

# **LUCA DI STASIO**

## **Postdoctoral (Experienced) Researcher in Mechanical Engineering**

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

**Italian & EU Citizen**

**(+966) 53 419 70 84**

**Driving License B (IT)**

**luca.distasio@gmail.com**

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Dear Anders,

Dear Hiring Team,

My multidisciplinary engineering background, along with my expertise in mechanics of structures, solids, and fluids, provide me with the skills to deliver high-quality innovative designs in a Research & Development Structural Engineer capacity at Floating Power Plant.

I offer proficiency in CAD/CAE and multi-physics software, and the development of software solutions (in Matlab, Python, C++, R, Julia, Mathematica, VBA, and combinations of them) for the semi- and un-supervised automatic construction of CAD models, creation of meshes (2D/3D), multi-physics simulation, and data extraction and analysis. I have experience in milling, turning, drilling, soldering, manufacturing of fiber reinforced composite laminates, production of electrical transformers, circuit design and installation, thermo-mechanical testing, strain sensing, NDT inspection, imaging (thermal, high-speed optical), and the development and implementation of custom technical equipment in adherence with relevant standards. I am expert in several programming languages and libraries as outlined in my CV.

Curious by nature, I devoted my formative years to build a solid background in multiple areas of engineering. 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 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. A self-starter, I am comfortable working in a team as well as independently and able to deliver under minimal or no supervision.

I am eager to put my skills and experience in service of Floating Power Plant'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

Industrial engineer and scientific researcher expert in design and multi-physics modelling, I'm a creative problem-solver and challenge-driven. Experienced in conducting innovative projects from conception to exploitation, both as leader and collaborator.

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### EMPLOYMENT HISTORY

#### KAUST

Thuwal, Saudi Arabia

Apr 2020 - Present

#### Postdoctoral (Experienced) Researcher

- 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 2<sup>nd</sup> 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

- 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
- Developed models of fracture for thin-ply laminates
- 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

- 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

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## EDUCATION

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

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## PROFESSIONAL DEVELOPMENT (SELECTED)

May 2021	<b>STRUCTURING MACHINE LEARNING PROJECTS</b>		
	DEEPLARNING.AI (THROUGH COURSERA)		USA
Apr 2021	<b>NEURAL NETWORKS AND DEEP LEARNING</b>		
	DEEPLARNING.AI (THROUGH COURSERA)		USA
May – Jul 2018	<b>FUNDAMENTALS OF BUSINESS CERTIFICATE</b>		
	QUANTIC SCHOOL OF BUSINESS AND TECHNOLOGY (PREVIOUSLY SMARTLY)		USA
Sep – Nov 2016	<b>PROJECT MANAGEMENT</b>		
	ECOLE CENTRALE LILLE		France
Jul 2015	<b>EFFECTIVE EXPLOITATION OF HIGH PERFORMANCE COMPUTING SYSTEMS</b>		
	SWISS NATIONAL SUPERCOMPUTING CENTER		Switzerland
May – Oct 2010	<b>CNC TECHNICIAN CERTIFICATE</b>		
	CENTRO DI FORMAZIONE SALESIANO DON BOSCO		Italy

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

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<b>TECHNICAL SKILLS</b>	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

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<b>LANGUAGES</b>	<b>Italian</b>	Native speaker	<b>English</b>	Highly proficient
	<b>French</b>	Highly proficient	<b>Spanish</b>	Highly proficient
	<b>German</b>	Working knowledge	<b>Swedish</b>	Working knowledge