



Luca Di Stasio

Early Stage Researcher

- D-CPR Certified (FR, SE)
- Driver License Cat. B (IT)
- Italian & EU citizen
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- 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
- Web Development
AJAX, JQuery, Bootstrap, Angular
React, D3, Node.js, Npm
- Databases
SQL, MongoDB
- Versioning
Git, Github
- Writing & Reporting
Latex, Tikz, Beamer, Word, Powerpoint

Work Experience

Research & Development

- currently **Early stage researcher** Luleå tekniska universitet (Luleå, Sweden)
Polymeric Composite Materials Group, TVM
Project(s): 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
Project(s): 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
Project(s): 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
Project(s): 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)
2011 Student representative in the board of the Department of Aerospace Engineering and in the board of the School of Industrial Engineering at Politecnico di Milano
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
Working language(s): English

Memberships

- Since 2014 Ordine degli Ingegneri della Provincia di Milano (Society of Licensed 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)				
	Speaking	●	●	●	●
	Writing	●	●	●	●
	Reading	●	●	●	●
	Spanish (fluent)				
	Speaking	●	●	●	●
	Writing	●	●	●	●
	Reading	●	●	●	●
	German (satisfactory)				
	Speaking	●	●	●	●
	Writing	●	●	●	●
	Reading	●	●	●	●
	Swedish (rudimentary)				
	Speaking	●	●	●	●
	Writing	●	●	●	●
	Reading	●	●	●	●
	Russian (rudimentary)				
	Speaking	●	●	●	●
	Writing	●	●	●	●
	Reading	●	●	●	●

Education

Higher Education

- 2015 - 2019 (exp.)

Joint European Doctor of Philosophy Degree in Advanced Materials Science and Engineering (DocMASE)
Luleå tekniska universitet (Luleå, Sweden) and Université de Lorraine (Nancy, France)
PhD in Polymeric Composite Materials (exp. 2019), Luleå tekniska universitet
PhD in Materials Science & Engineering (exp. 2019), Université de Lorraine
Working language(s): English, French, Swedish
- 2013

Professional License, Industrial Engineering
Politecnico di Milano (Milano, Italy)
Working language(s): Italian
- 2010 - 2013

Double Master of Science degree EAGLES (Engineers as Global Leaders for Energy Sustainability)
Politecnico di Milano (Milano, Italy), Drexel University (Philadelphia, USA) and Universidad Politécnica de Madrid (Madrid, Spain)
MSc in Space Engineering, 110/110 (2013), Politecnico di Milano
MSc in Mechanical Engineering, 4/4 (2012), Drexel University
Working language(s): Italian, English, Spanish
- 2007 - 2010

Bachelor of Science in Aerospace Engineering, 110/110
Politecnico di Milano (Milano, Italy)
Working language(s): Italian
- 2002 - 2007

Scientific High School Diploma, 100/100 cum Laude
Scientific High School Istituto Sacro Cuore (Milano, Italy)
Working language(s): Italian
- 1997 - 2007

Cello Studies
Municipal School of Music (Cernusco s/N, Italy)
Working language(s): Italian

Selected Courses & Seminars

- 2018 - 2019

Qualifying Course for University Teachers
Luleå tekniska universitet (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

2015 Summer School on Effective High Performance Computing
CSCS and Università 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

Honors & Awards

- 2019 **Wallenberg Jubileumsanslaget Travel Grant**
Knut and Alice Wallenberg Foundation
Travel expenses for the participation to the *12th International Conference on Composite Science and Technology*
- 2015 - **Erasmus Mundus Fellowship**
2018 European Commission
Salary and travel expenses for the participation to the *Joint European Doctoral Programme in Advanced Materials Science and Engineering (DocMASE)*
- 2015 **Academic Excellence Award**
BCC (Banca di Credito Cooperativo) di Cernusco s/N (now BCC di Milano) (Milano, Italy)
Award for excellence in graduate studies at Politecnico di Milano (Milano, Italy)
- 2013 **PEGASUS award**
PEGASUS - The European Network of Excellence in Aerospace Engineering Education
Statement of recognition of special achievements in European cooperation through working abroad for academic research or industrial development projects
- 2012 - **Erasmus Fellowship**
2013 European Commission
Salary and travel expenses to conduct a research project at IMDEA Materials Institute (Madrid, Spain), as part of the *Double Master Degree Program EAGLES (Engineers as Global Leaders for Energy Sustainability)*
- 2011 - **EU-US Atlantis Program Fellowship**
2012 European Commission and U.S. Department of Education
Full tuition, salary and travel expenses to conduct graduate studies at Drexel University (Philadelphia, USA), as part of the *Double Master Degree Program EAGLES (Engineers as Global Leaders for Energy Sustainability)*
- 2012 **Academic Excellence Award**
BCC (Banca di Credito Cooperativo) di Cernusco s/N (now BCC di Milano) (Milano, Italy)
Award for excellence in undergraduate studies at Politecnico di Milano (Milano, Italy)
- 2007 - **Merit-based tuition fees exemption**
2010 Politecnico di Milano (Milano, Italy)
Merit-based partial exemption from tuition fees to conduct undergraduate studies at Politecnico di Milano (Milano, Italy)
- 2007 **Academic Excellence Award**
BCC (Banca di Credito Cooperativo) di Cernusco s/N (now BCC di Milano) (Milano, Italy)
Award for excellence in high school studies at Scientific High School Istituto Sacro Cuore (Milano, Italy)
- 2007 **Academic Excellence Award**
Ministero dell'Istruzione, dell'Università e della Ricerca (Italian government)
Award for excellence in high school studies at Scientific High School Istituto Sacro Cuore (Milano, Italy)

Selected Publications

- 2019 Energy release rate of fiber/matrix interface crack growth in cross-ply laminates under transverse loading: effect of the $0^\circ/90^\circ$ interface and of 0° layer thickness
Submitted to *Composites Part A: Applied Science and Manufacturing*
- 2019 Finite Element solution of the fiber/matrix interface crack problem: convergence properties and mode mixity of the Virtual Crack Closure Technique
Submitted to *Finite Elements in Analysis and Design*
- 2019 Growth of interface cracks on consecutive fibers: on the same or on the opposite sides?
Proceedings of the *12th International Conference on Composite Science and Technology - Sorrento, Italy - May 8-10th, 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 - 18th European Conference on Composite Materials - Athens, Greece - June 24-28th, 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.