LUCA DI STASIO

Postdoctoral Researcher/Scientist

Discovery Boulevard, G-3900, KAUST, Thuwal, Saudi Arabia

D-CPR Certified **Driving License B (IT)**

(+966) 53 419 70 84 **luca.distasio@gmail.com**

Dear James,

Dear Hiring Team,

My Ph.D. in Materials Science and Engineering focused on polymers and their composites, and more than 2 years as a postdoctoral fellow in computational mechanics of soft polymers and biological materials, along with my experience in developing and managing international research projects both as leader and collaborator, provide me with the skills to drive innovation in the development of heart support devices in a Senior/Principal Polymer Development Engineer capacity.

I offer proficiency in data analysis and statistical modeling, product design (CAD, CAE), several computational methods of solid mechanics (FEM, BEM), fluid mechanics (LBM, FVM), fracture and damage mechanics (CZM, VCCT, J-integral, interaction integrals), mesh generation and computational geometry (transfinite interpolation, elliptic/parabolic/hyperbolic mesh smoothing), and statistical mechanics (MC, MD). I have multiple years of experience in mechanical testing of polymers and their composites, strain sensing, ultrasound inspection, thermal imaging, microscopy, Scanning Electron Microscopy (SEM), Differential Scanning Calorimetry (DSC). I am expert in several software and programming languages as outlined in my CV.

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 my Master's thesis through my Ph.D. project to my postdoctoral fellowship, I have learned to manage international research projects from inception to exploitation. Honesty, transparency, and a positive attitude towards challenges have helped me earn the trust of each stakeholder involved. The ability to communicate candidly in the workplace has allowed me to build a broad network across different countries and scientific fields.

I am eager to put my skills and experience in service of your client’s mission, and I am confident we should arrange a time to meet. In the meantime, I wish to thank you for taking the time to consider my application and review my qualifications.

Sincerely,

Luca Di Stasio

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PROFILE Scientific researcher and software simulation engineer, I'm a creative problem-solver and challenge-driven. Experienced in managing R&D projects from conception to exploitation, both as leader and collaborator.

EMPLOYMENT HISTORY

KAUST — Thuwal, Saudi Arabia

Apr 2020 - Present **Postdoctoral Researcher/Scientist**

- Led the development of multiple research projects from idea to publication in the field of large deformation elasticity of cracked Neo-Hookean bodies
- Developed automated software pipelines for the semi- and un-supervised generation and analysis of numerical models (mesh generation, CSM/CFD simulation, data analysis)
- Developed routines for the visualization of multi-dimensional data
- Disseminated results through the publication of journal articles
- Presented results at international conferences

UNIVERSITÉ DE LORRAINE — Nancy, France

Sep 2020 – Feb 2021 **Guest Lecturer**

- Established learning objectives, formulated assessment methods and designed learning activities of a Solid Mechanics course for 2nd year undergraduate students in Materials Science and Engineering delivered online
- Delivered learning activities, provided extra-curricular support, assessed the achievement of learning outcomes
- Managed remotely a team of 5 teaching assistants

LULEÅ UNIVERSITY OF TECHNOLOGY — Luleå, Sweden

Jan 2018 – Dec 2019 **Early-stage Researcher/Junior Scientist**

- Completed successfully an international research project between institutions in France, Sweden, and Germany
- Developed automated software pipelines for the semi- and un-supervised generation and analysis of numerical models (mesh generation, CSM/Fracture Mechanics simulation, data analysis)
- Co-supervised master students' research projects
- Disseminated results through the publication of journal articles
- Presented results at international conferences and seminars

UNIVERSITÉ DE LORRAINE — Nancy, France

Sep 2015 – Dec 2017 **Early-stage Researcher/Junior Scientist**

- Kickstarted an international research project (between institutions in France, Sweden and Germany)
- Developed automated software pipelines for the semi- and un-supervised generation and analysis of numerical models (mesh generation, CSM/Fracture Mechanics simulation, data analysis)
- Presented results at international conferences and seminars

ETH ZÜRICH — Zürich, Switzerland

Sep 2013 – Aug 2015 **R&D Engineer**

- Participated to the development of a coupled LBM-FEM code for staggered fluid-structure interaction
- Optimized the performance of an in-house code for multi-scale modeling of wood

IMDEA MATERIALS INSTITUTE — Madrid, Spain

Nov 2012 – Aug 2013 **Research Assistant**

- Organized and completed successfully an international research project between institutions in Italy and Spain
- Independently designed and conducted a series of mechanical tests to address the effect of loading rate on composites
- Developed CAE models and conducted FEM analysis of the experiments
- Implemented routines for feature detection and extraction of Fracture Mechanics parameters from video recordings of experiments

EDUCATION

Sep 2015 – Dec 2019	**PHD**	**POLYMERIC COMPOSITE MATERIALS**	
	LULEÅ UNIVERSITY OF TECHNOLOGY		Luleå, Sweden
Sep 2015 – Dec 2019	**PHD**	**MATERIALS SCIENCE**	
	UNIVERSITÉ DE LORRAINE		Nancy, France
Nov 2013	**PE**	**INDUSTRIAL ENGINEERING**	
	POLITECNICO DI MILANO		Milano, Italy
Oct 2010 – Oct 2013	**MSC**	**SPACE ENGINEERING**	**GPA 110/110**
	POLITECNICO DI MILANO		Milano, Italy
Sep 2011 – Jun 2012	**MSC**	**MECHANICAL ENGINEERING**	**GPA 4/4**
	DREXEL UNIVERSITY		Philadelphia, USA
Sep 2007 – Sep 2010	**BSC**	**AEROSPACE ENGINEERING**	**GPA 110/110**
	POLITECNICO DI MILANO		Milano, Italy

PROFESSIONAL DEVELOPMENT (SELECTED)

May 2021	**STRUCTURING MACHINE LEARNING PROJECTS**	
	DEEPLEARNING.AI (THROUGH COURSERA)	USA
Apr 2021	**NEURAL NETWORKS AND DEEP LEARNING**	
	DEEPLEARNING.AI (THROUGH COURSERA)	USA
May – Jul 2018	**FUNDAMENTALS OF BUSINESS CERTIFICATE**	
	QUANTIC SCHOOL OF BUSINESS AND TECHNOLOGY (PREVIOUSLY SMARTLY)	USA
Mar 2018	**RESEARCH FUNDING**	
	LULEÅ UNIVERSITY OF TECHNOLOGY	Sweden
Sep – Nov 2016	**PROJECT MANAGEMENT**	
	ECOLE CENTRALE LILLE	France
Jul 2015	**EFFECTIVE EXPLOITATION OF HIGH PERFORMANCE COMPUTING SYSTEMS**	
	SWISS NATIONAL SUPERCOMPUTING CENTER	Switzerland

COMPUTER SKILLS

C++ Python Julia Fortran R Matlab Mathematica Maple
Windows Batch Unix Shell Abaqus Ansys Comsol FEniCs OpenFOAM Thermal Desktop AutoCAD
SQL Git Javascript HTML CSS VBA Excel OpenMP MPI CUDA OpenACC

TECHNICAL SKILLS

Manufacturing and testing of FRP		Operating CNC and precision machines
Milling, turning, drilling, welding	CAD/CAE/CAM	Circuit design and manufacturing
Optical and digital microscopy	Scanning electron microscopy	Strain and stress measurements
Project management	Funding and budgeting	Technical writing and communication

LANGUAGES

Italian	Native speaker	**English**	Highly proficient
French	Highly proficient	**Spanish**	Highly proficient
German	Working knowledge	**Swedish**	Working knowledge