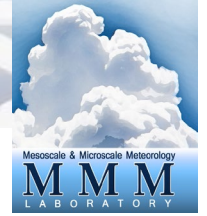


MMM SEMINAR SERIES



Introduction to an Integrated Moist-Physics Parameterization for the Earth System (IMPrES)

Sungsu Park
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During the last 9 years, our team has been working on developing an advanced suite of physics parameterizations, so called, "An Integrated Moist-Physics Parameterization for the Earth System (IMPrES)" focusing on imposing strong inter-process consistency among various physics parameterizations. This work consists of the development of an advanced Unified Convection Scheme (UNICON) including stochastic convection and elevated convection; a new integrated vertical cloud overlap parameterization; an advanced double-moment cloud microphysics scheme for convective as well as stratiform precipitation; a new cloud macrophysics scheme; and more comprehensive treatment of aerosol and radiation processes. IMPrES and UNICON can be used in both weather forecasting and climate models.

In this talk, I will introduce an advanced UNICON and explain how UNICON can address the gray-zone issue. Then, I will introduce IMPrES. Finally, I will briefly introduce our recent efforts to implement UNICON into the NCAR-WRF and NOAA-UFS models.

Co-Authors: Chanwoo Song, Siyun Kim, and Ui-Jin Kwon

Thursday, 15 August 2024, 2:00PM

Refreshments 1:45PM

Please also join colleagues for refreshments and informal discussion after the seminar until 3:30pm

NCAR-Foothills Laboratory, 3450 Mitchell Lane
FL2-1022, Large Auditorium

Seminar will also be live webcast

<https://operations.ucar.edu/live-mmm>

Participants may ask questions during the seminar via Slido.