

# **Luca Di Stasio**

## **Early Stage Researcher**

D-CPR Certified (FR, SE)

Driver License Cat. B (IT)

Italian & EU citizen

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SE-\*\*\*\* Luleå, Sweden

+46 76 \*\*\* \*\* \*\*

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C Linkedin, Researchgate

## Computer Skills -

- Operating Systems
  Linux (Ubuntu, OpenSUSE, CentOS)
  Windows (>95), Mac OS X (>10.6)
- Languages C, C++, Python, Perl, Java, Fortran VBA, Javascript, HTML(5), CSS Bash, Windows Batch Scripting
- High Performance Computing OpenMP, MPI, CUDA, OpenACC
- Scientific Computing & Statistics Numpy, Scipy, R, Stata Matlab, Mathematica, Octave, Maple Excel, G-Sheets, LibreOffice Calc
- CAD, CAM, CAE
  Autocad, Solid Edge, G-code
  Abaqus, Ansys, Comsol Multiphysics
  CalculiX, FEniCS, Code\_Aster
  OpenFOAM, Thermal Desktop
- Web Development
  AJAX, JQuery, Bootstrap, Angular
  React, D3, Node.js, Npm
- Oatabases
  SQL, MongoDB
- Versioning
  Git, Github
- Writing & Reporting Latex, Tikz, Beamer, Word, Powerpoint

## **Work Experience**

### Research & Development

currently **Early stage researcher**Luleå University of Technology, Luleå, Sweden
Polymeric Composites Group, TVM.

*Projects*: Mechanics of extreme thin composite layers for aerospace applications; Effect of aging on transverse cracking in GFRPC; Temperature and loading rate effect on transverse cracking in GFRPC.

Working language(s): Swedish, English.

2015 - **Early stage researcher** Université de Lorraine, Nancy, France

2017 Mechanics of Materials Group, SI2M, IJL, EEIGM.

*Projects*: Mechanics of extreme thin composite layers for aerospace applications. *Working language(s)*: French, English.

2013 - Early stage researcher

ETH Zürich, Zürich, Switzerland

2015 Computational Physics for Engineering Materials Group, D-BAUG.
Projects: Fluid-structure interaction on deformable surfaces; Multi-scale modeling of wood.

Working language(s): German, English.

2012 - Research assistant IMDEA Materials Institute, Madrid, Spain

2013 Structural Composites Group.

Projects: Loading rate effects on interlaminar fracture toughness in advanced CFRP

Working language(s): Spanish, English.

2012 Research assistant Drexel University, Philadelphia, USA

Mesoscale Materials Laboratory & BioMechanics Laboratory.

*Projects*: Design of nano-resonators for environmental electromagnetic field detection; Talus morphology and its relationship to the kinematics of the ankle joint.

Working language(s): English.

### **Teaching & Supervision**

currently **Teaching Assistant**Luleå University of Technology, Luleå, Sweden 
Subjects: Elasticity, Rheological models, Fracture mechanics, Experimental methods, Mechanics of Composite Materials, Laminate Analysis, Finite Element Method.

Working language(s): English.

2016 - **Teaching Assistant** 

Université de Lorraine, Nancy, France

2017 Subjects: Mechanics of materials, Elasticity, Rheological models, Fracture mechanics, Experimental methods, Mechanics of Composite Materials, Finite Element Method.

Working language(s): French.

2014 - **Tutor** The Learning Center Zürich, Zürich, Switzerland

2015 *Subjects*: Mathematics, Physics, Statistics, Econometrics, Java programming. *Working language(s)*: German, English.

2011 **Tutor** 

Politecnico di Milano, Milano, Italy

Subjects: Calculus.

Working language(s): Italian.

2009 - **Tutor** Scientific High School Istituto Sacro Cuore, Milano, Italy

2011 *Subjects*: Mathematics, Physics, Biology, Italian Language and Literature, Latin Language and Literature, History.

Working language(s): Italian.

#### Institutional and Administrative Activities

2008 - **Student Representative** Politecnico di Milano, Milano, Italy Student representative in the board of the Department of Aerospace Engineering

Working language(s): Italian.

### Volunteer Work

#### currently Instructor

The Carpentries, CA, USA.

Conducting workshops to teach foundational coding and data science skills (Unix Shell, Git, Python, R) to researchers.

and in the board of the School of Industrial Engineering at Politecnico di Milano.

Working language(s): English.

