Vincenzo Cucumazzo

Structural Mechanics and Computer-Aided-Engineering Analyst

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Research experience

Loughborough University, Mechanics of Advanced Materials Group Loughborough, England

PhD Researcher Apr 2017 – current

- Learnt to see the big picture in parallel to details
- Developed a parametric numerical tool with a GUI which enables users to automatically model and simulate the desired calendered nonwoven in a commercial software (MSC Marc)
- Developed several codes to conduct statistical analysis
- Carried out mechanical (tensile tests) and surface characterisation (SEM, X-Ray micro-CT) on calendered nonwovens.

Loughborough University Loughborough, England

Finite Element Analysis Tutor and Demonstrator Apr 2017 – current

Tutored and supported undergraduate and postgraduate students with MSC Marc tutorials in the area of Finite Element Analysis.

Co-supervisor of Mechanical Engineering undergraduate students for final year project Feb 2018 – current

- Imparted critical thinking skills to students to allow them to work independently
- Advised on experimental study of deformation, damage and failure behaviours of calendered nonwovens
- Proof-read final year reports

National Structural Integrity Research Centre (NSIRC) and TWI Ltd Cambridge, England

NSIRC PhD Student at The Welding Institute Sep 2016 – Feb 2017

Researched on Acoustic Emission (AE) techniques to detect defects in real time in stainless steel pressure vessels.

Education

PhD in Mechanical Engineering	Loughborough University, England	Apr 2017 – Apr 2020 (expected)
MSc in Structural Integrity	Cranfield University, England	Oct 2014 – Sep 2015
BSc in Civil Engineering	Politecnico of Bari, Italy	Feb 2009 – Apr 2013
BSc in Building Engineering	Politecnico of Bari, Italy	Oct 2005 – Jan 2009
Diploma in Mechanics	I.T.I.S. Alessandro Volta, Italy	Sep 2000 – Jul 2005

Technical skills

Computing: MSC Marc, Abaqus, Ansys, Python and its libraries, MATLAB, MathCAD, certified MS Office
Sketching and Modelling: AutoCAD, ArchiCAD, Solidworks, Inkscape
Languages: Italian (native), English (fluent), Spanish (basic)

Awards

- 3-year scholarship granted from Lloyd's Register Foundation (UK)
- 3-year scholarship granted from The Nonwovens Institute (NWI) of North Carolina State University (US)

Mission, vision & interests

My mission is to combine scientific programming to mechanics of materials in a way to predict the mechanical behaviour of materials in an automated manner. I also strongly believe in programmable materials capable of changing their physical properties in a programmable fashion to various external conditions. This could be achieved by collaborating with talented people. I am addicted to a large number of themes, in particular to those related to *Space*. As an ultimate career goal, I would like to see our cutting-edge materials being used in an extra-terrestrial environment.