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Application for ESiWACE Summer School on Effective HPC for Climate and Weather

To whom it may concern,

About Me

“The world will not be destroyed by those who do evil, but by those who watch them without doing anything”, said Albert Einstein, one of the greatest minds of our times. Unfortunately, we are not in control of everything: untoward events happen and we need to be both conscious and prepared. However, we can decide to channel some of our efforts into something good, something powerful and disruptive that can improve the surrounding environment and the people living in it. We must take action and Computer Science provided me with the concepts and the technologies to turn my work into something beneficial and altruistic.

Why Me?

As a student, good grades and excellence have always been two goals that I aspired to accomplish. Indeed, during all these years, I have strongly engaged and succeeded in different situations and I have won a scholarship for innovative projects in support of people with disabilities. Beside studying, I have also been intrigued by meteorology since high school. Some years ago, I decided to start to help my father – on a infrastructure management and data analysis level – with a weather forecast website called “[MeteoValmorea](#)”, which he has been managing for 20 years; it is well known in my area and his passion has strongly fed my curiosity over the time so that I decided to use the data acquired by his weather station to develop a project with the purpose of predicting the atmospheric pressure, by running Deep Learning algorithm within a low-cost embedded system. This project has aroused interest up to the point that [Danilo Pau](#) (Technical Director, IEEE and ST Fellow Artificial intelligence Tools at STMicroelectronics Italy) offered me the opportunity to produce a joint paper - which I am working on at the moment, [here](#) the abstract - with the aim of submit it to [IEEE RTSI 2020 Conference](#).

Why ESiWACE?

ESiWACE, being a centre of excellence in simulation of weather and climate and bringing together the experience of people with different backgrounds and from all over the Europe, would allow me to improve both theoretical and practical side of my knowledge. Considering the topics that will be treated during the summer school, I strongly believe that the deepening of those topics could allow me to extend the ideas and projects that I have already started to more general and interesting cases. In the hypothetical case these works are of scientific relevance, I have the possibility to formalize them as scientific papers and submit them to international conferences through my university. In addition, I could personally present some of the concepts I have learned to the public following the weather forecast site mentioned above, which participates in large numbers in the initiatives that my father organizes.

Conclusion

Being part of ESiWACE Summer School means operating at the global heart of weather and climate modeling. It means working in a community of people that cooperate and engage in order to prepare the world for the challenges of the future. After getting my BSc degree and completing several projects, I finally feel ready to face a bigger challenge – being a student at the ESiWACE Summer School.

I hope that you will consider my application positively and I eagerly await your response. I give you my warmest salutations.
Sincerely,

MARCH 5, 2020

NICOLÒ GHIELMETTI · MOTIVATION LETTER