## Memberships

Since Ordine degli Ingegneri della Provincia di Milano (Society of Licensed

2014 Engineers of Milan)

### **Technical Skills** -

- Mechanical & Electrical Engineering Creation of Drawings & Specifications Circuit Design & Assembly Milling, Turning, Drilling, Welding Operating CNC & Precision Machines
- Composites Science & Technology
  Hand layup, Resin Molding & Casting
  Specimen Cutting & Polishing
  UTM Testing, Strain Measurements
  Optical & Digital Microscopy, SEM
- Project Management Goals & Specifications Formulation Planning, Scheduling & Supervision Funding & Budgeting
- Technical Writing & Communication Technical Reports, Scientific Articles Seminar & Conference Presentations Meeting, Video-Conferencing

## Languages -

Italian (mother tongue)

Speaking
Writing
Reading

English (fluent)

Speaking
Writing
Reading

French (fluent)

Reading

Spanish (fluent)

Speaking
Writing
Reading

German (satisfactory)

Speaking
Writing
Reading

Swedish (rudimentary)

Speaking
Writing
Reading

Russian (rudimentary)

Speaking
Writing
Reading

## **Education**

### **Higher Education**

2013 **Professional License, Industrial Engineering** 

Politecnico di Milano, Milano, Italy *Working language(s)*: Italian.

- 2010 Master of Science, Space Engineering, 110/110
- 2013 Politecnico di Milano, Milano, Italy

Double M.Sc. degree project EAGLES (Politecnico di Milano, Milano, Italy - Drexel University, Philadelphia, USA - Universidad Politécnica de Madrid, Madrid, Spain) Working language(s): Italian, English, Spanish.

- 2011 Master of Science, Mechanical Engineering, 4/4
- 2012 Drexel University, Philadelphia, USA

  Double M.Sc. degree project EAGLES (Politecnico di Milano, Milano, Italy Drexel
  University, Philadelphia, USA Universidad Politécnica de Madrid, Madrid, Spain)

Working language(s): English.

2007 - Bachelor of Science, Aerospace Engineering, 110/110

2010 Politecnico di Milano, Milano, Italy Working languages(s): Italian.

- 2002 Scientific High School Diploma, 100/100 cum Laude
- 2007 Scientific High School Istituto Sacro Cuore, Milano, Italy Working languages(s): Italian.
- 1997 Cello Studies
- 2007 Municipal School of Music, Cernusco s/N, Italy Working language(s): Italian.

#### Selected Courses & Seminars

- 2018 Qualifying Course for University Teachers
- 2019 Luleå University of Technology, Luleå, Sweden
  In-Class Course and Verified Certificate of Completion.
  Working language(s): English.
- 2016 **Project Management MOOC Classic Course**

Centrale Lille and Unow, Lille, France
Online MOOC and Certificate of Completion.
Working language(s): French.

2015 Corporate Social Responsibility (CSR) and Value Creation
Audencia Nantes Business School, Nantes, France

Online MOOC and Verified Certificate of Completion.
Working language(s): English.

2015 Summer School on Effective High Performance Computing CSCS and Universitá della Svizzera Italiana, Lugano, Switzerland.

In-Class Course, Hands-on Training and Certificate of Completion.

Working language(s): English.

#### **Vocational Training**

2009 **CNC Technician** Centro di Formazione Professionale Salesiano Don Bosco, Milano, Italy *In-Class Course, Hands-on Training and Certificate of Competence.*Working language(s): Italian.

## **Selected Publications**

2019 Growth of interface cracks on consecutive fibers: on the same or on the opposite sides?

Proceedings of the  $12^{th}$  International Conference on Composite Science and Technology - Sorrento, Italy - May 8- $10^{th}$ , 2019

- 2019 Energy release rate of the fiber/matrix interface crack in UD composites under transverse loading: debond-debond and debond-free boundary interactions

  Theoretical and Applied Fracture Mechanics, doi: 10.1016/j.tafmec.2019.102251
- 2018 Effect of boundary conditions on microdamage initiation in thin ply composite laminates

Proceedings of the ECCM18 -  $18^{th}$  European Conference on Composite Materials - Athens, Greece - June 24- $28^{th}$ , 2018

2013 Experimental, Analytical and Numerical Investigation of Loading Rate Effects on Mode I, Mode II and Mixed Mode I-II Delamination in Advanced CFRP Master Thesis, Master of Science in Space Engineering. Politecnico di Milano, Milano, Italy.