Curriculum Vitae

ELENA RAPONI

Education and Qualifications

$Nov2017 - today$	PhD Student in Applied Mathematics at University of Camerino **Supervisors:** Maria Letizia Corradini, Full Professor of Control Systems Theory and Design, University of Camerino Simonetta Boria, Assistant Professor of Mechanical Design and Machine Building, University of Camerino
$Sep2018$	Summer School on Composite Materials 2018 San Benedetto del Tronto, Italy **Thematic Sessions:** Costruzioni Tecnologie e Progettazione Visita Aziendale e Workshop
$July2018$	Conseguimento di 24 CFU nelle discipline antropo-psico-pedagogiche e nelle metodologie e tecnologie didattiche Requisito d'accesso al concorso per l'ammissione ai FIT, istituito ai sensi del Decreto ministeriale 616 del 10/08/2017
$Oct2015 - Oct2017$	Master studies in Mathematics and Applications, University of Camerino **Final Grade:** full marks (110/110) and summa cum laude **Thesis Title:**"Development of Surrogate Modeling Techniques for Level Set Topology Optimization" **Advisors:** Simonetta Boria, Assistant Professor of Mechanical Design and Machine Building, University of Camerino Fabian Duddeck, Associate Professorship of Computational Mechanics, Technical University of Munich **Co-Advisors:** Mariusz Bujny, PhD Student of Computational Mechanics, Technical University of Munich Markus Olhofer, Chief Scientist at Honda Research Institute, Europe (HRI) Fabio Giannoni, Full Professor of Analysis, University of Camerino

*Sep*2012 − *June*2018	School of Excellence "C.Urbani" scholarship, University of Camerino **Final Grade:** full marks (110/110) and summa cum laude **Thesis Title:**"Hybrid Surrogate-assisted Techniques for Level Set Topology Optimization" **Advisors:** Simonetta Boria, Assistant Professor of Mechanical Design and Machine Building, University of Camerino Fabio Giannoni, Full Professor of Analysis, University of Camerino
*Oct*2012–*Jul*2015	Bachelor in Mathematics and Applications, University of Camerino **Final Grade:** full marks (110/110) and summa cum laude **Thesis Title:** "Automobile safety problem: different mathematical approaches" **Advisors:** Fabio Giannoni, Full Professor of Analysis, University of Camerino Simonetta Boria, Assistant Professor of Mechanical Design and Machine Building, University of Camerino
June 2015	Research activity *NTNU*, Norwegian University of Science and Technology Topic: Control systems and optimal control with applications to damped oscillators
*Mar*2015–*May*2015	University Stage by Picchio S.p.A. Topic: Analysis and Modelling of complex structures under dynamical stresses
*Sep*2007 − *Jul*2012	High School Scientific Lyceum Liceo "L. Da Vinci", Jesi Final Grade: full marks (100/100) and summa cum laude. Thesis: Mathematics in Nature.
*Sep*2011–*Oct*2011	Life Long Learning Programme Leonardo Mobility Brighton, UK

Research Activities

*Sep*2019	ECTA2019, 11th Evolutionary Computation Theory and Applications, Vienna *Hybrid Kriging-assisted Level Set Method for Structural Topology Optimization* E. Raponi, M. Bujny, M. Olhofer, S. Boria, F. Duddeck Winner of *Best Student Paper Award*
*July*2019	MECHCOMP2019, 5th International Conference on Mechanics of Composites, Lisboa *Parameter Optimization of a Composite Impact Attenuator under Axial Loading (Presentation)* E. Raponi, S. Boria
*June*2019	Journal of Composite Materials (Journal) *Analytical modeling and experimental validation of the low velocity impact response of hemp and hemp/glass thermoset composites* S. Boria, C. Santulli, E. Raponi, F. Sarasini, J. Tirillò
*Feb*2019	Computer Methods in Applied Mechanics and Engineering (Journal) *Kriging-Assisted Topology Optimization of Crash Structures* E. Raponi, M. Bujny, M. Olhofer, N. Aulig, S. Boria, F. Duddeck
*Jan*2019	Multiscale and Multidisciplinary Modeling, Experiments and Design (Journal) *Evaluation of a New Green Composite Solution for Wind Turbine Blades* S. Boria, C. Santulli, E. Raponi, F. Sarasini, J. Tirillò
*Dec*2018	Procedia Structural Integrity (Journal) *Green sandwich structures under impact: experimental vs numerical analysis* S. Boria, E. Raponi, F. Sarasini, J. Tirillò, L. Lampani
*July*2018	DRAF 2018, International Symposium on Dynamic Response and Failure of Composite Materials *Evaluation of a New Green Composite Solution for Wind Turbine Blades (Presentation)* S. Boria, C. Santulli, E. Raponi, F. Sarasini, J. Tirillò
*Oct*2017	7th GACM Colloquium on Computational Mechanics for Young Scientists from Academia and Industry *Kriging-guided Level Set Method for Crash Topology Optimization* E.Raponi, M. Bujny, M. Olhofer, N. Aulig, S. Boria, F. Duddeck
*May*2016	1st International Conference on Impact Loading of Structures and Materials *Searching the energy absorption capability of composite impact attenuators with the particle swarm optimization* S.Boria, E.Raponi, G.Belingardi, F.Giannoni

Work Experiences

$Oct2018 - today$	Adjunct Professor of Mathematics I Chemistry Degree Course, School of Sciences and Technology, University of Camerino
$Oct2018 - June2019$	Exercise Lecturer of Mathematical Analysis II Mathematics and Applications Degree Course, School of Sciences and Technology, University of Camerino
$Oct2017 - June2018$	Exercise Lecturer of Mathematical Analysis II Mathematics and Applications Degree Course, School of Sciences and Technology, University of Camerino
$Feb2015 - Jun2015$	Project for *University of Camerino and Belumbury spa*, Ascoli Piceno (Italy) Creation and implementation of a 3D mounting and maintenance manual for electric cars (on-line)
$2012 - today$	University Futures Programme University of Camerino and Liceo Scientifico "Leonardo da Vinci" (Jesi)
$2009 - today$	Private Mathematics and Physics Lectures

Honours and Awards

2019	Winner of *Best Student Paper Award* at ECTA2019 Paper: Hybrid Kriging-assisted Level Set Method for Structural Topology Optimization Authors: E. Raponi, M. Bujny, M. Olhofer, S. Boria, and F. Duddeck
2016	First place in the Ecapital Business Plan Competition 2016 Team: LiMiX Project: Talking Hands
2015	First place in the Start Cup Marche Competition 2015 Team: LiMiX Project: Talking Hands

Computer Skills

Microsoft Office	Competent with most Microsoft Office programmes (ECDL European Certificate)
Programming	Competent with C, Python and Matlab Language coding
CAD/CAE	Great knowledge of CAD/CAE softwares (HyperWorks, Creo, Solidworks)
Graphics	Good command of video and photo editing software gained as an amateur photographer

Languages

Italian	Native tongue
English	Fluent in speaking and writing, Cambridge First Certification (B2 level)
German	Basic knowledge (non certified level: B1)
Spanish	Basic knowledge

Professional Skills

- Great Attitude to Problem Solving
- Flexybile and adaptive
- Curious and learning fascinated
- Excellent organisational and prioritisation skills
- Diligent and Responsible
- Optimal Ability to Relate and Talk