

Motivational Letter

I am writing this letter to express my interest in attending ESiWACE Summer School on “**Effective HPC for Climate and Weather**” organized at University of Reading, UK. Currently, I am a PhD student at Centre for Atmospheric Sciences, Indian Institute of Technology Delhi (IIT Delhi) working on a project titled ‘Numerical modeling of Floods over India’. I have a Bachelor’s degree in Physics, Chemistry, and Mathematics and a Postgraduate degree in Environmental Sciences and Technology. It was during my Postgraduate degree in the domain that my drive for research in the applicative environmental sciences took shape. A strong and consistent academic record from Secondary education to Post Graduation affirmed my intent to pursue a career in research and got me an opportunity to join IIT as a PhD student. The curriculum of my Post-Graduation entailed hands-on with instrumentation but lacked exposure towards computational skills required for research in atmospheric sciences. The topic that I am pursuing demands exceptional knowledge and skills in computation since modeling of flood requires accurate precipitation simulation that can be achieved by running a regional climate model. Despite the lack of a conducive background, I was able to successfully compile and run Weather Research and Forecasting model (WRF) on LINUX operating systems. During this time of learning the technical aspects of using HPC for running a regional model at high resolutions, I realized the immense importance and scope that computation has in my area of research.

In this phase of learning, I see this workshop as an opportunity to further learn about the challenges in using HPCs and strategies of using tools to improve and aid my research. It will serve as a platform to get acquainted with many relevant topics such as post-processing and visualization, use and challenges of machine learning to improve weather and climate forecast, and especially analysis of climate/weather data using python which will be very beneficial for a beginner like myself in this field. The workshop will present a great opportunity for me to meet other students and researchers from all over the world and learn from their experience which would inspire me to work with more confidence. I believe that my performance on the requisites and my desire to learn the proposed concepts makes me a suitable candidate for attending this workshop.

Sincerely,

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