyewall replacement cycles?
- D-7 Takuya Takahashi (JMA) et al. The vortex structure and near-surface winds of Typhoon Faxai (2019) during landfall
- D-8 Nozomi Tamura (Nagoya U.) et al. Improvement of reproducibility in the inner-core structure of a typhoon through assimilation of dropsonde data within the eye
- D-9 Ruifen Zhan (Fudan U.) et al. Duration and possible affecting factors of extratropical transition of tropical cyclones in the Northwest Pacific
- D-10 Leia Pauline Tonga (Manila O.) et al. The impact of vertical resolution in WRF to Typhoon Bopha (Taiga2012) during its landfall
- D-11 Edward Maru (Kyoto U.) et al. Analysis of tropical cyclone rapid intensification in the Southwest Pacific region
- D-12 Taiga Tsukada (CSU) et al. Guidance for estimating mean and maximum sustained winds in tropical cyclone using SAR-derived winds

SESSION IX: FORECAST (F)

F-1 Takeshi Doi (JAMSTEC) et al. Seasonal predictability of tropical cyclone frequency over the western North Pacific by a large-ensemble climate model

F-2 Weizhen Chen (Sun Yat-sen U.) et al. Weekly prediction of tropical cyclogenesis over the South China Sea using machine learning-based models

SESSION X: HAZARD (H)

H-1 Robb Gile (PAGASA) et al. Development of typhoon severe wind impact forecasting in the Philippines:Recent progress

H-2 Itiro Yoshiura (YNU) et al. Surfactants that suppress evaporation of water

H-3 Hafizu Kasozi (NMTS; Makerere U.; CCC) The increased flooding in Uganda

H-4 Xiaoyang Li (U. Tokyo) et al. Impact-based forecasting for Typhoon Hagibis (2019) with different potential tracks

H-5 Kalifani Lwanga Kitayimbwa (Makerere U.; NEMRA A.; Red C.) Disaster preparedness and resilience in Uganda