

「2022 KIAPS 국제심포지엄 : 전지구 수치예보시스템 모델링」 개최 알림

【 2022. 10. 27.(목) / (재)차세대수치예보모델개발사업단 】

□ 행사 개요

- (목 적) 전지구 수치모델링 관련 최신 연구현황 공유 및 국·내외 전문가 간 연구 협력관계 강화
- (일 시) 2022. 11. 14.(월) 09:00 ~ 11. 16.(수) 12:30
- (장 소) 콘래드 서울호텔 파크볼룸(5F)
- (참석자) 차세대사업단 및 관련 분야 국·내외 전문가 150여명
- (발 표) 초청강연 포함 구두발표 32건, 포스터발표 44건
- (언 어) 영어

□ 국 · 내외 초청강연 연사

- (미 국) Bill Skamarock, Michael Ek, Jimmy Dudhia, 신혜음 (국립대기연구센터), 김영준, 홍성유, Vijay Tallaparagada, Kevin Viner (해양대기청)
- (유 럽) Adam Scaife (영국 기상청), Stephen English (유럽중기예보센터), Dale Barker (싱가폴 기상청 파견), Roland Potthast (영국 레딩대)
- (캐나다) Mark Buehner (캐나다 기상청)
- (일 본) Masaki Satoh (일본 동경대)
- (중 국) Xingliang Li (중국 기상청)
- (호 주) Peter Steinle, Susan Rennie (호주 기상청)
- (국 내) 하종철 (기상청), 박상훈, 송하준 (연세대), 손병주 (서울대), 최석진 (강릉원주대), 임교선 (경북대), 김영호 (부경대)

□ 참석신청

- (방 법) 행사 홈페이지(www.kiaps-symposium.com)로 사전등록
※ 발표자 등록(구두, 포스터)은 마감되었으며, 본 신청은 참석 건에 한함
- (기 간) 2022. 11. 11.(금) 12시까지
※ 코로나19 상황과 장내 여석을 고려하여 등록인원이 많은 경우 부득이 조기에 등록 마감
- (문 의) 융합전략실 신소영 대리(02-6480-6313, syshin@kiaps.org)
심포지엄 운영사무국(02-332-3155, kiapssymposium2022@gmail.com)

□ 심포지엄 프로그램 및 상세일정

First Day (14 November 2022, Monday)		
08:30~09:00	Registration	-
09:00~09:30	Opening Remarks	-
09:30~09:50	Group Photo	-
[Session I] Keynote Presentation		
09:50~10:40	Research and Forecasting Atmospheric Modeling Activities in Japan	Masaki Satoh (University of Tokyo)
10:40~11:30	Prospects and challenges for the Earth System approach to Numerical Weather Prediction at ECMWF	Stephen English (ECMWF)
11:30~13:00	Lunch Break	-
[Session II] Overview of Operational NWP Systems		
13:00~13:20	Next generation NWP Modeling at KIAPS : Status report	W.J. Lee (KIAPS)
13:20~13:40	Improvement of NWP for NWS forecasters through requirement development and field case evaluation according to the NWS Governance Process	Young-joon Kim (NOAA)
13:40~14:00	Hierarchical System Development to support NWP model improvement	Jimy Dudhia (NCAR)
14:00~14:20	State-of-the-art NCEP operational modeling and future advances	Vijay Tallaparagada (NOAA)
14:20~14:40	Coffee Break	-
14:40~15:00	Numerical Weather Prediction at the Australian Bureau of Meteorology	Peter Steinle (BoM)
15:00~15:20	KMA operational NWP model(KIM) status and future plan	Jong-Chul Ha (KMA)
15:20~15:40	Seamless Km-Scale NWP and Regional Climate Projections for Southeast Asia	Dale Barker (CCRS)
15:40~16:00	CMA NWP system status and future plan	Xingliang Li (CMA)
[Session III] Poster Presentations		
16:00~18:30	Poster Presentations	-
18:30~20:30	Welcome Dinner	-
Second Day (15 November 2022, Tuesday)		
[Session IV] Dynamical Core		
09:00~09:20	Application of Adaptive Time-step Algorithm in KIM	Hyun Nam (KIAPS)
09:20~09:40	A comparison of Numerical characteristics in the regional MPAS and WRF Models Using Heavy Snowfall episodes over complex terrain	Sanghun Park (Yonsei University)
09:40~10:00	Development and Evaluation of the KIM dynamic core of a stretched global grid	Suk-Jin Choi (Gangneung-Wonju National University)
10:00~10:20	Extending the nonhydrostatic MPAS atmospheric model to geospace applications	Bill Skamarock (NCAR)
10:20~10:40	An Overview of NOAA's Unified Forecast System (UFS) with Focus on the FV3 Dynamical Core	Kevin Viner (NOAA)
10:40~11:00	Coffee Break	-

