To

Date: 06 March 2020

The Organizers,
Summer School on Effective HPC
for Climate and Weather,
University of Reading, UK

Dear Dr. Julian and Luciana,

I am writing to express my interest for Summer School on Effective HPC for Climate and Weather. I have submitted my doctoral thesis entitled as "Projection of temperature and precipitation over India using a Regional Climate Model (RegCM4)" at Department of Geophysics, Institute of Science, Banaras Hindu University, Varanasi India under the direction of Professor G.P Singh on November 2019.During my research, I am well acquainted with handling big data analysis through programming language FORTRAN, Python, R, C, and shell scripting in visualization tools as NCL, Python and R. My skillset also includes experience in big data handling with HPC, and other aforementioned programming languages. I have considerable experience in working with Regional climate model(RegCM4) and global model. My research primarily focused on Monsoon Dynamics and Variability, Regional Climate Modeling, Projection of Climate Change and Climate Extremes.

I have currently working as a Research Associate under DST Centre of Excellence in Climate Modeling group at IIT Delhi, India. I am express my interest for the area of research of nonlinearity/uncertainty of atmosphere and how to interact with Ocean . I am strengthen of my research lies in the breadth and depth of the mathematical and statistical approaches. I utilize in understanding the mechanisms that drive the systems for Climate Model as well as model development and Improvement. A understanding of challenges of uncertainties in climate modelling with respect to observations.

This summer School is helpful for competing the challenging task for understanding new techniques of machine learning and parallel computing as well as High-Performance Storage approaches to improve weather and climate predictions at regional scale. This school will prove to be a boon for depth of knowledge in Code development for new model development .I have developed our understanding in model parameterization schemes for further studied of tropical-extratropical climate variability, and their air-sea interactions and teleconnections, Monsoon Dynamics and predictability, Variability of Indian Summer monsoon and asymmetric heating, Projection of Climate Change and Climate Extremes, and Characterisation, physical mechanism and impact of Extreme precipitation

Thank you for your consideration and time to review my application.

Sincerely yours,

Pradeep Kumar Rai
COE, CAS, IIT Delhi, India