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Application for Summer School on Effective HPC for Climate and Weather

Dear Dr. Kunkel,

My name is Lisa Degenhardt and I am a NERC CENTA-funded PhD-Student at the University of Birmingham. I studied Meteorology as my undergraduate and postgraduate programme in Berlin at the Freie Universität Berlin. My PhD project is a meteorological topic as well, "Seasonal to sub-decadal variability of extreme windstorms over Europe", supervised by Prof Leckebusch.

In the master's programme I had initial programming experience by using big meteorological data sets (e.g. ERAint or CODEX data) and worked on small academic projects (e.g., CWT or Temperature changes with climate). Therefore, I worked with Linux systems, and I got some experience with Shell-Scripting, I attended a basic module in Python, and using R in my daily programming work.

For my PhD project in Birmingham I need to handle even larger multi-model multi-member ensemble atmospheric data sets, e.g. latest global seasonal forecast suits (ECMWF S5, or GloSea5). . A better knowledge of handling these data is a very necessary and important skill for a successful work on my project.

As mentioned, I have some experience with Linux/Bash and I am working often with CDOs (Climate Data Operators), but I think I know only kind of the basics in working with these languages. To get a good output for my project I would like to advance my knowledge in handling in large multi-model, multi-parameter data sets. I usually work with R, but for big data sets better knowledge in Unix/Shell scripting would make my calculations easier, faster and reusable for further projects.

In general I think, the meteorological studies requires a good knowledge in programming and Linux/Shell is a very useful skill to have while handling big data sets.

A workshop like this is as well a very good opportunity to meet people working on the same field and using the same kind of data. Next to all this, I would be really interested to visit the ECMWF. It was part of my whole study and it would be great to see, where the data I used for over 6 years is coming from.



Lisa Degenhardt

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