Second Day (15 November 2022, Tuesday)		
[Session V] Physics Parameterization		
11:00~11:20	A Semi-Lagrangian Sedimentation Algorithm for Double-Moment Microphysics Scheme	Songyou Hong (NOAA)
11:20~11:40	Atmospheric Model Physics for the NOAA Unified Forecast System (UFS) Applications Across Scales	Vijay Tallaparagada (NOAA)
11:40~12:00	Subgrid-Scale Topographic Effects on Radiation for Global Weather Forecast Models	Sunghye Baek (KIAPS)
12:00~12:20	Appliance of Eddy-Diffusivity/Mass-Flux (EDMF) approach in ShinHong (SH) scheme	Wonheung Kim (KIAPS)
12:20~13:50	Lunch Break	
13:50~14:10	A simplified chemistry module in KIM - status and plans	Jung-Yoon Kang (KIAPS)
14:10~14:30	Evaluation of clouds in the Korean Integrated Model	Eun-Hee Lee (KIAPS)
14:30~14:50	New ice microphysics in Weather Research and Forecasting (WRF) Double-Moment 6-class (WDM6)	Kyo-Sun Lim (Kyungpook National University)
14:50~15:10	A Comparative study of various approaches for producing probabilistic forecasts of upper-level turbulence	HyeYum Shin (NCAR)
15:10~15:30	On the Need to Modify the Sea Surface Roughness Formulation over Shallow Waters	Jimmy Dudhia (NCAR)
15:30~15:50	Coffee Break	-
[Session VI] Coupled model		
15:50~16:10	Extended range predictions with coupled O-A models(영상)	Adam Scaife (Met Office)
16:10~16:30	Development of the KIM coupled version	Myung-Seo Koo (KIAPS)
16:30~16:50	Atmosphere-Ocean Coupling in the Korean Integrated Model	Eunjeong Lee (KIAPS)
16:50~17:10	Mesoscale Dynamic and Thermodynamic coupling between the atmosphere and the ocean near the Kuroshio Current	Ha-Joon Song (Yonsei University)
Third Day (16 November 2022, Wednesday)		
[Session VII] Observation preprocessing		
09:00~09:20	Observation processing for the KIAPS Data Assimilation system: Current status and Plan	Jeon-Ho Kang (KIAPS)
09:20~09:40	A new strategy to stabilize bias correction of satellite radiance observation in KPOP	Hyeyoung Kim (KIAPS)
09:40~10:00	Sea ice emissivity and emitting layer temperature over the Arctic Ocean for assimilating surface-sensitive microwave channels	Byung-Ju Sohn (Seoul National University)
10:00~10:20	Perspectives on observation usage at the Australian Bureau of Meteorology	Susan Rennie (BoM)
10:20~10:40	Coffee Break	-
[Session VIII] Data Assimilation		
10:40~11:00	Recent changes to the DA systems at ECCC(영상)	Mark Buehner (ECCC)
11:00~11:20	Recent progress in Earth System Data Assimilation and Observation usage at ECMWF	Stephen English (ECMWF)
11:20~11:40	Development of data assimilation systems for current and future KIAPS models	Adam Clayton (KIAPS)
11:40~12:00	Impact of in-situ and satellite data assimilation on high-resolution ocean prediction system in the Northwest Pacific Ocean	Young Ho Kim (Pukyong National University)
12:00~12:20	Framework for all-sky radiance assimilation in the KIM forecast system	Sihye Lee (KIAPS)
12:20~12:30	Symposium Summary & Closing	
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□ 포스터 발표목록(총 44건)

