

Directions

Address: 662, Gyeongin-ro, Guro-gu, Seoul, Republic of Korea

Tel: +82-2-2211-2000



International Conference on Weather Forecast and Hydrological Applications of Radar 2019

Date 13(Wed)-15(Fri) November, 2019

Venue 6th Floor, Grand Ballroom, Sheraton Seoul D Cube City Hotel, Korea



Korea Meteorological
Administration



Ministry of
Environment

Invitation Letter

Every year the risk of extreme weather events such as storms, heavy snowfall, flooding, droughts and heat waves is rising globally. Even at this moment, many people around the world are suffering from tremendous weather-related disasters. And the disasters even threaten basic human rights of people living in the areas vulnerable to natural disasters.

At this critical juncture, weather radars play the most crucial role in early monitoring and very short-range forecasting of heavy rainfall and flash flooding in the context of meteorological and hydrological disaster prevention and preparedness.

This year marks the 50th anniversary of the operation of weather radars in Korea. The year 2019 is indeed a significant year for the Korea Meteorological Administration, as we open a new era of weather radar by establish a new nationwide dual-polarization radar network.

The Korea Meteorological Administration and the Ministry of Environment will jointly host the 2019 International Conference on Weather Forecasting and Hydrological Applications of Radar to provide an opportunity for collaboration to efficiently utilize the dual-polarization radar network and enhance radar-based disaster prevention.

I hope this conference will be a great opportunity for all participants to discuss future cooperation on disaster prevention and technical innovation in the field of weather radar.

Thank you.

Jongseok Kim

Administrator of the Korea Meteorological Administration

I hope this conference will be a great opportunity for all participants to discuss future cooperation on disaster prevention and technical innovation in the field of weather radar.

Thank you.

※ This program can be changed by the site situation.

11.13
Wednesday

| DATE / TIME | TITLE | SPEAKER |
|---------------|--|-----------------------|
| 2019. 11. 13 | [Session 1] Keynote Presentation | Chair: Ki-Hong Min |
| 15:00 ~ 15:40 | Seamless Probabilistic Analysis and Forecasting: from Minutes to Days | Wang Yong |
| 15:40 ~ 16:20 | Using a Radar Archive to Predict Precipitation Growth and Decay over Switzerland - a Machine Learning Approach | Daniele Nerini |
| 16:20 ~ 16:40 | Coffee Break | |
| 2019. 11. 13 | [Session 2] Use of Radar Data for Nowcasting and Numerical Models | Chair: Sung-Hwa Jung |
| 16:40 ~ 17:10 | Ensemble Rainfall Forecast and Data Assimilation of Polarimetric Radar | Kosei Yamauchi |
| 17:10 ~ 17:30 | Improving Prediction of Numerical Model Using Radar Data Assimilation | Ki-Hong Min |
| 17:30 ~ 18:00 | Microphysics: DSD Measurements and Microphysical Assumptions | Francisco J. Tapiador |
| 18:00 ~ 20:00 | Welcome Dinner | |

11.14
Thursday

| | | |
|---------------|--|-----------------------|
| 2019. 11. 14 | [Session 3] Hydrological Applications I | Chair: Keon-Haeng Lee |
| 09:00 ~ 09:30 | A Physical Interpretation for Peak Flow Scaling of Rainfall-Runoff Events with Implications on Peak Flow Regionalization | Richardo Mantilla |
| 09:30 ~ 09:50 | Bias Correction Method for Rainfall Forecasts using Backward Storm Tracking | Chulsang Yoo |
| 09:50 ~ 10:10 | Application of the Weather Radar-Based Quantitative Precipitation Estimations for Flood Runoff Simulation in a Dam Watershed | Younghyun Cho |
| 10:10 ~ 10:30 | Flash Flood Forecasting using Rainfall Radar and New Evaluation Method | Seokhwan Hwang |
| 10:30 ~ 11:00 | Coffee Break | |
| 2019. 11. 14 | [Session 4] QC, QPE, and Microphysical Studies with Radars | Chair: GyuWon Lee |
| 11:00 ~ 11:30 | Microphysical Characteristics and Types of Precipitation for Different Seasons over North Taiwan | Pay-Liam Lin |
| 11:30 ~ 12:00 | Polarimetric Analysis of Melting Layer using Range Height Indicator-Quasi Vertical Profiles | Shaik Allabakash |
| 12:00 ~ 12:20 | Lower Level Rainfall Detection and Estimation Using Microwave Link | Min-Seong Kim |
| 12:20 ~ 12:40 | Procedure for Correction of Polarimetric Observations at SSPA X-band Weather Radar | Jeong-Eun Lee |
| 12:40 ~ 14:00 | Luncheon | |
| 2019. 11. 14 | [Session 5] New and Emerging Radar Technology | Chair: Kwang-Ho Kim |
| 14:00 ~ 14:30 | On the Application of Radar-Retrieved Refractivity | Ya-Chien Feng |
| 14:30 ~ 15:00 | Radar Echo Extrapolation with Convolutional Recurrent Neural Networks | Quang-Khai Tran |
| 15:00 ~ 15:20 | Deep Learning based Weather Prediction (Precipitation Amount Prediction from Radar Data and Tropical Cyclone Path Prediction from Simulation Data) | Seongchan Kim |
| 15:20 ~ 15:40 | Comparative Study of Storm Classification and Tracking Methods based on Machine Learning | Hansoo Lee |
| 15:40 ~ 16:00 | The Status of Radar Data Application for Satellite Products Validation and Verification | Jun Dong Park |
| 16:00 ~ 18:00 | [Session 6] Poster (13 topics) | |
| 18:30 ~ 20:30 | Banquet | |

11.15
Friday

| | | |
|---------------|---|-----------------------|
| 2019. 11. 15 | [Session 7] Hydrological Applications II | Chair: Seong-Sim Yoon |
| 09:00 ~ 09:30 | Hydrometeorological Big Data Analysis and Web-based Visualized Flash Flood Pre-Warning Platform | Lin Bing Zhang |
| 09:30 ~ 10:00 | Hydrological Applications of Weather Radar and National Scale Flood Forecasting: Some UK Experiences | Steven Cole |
| 10:00 ~ 10:20 | A Research on Improving the Utilization of Rain Radar for Flood Forecasting System | Keon-Haeng Lee |
| 10:20 ~ 10:40 | Improved High Resolution Radar QPE in Seoul Metropolitan Area and Its Hydrological Application | GyuWon Lee |
| 10:40 ~ 11:00 | Revisiting the Z-R Relationship Using Long-Term Radar Reflectivity over The Entire South Korea Region in a Bayesian Perspective | Hyun-Han Kwon |
| 11:00 ~ 11:20 | Coffee Break | |
| 2019. 11. 15 | [Session 8] Convergence Radar Technology | Chair: SangHun Lim |
| 11:20 ~ 11:40 | The Characteristics of Lightning using LINET and KMA S-band Polarimetric Radar | Mi-Young Kang |
| 11:40 ~ 12:00 | A Statistical Analysis on the Inner Structure of Volcanic Ash Clouds using X-band Dual-Polarimetric Radar | Sung-Ho Suh |
| 12:00 ~ 12:20 | Studies on Precipitation and Volcanic Eruption Clouds using X-band Polarimetric Radar | Yura Kim |
| 12:20 ~ 12:30 | Closing Remarks | |
| 12:30 ~ 18:00 | City Tour | |