Letter of motivation

I am very glad to apply for Summer School on Effective HPC for Climate and Weather. It will have a great impact on my knowledge and skills in operational oceanographic analysis needed for my current postdoctoral research on numerical modelling of dispersion and ecological connectivity in the coastal seas. In presented agenda I find a lot of interesting techniques that could benefit me, especially ones that are focusing on modern storage and machine learning with which I had a little touch during my doctoral studies.

For me it is very important to get a chance to learn about big data analytics that I am not familiar with, although I assume they could be used with great success in my research.

I am currently a postdoc researcher in Laboratory for Physical Oceanography at the Institute of Oceanography and Fisheries in Split (IOF). Domain of my research work and study is physical oceanography, precisely hydrodynamic modelling of Adriatic Sea, with focus on ecological dispersion modelling. I expect this training school will greatly upgrade my knowledge related to use of modern computation methods, which can I after use in my work on numerical modelling. This is very important for me as an oceanographer and also for the Institute at which I am working.

One of the goals of my work group to be achieved in near future is developing of climatological oceanographic numerical model for the Adriatic Sea, coupled with meteorological, ecological and wave models, which can be used for future climate scenarios simulations. Tentative idea of a project that can be concluded as a part of the Academic Group Projects has a lot of similarities with goals of my work group. It includes work on numerical oceanographic models to study future climate, especially ocean connectivity through the scope of global warming. In one word this idea can be described as ecological modelling forecast.

Hitherto I have some skills and expertise in this computational field, but I wish to get a deeper insight. Furthermore, it is important to learn some new features in post-processing and visualisation that will help me analysing climate model outputs in efficient way, together with knowledge of performance analysis.

New knowledge gained during this training will be of great help not only for me but also for my work colleges interested in ecological and climatological modelling. Together we will be able to work in solving problems arising from different sources like a global warming, growing tourism industry and increasing marine traffic in the Adriatic Sea. A chance to listen experienced lecturers, to work and associate with young colleagues from same scientific niches will be of a great assist for me now and in the future, especially when we know how are our fields of research interconnected and how great results can arise from our collaboration.

I would be really glad to participate in such very interesting and useful event, as Summer School on Effective HPC for Climate and Weather.

Sincerely,
Tomislav Džoić