

# Motivational Letter

I'm a theoretical physics student and I've always been fascinated by computation. By the way, my interest in scientific computing arose from the encounter with those branches of physics that implicitly demand numerical simulations to be really understood. I'm referring to phenomena such as phase transitions in statistical mechanics, or the theoretical framework of path integrals in quantum mechanics and quantum field theory, that naturally defines Monte Carlo algorithms to compute the values of physical observables.

I really think that this Guest Student Programme could be a great opportunity for me. It's exactly the experience I'm willing to have: I could improve my knowledge in parallel computing and have a unique first-hand experience in implementing powerful algorithms, and, at the same time, I could collaborate with people involved in cutting-edge researches. I think, in particular, that this experience could be crucially important next year, when I'll begin working on my Master's thesis, and, anyway, I could bring it with me in the future, since I would like to be a researcher.

I think that I would definitely enjoy meeting peers from other countries that have the same interests and purposes as I do, and hopefully, maintain contact and friendship with them.

Thank you for your consideration, Giovanni Iannelli