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## **Application for the Summer School on Effective HPC for Climate and Weather**

Dear Organising-Committee,

I am writing to express my interest in attending the Summer School on Effective HPC for Climate and Weather at the University of Reading, UK. The summer school presents an exciting opportunity to learn state-of-the-art HPC practices, foster collaboration with other early-career researchers in related fields and provide knowledge transfer to our home institutions. While my research involves extensive work with HPC, including climate model simulation and data management, storage as well as visualisation, I am particularly interested in the performance analysis and machine learning sessions.

My proposed research project "CMIP visualisation interface" (CMIPvis) touches on big data analysis and visualisation and would be useful to the wider scientific community. The Climate Model Intercomparison Project (CMIP) is a trove of climate model data freely accessible to scientists all over the world. Yet this data can be challenging to extract, visualise and analyse for non-climate scientists, such as ecologists and biologists. While interfaces such as the KNMI Climate Explorer ([climexp.knmi.nl](http://climexp.knmi.nl)) provide access to various physical climate variables (e.g. temperature, precipitation), other output such as total vegetation carbon and productivity is not covered. This restricts the reach and impact of this data. The proposed CMIP visualisation interface (CMIPvis) aims to address this shortcoming. With CMIPvis the user will be able to make spatial selections of variables and scenarios across individual CMIP models and multimodel means, view and download time series, and generate visually attractive spatial plots via a set of functions or website tool.

To disseminate the knowledge acquired at the summer school I will organise a workshop together with the University of Hong Kong IT department, open to all faculties of the University of Hong Kong to maximise the impact of my participation at the summer school. At the workshop I will introduce the core concepts taught at the summer school and provide resources (online) with further information. Seed funding for the workshop has already been agreed upon by the Department of Earth Sciences, HKU.

Yours sincerely,



Dr Alexander Koch