



Luca Di Stasio

Researcher & Engineer

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Purpose-driven professional with expertise in computational science and aerospace engineering seeking Study Engineer - Modelling & Simulation position at Airbus.

I am writing regarding the opening for the position of Study Engineer - Modelling & Simulation, which I came across in my LinkedIn feed. As a postdoctoral researcher in Computational Solid Mechanics with several years of experience working in international settings, I think I am well qualified for the position you offer.

I have a multidisciplinary background rooted in the engineering sciences, as I started my professional journey with a B.Sc. in Aerospace Engineering, obtained then an M.Sc. in Mechanical Engineering and an M.Sc. in Space Engineering, and finally completed my formation with a Ph.D. in Materials Science and a Ph.D. in Polymeric Composite Materials. Growing as a researcher, I have had the chance of working on several projects in various subjects, from ankle biomechanics to micromechanics of composite materials, from nano-electromechanical systems to the mechanics of soft materials. I have thus developed a wide perspective on the current developments in the field of applied mechanics and materials science. Computational modeling has been the common theme of my research experience, which has provided me with solid foundations in software design, programming, multi-physics simulation, and data analysis. I have a deep theoretical understanding and practical experience with several numerical methods in Computational Solid and Fluid Mechanics, such as the Finite Element Method (FEM), Boundary Element Method (BEM), Finite Difference Method (FDM), Lattice Boltzmann Method (LBM), Lattice Spring Method (LSM), Cellular Automata (CA). I have experience in several programming languages, mainly Python, C++, R, Julia, Matlab, Mathematica, Bash scripting, Windows command line scripting. I am an active peer reviewer for scientific journals (the Journal of Composite Materials, Frattura ed Integrità Strutturale, and the Journal of Open Research Software). I have experience in research funding and grant application writing, in particular with Vinnova (the Swedish Innovation Agency) for a project on neutron-based imaging of damage in composite materials and Code for Science & Society to fund a series of workshops on good coding and data management practices for researchers in Italy.

The opportunity of living and working in several countries has allowed me not only to become fluent in different languages but most importantly to master cross-cultural communication skills. Flexibility, adaptability, and rapid response to change are qualities that I have nurtured by navigating multiple work environments. From the experience of my Ph.D. project, which was a collaboration between Université de Lorraine in France and Luleå tekniska universitet in Sweden, and of my postdoctoral fellowship, which started remotely due to the Covid-induced travel restrictions, I have learned how to successfully manage complex projects with uncertain boundaries, multiple requirements, and several stakeholders. Honesty, transparency, and a positive attitude towards challenges have helped me earn the respect and trust of superiors and colleagues, which has led to numerous teaching and supervision tasks entrusted to me by supervisors and senior members of the Institutes I worked at. The ability to communicate candidly in the workplace has allowed me to build over the years a broad network across different countries and specialties.

I believe my skills and experience would prove valuable in the service of Airbus and its customers' needs. I am looking forward to a personal interview, and the chance to further discuss the value I could bring to Airbus as a Study Engineer. In the meantime, I wish to thank you for taking the time to consider my application and review my qualifications.

Best regards,

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