

YSCA report for EMS Annual Meeting 2024

Barcelona, Spain | 2-6 September 2024

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I would like to express my sincere thanks to the awards committee of the European Meteorological Society (EMS) for awarding me the Young Scientist Conference Award (YSCA). The accompanying support made it possible for me to attend the EMS annual meeting 2024 in Barcelona. It was an excellent experience to engage with the community and a valuable opportunity to present my work.

Attending this year's annual meeting was a great experience, especially listening to the award lectures by Prof. Susan Grimmond and Prof. Aijun Ding. Their talks provided valuable insights into how human activities influence the urban and planetary boundary layer. As this year's theme: "The Role of Weather and Climate Research in the Achievement of a Climate-Neutral Europe.", the presentations and discussions focused on the interactions between atmospheric processes and energy consumption, carbon emissions, as well as air pollution; and highlighted the critical challenges to these topics. Moreover, I benefited a lot from the sessions on numerical weather prediction (NWP), model downscaling, and climate modeling over high mountains and complex terrain. The discussions on the ongoing challenges of simulating observed features through reasonable processes were directly relevant to my interests. Sessions on atmospheric dynamics and boundary layer processes helped a lot in terms of learning the latest findings in the atmospheric processes, to which I can relate my research on precipitation processes over complex terrain. Artificial intelligence (AI) was a prominent topic throughout the meeting. In both oral and poster sessions, and the keynote presentation on engagement with society, it was fascinating to see how machine learning has been employed in research (e.g., for downscaling and classification), education, and communication. AI's role in communication was highlighted, with the World Meteorological Organization (WMO) exploring tools for delivering reliable messages supported by scientific results to the public.

My contribution to the meeting was a presentation with the title "Investigating the Diurnal Cycle of Summer Precipitation over Mainland Southeast Asia: Insights from Dynamic Downscaling Simulations" in session OSA1.5 "The Weather Research and Forecasting Model (WRF): development, research and applications". I had very interesting discussions with scientists about the precipitation mechanisms and the challenges of high-resolution modeling, which were useful and motivated me to keep going with the work.

In summary, I enjoyed my participation in this well-organized, and informative conference. Thanks to the YSCA, attending the conference not only enriched my research but also provided me the opportunity to expand my knowledge and start building my network as an early-career scientist.