구분		발표자	발표제목
1	Numerical Modeling Group	Raeseol Park	Diagnostic cloud fraction scheme based on cloud hydrometeors for the KIM
2	Numerical Modeling Group Dynamics Research Team	Ja-Rin Park	Construction and evaluation of 8-km high-resolution KIM
3	Numerical Modeling Group Dynamics Research Team	Hae-Jin Kong	Application of smoothed hybrid sigma-pressure (SMH) coordinate to KIM
4	Numerical Modeling Group Physics Research Team	Soo Ya Bae	A semi-lagrangian sedimentation method of rain for WDM6 in KIM
5	Numerical Modeling Group Physics Research Team	So-Young Kim	Vertical overlap of clouds and its radiative effects in KIM
6	Numerical Modeling Group Physics Research Team	Ji-Young Han	Comparison of precipitation forecasts with different scale-aware cumulus parameterizations over South Korea
7	Numerical Modeling Group Physics Research Team	Jiwon Hwang	Influence of interannual stratospheric ozone variability on Arctic winter temperature in KIM
8	Numerical Modeling Group Coupled Model Team	Hyeon-Ju Gim	A new land surface model in KIM: NoahMP
9	Numerical Modeling Group Coupled Model Team	Junseong Park	Coupling of sea ice model in KIM
10	Numerical Modeling Group Coupled Model Team	Jaeyoung Song	Development of KIM land surface processes using the Community Land Model (CLM)
11	Numerical Modeling Group Coupled Model Team	Mee-Hyun Cho	River-routing model coupling in KIM
12	Numerical Modeling Group Coupled Model Team	Yongjae Han	Coupling of wave model in KIM
13	Numerical Modeling Group Coupled Model Team	Jinyun Jeong	Evaluation of atmosphere-land-ocean-sea ice coupled KIM
14	Numerical Modeling Group Model Verification Team	Hye-Jin Park	Evaluation of the Madden-Julian Oscillation in KIM
15	Numerical Modeling Group Model Verification Team	Sae-Rim Yeo	Assessment of the ENSO teleconnection in the long-range simulation of KIM
16	Numerical Modeling Group Model Verification Team	Keon-Hee Cho	Assessment of the blocking predictability in the KIM medium-range forecast system
17	Numerical Modeling Group Model Verification Team	Eun-Hye Lee	Characteristics of East Asian summer monsoon in KIM multi-year seasonal simulations
18	Numerical Modeling Group Model Verification Team	Sujeong Cho	Evaluation of the vertical structure of hydrometeors in KIM using space-borne radar measurements
19	Numerical Modeling Group Model Verification Team	Jiyoung Jung	Performance evaluation of tropical cyclone genesis over the western North Pacific
20	Data Assimilation Group Observation Processing Team	Hyun-Jun Han	Development of ground-based GNSS data assimilation system for KIM and their impacts
21	Data Assimilation Group Observation Processing Team	Hui-nae Kwon	A study on the impact of the Mode-S wind data in the KIM global DA system
22	Data Assimilation Group Observation Processing Team	Hyemin Shin	Development of ground-based AWS data assimilation system for KIM

구분		발표자	발표제목
23	Data Assimilation Group Observation Processing Team	In-Hae Cho	Development of radar radial velocity processing system within the KPOP
24	Data Assimilation Group Observation Processing Team	Eun-Jin Kim	Machine learning application study on the AIRCRAFT observation quality control
25	Data Assimilation Group Observation Processing Team	Hyeon-Ju Jeon	Measuring the forecast sensitivity based on attentive 3D-convolutional recurrent neural networks
26	Data Assimilation Group Observation Processing Team	Jihoon Ryu	Clear-sky radiance assimilation of GPM microwave imager for the KIM
27	Data Assimilation Group Observation Processing Team	Hye-Sil Kim	Development of assimilation techniques for the first GEO hyperspectral IR sounder (GIIRS/FY-4A)
28	Data Assimilation Group Assimilation Techniques Team	Dayoung Choi	Development of ensemble-based radar reflectivity assimilation
29	Data Assimilation Group Assimilation Techniques Team	Hyeyeong Jang	Ocean DA experiments with 6-hour cycles, targeting a future weakly-coupled atmosphere-ocean DA system
30	Data Assimilation Group Assimilation Techniques Team	Han-Byeol Jeong	All-sky data assimilation in the KIM LETKF system
31	Data Assimilation Group Assimilation Techniques Team	Wonho KIM	A 4DIAU scheme for the KIM DA system
32	Data Assimilation Group Assimilation Techniques Team	Eunbyeol Ko	Development of an ocean data assimilation system with KIM surface forcing
33	Data Assimilation Group Assimilation Techniques Team	Hanbyul Jang	Single observation test results from the KIM hybrid-4DEnVar system
34	Data Assimilation Group Diagnosis & Evaluation Team	Ja-Young Hong	Sensitivity experiments for ensemble sizes in the LETKF data assimilation system
35	Data Assimilation Group Diagnosis & Evaluation Team	Sanghee Jun	Improvements in soil moisture data assimilation for KIM at 8km and evaluation of its impacts
36	Data Assimilation Group Diagnosis & Evaluation Team	Seokmin Hong	Stochastic representations of model uncertainties at KIM: current status and future plan
37	Data Assimilation Group Diagnosis & Evaluation Team	Hyerim Kim	Evaluating and diagnosing the performance of KIM data assimilation
38	Operational System Group Model System Team	Shin-Woo Kim	KIM coupling utility and its application to the Arctic cyclone simulation
39	Operational System Group Model System Team	Ilseok Noh	KIM physics optimization using GPU accelerate with OPENACC library
40	Operational System Group Model System Team	Youngsu Lee	Current status and future plan for KIM operational system
41	Operational System Group Model System Team	Heeje Cho	An application of satellite observation simulators for evaluating clouds in the Korean Integrated Model
42	Operational System Group Data Application Team	Jiyeon Jang	KIM PBL Emulator Performance Evaluation
43	Operational System Group Data Application Team	Wooyeon Park	Radiation Parameterization Emulator Development Using Deep-learning Techniques for Low Resolution Korean Integrated Model
44	Operational System Group Data Application Team	Sojung An	Conditioned Nowcasting Model based on Generative Adversarial Network with Self-Supervised Learning