

To whom it may concern,

I'm writing this letter in order to apply for 2020 ESiWACE Summer School. My institute would support my participation at the school with a contribution up to 500 euros.

Since February 2016 I have been involved in ICTP and OGS in the development of new version of the Regional Earth System Model RegCM-ES (Sitz et al., 2017) with a specific target area of application represented by the Mediterranean region. One of the novel aspects of this new version of the model is represented by the presence of online biogeochemical module, BFM, to simulate the dynamics of marine ecosystems. Presently I'm involved in running high resolution coupled models (OGSTM-BFM) to simulate the biogeochemical dynamics of the Mediterranean Sea in the future climate scenarios. These numerical experiments produce huge amount of data that need to be processed using python codes. Because of that the use of HPC and the parallelization of codes is of a paramount importance in optimizing performances and saving time during the analyses. I would like to attend your school with the final purpose to improve my knowledge in the optimization of codes performances using HPC with a specific focus on python programming language and to learn something new about available tools to accomplish such a purpose. From this point of view one possible project would be the improvement of the performances of a preexisting code to analyze huge (from a temporal or spatial point of view) amount of data. My possible keyword for such a project would be: biogeochemistry, nutrients, python, optimization, performances.

My work, but also my institute research and colleagues, will benefit from the attendance to the school through the sharing of the new knowledge and tools acquired during this event.

Looking forward to a positive reply to my request

Best Regards

Marco Reale