

Andrea Chiocca

RESEARCH FELLOW · UNIVERSITY OF PISA

Via Viano 116, La Spezia 19123, Italy

☎ (+39) 3464945637 | ✉ andrea.chiocca@unipi.it | 🌐 andrea-chiocca

Qualifications summary

- Work experience in structural durability and fatigue analysis of welded joints and additive manufacturing materials
- Research experience in both Italian and foreign institutions with well established research collaborations
- Winner of national and international awards regarding finite element analysis
- Lecturing and tutoring experience at the University of Pisa

Experience

Pierburg Pump Technology Italy S.p.A. – Rheinmetall

Livorno, Italy

EXTERNAL COLLABORATOR

Feb. 2022 - Present

- Sustainable automotive components
- Fatigue assessment of elastomer materials
- Fatigue assessment of PCBs

Department of Civil and Industrial Engineering – University of Pisa

Pisa, Italy

RESEARCH FELLOW

Feb. 2022 - Present

- Residual stresses evaluation of welded joints by means of thermal-mechanical numerical analysis, experimental tests and analytical models
- Fatigue assessment of welded components under uni-axial and multi-axial state of stress and strain
- Fatigue assessment of PLA additive manufactured lattice structures

Fraunhofer LBF

Darmstadt, Germany

PHD PERIOD ABROAD

Feb. 2021 - June 2021

- Transfer the representative structure element through different scales using analytical approaches and numerical methods

Fraunhofer LBF

Darmstadt, Germany

CONTRACT WORK

July 2018 - Oct. 2018

- Study of cyclic behaviour of additive manufactured specimens, produced by the SLM method
- Characterization of the anisotropic material behaviour, through experimental and numerical tests

Fraunhofer LBF

Darmstadt, Germany

MASTER THESIS STUDENT

Dec. 2017 - May 2018

- Study of the interaction and coalescence behaviour of multiple cracks in welded joints by means FE-analysis and experimental tests
- Implementation of the developed multiple cracks model within the IBESS computational algorithm

Education

Department of Civil and Industrial Engineering – University of Pisa

Pisa, Italy

PHD STUDENT

Nov. 2018 - Oct. 2021

- Thesis title: *Influence of residual stresses on the fatigue life of welded joints*
Thesis discussed on November 3, 2021 with grade *excellent with honours*

University of Pisa

Pisa, Italy

QUALIFICATION TO PRACTICE AS AN INDUSTRIAL ENGINEER

Dec. 2018

University of Pisa

Pisa, Italy

M. SC. IN MECHANICAL ENGINEERING

Dec. 2015 - May 2018

- Thesis title: *Analysis of the interaction and propagation of multiple cracks in weldments*
Thesis discussed on May 10, 2018 with grade *108/110*

University of Pisa

B. SC. IN MECHANICAL ENGINEERING

- Thesis title: *Preliminary structural analysis of a support for compound parabolic collectors*
Thesis discussed on December 9, 2015 with grade 104/110

Pisa, Italy

Sep. 2011 - Dec 2015

Scientific High School A. Pacinotti

SCIENTIFIC HIGH SCHOOL DIPLOMA

La Spezia, Italy

Sep. 2006 - May 2011

Awards

Best PhD thesis in Industrial Engineering of 2021

University of Pisa

June 2022

Top 10 Academic

Ansys Hall of Fame 2020 Competition

Feb. 2020

Software simulation award

Italian scientific society of mechanical design and machine construction (AIAS)

Sept. 2019

Technical Skills

SOFTWARE

FEM: Abaqus, Ansys APDL, Ansys Workbench

CAD: SolidWorks

MBD: MSC Adams

CFD: Ansys Fluent

Other: Matlab, Mathematica, Mathcad, Eureka

PROGRAMMING LANGUAGES

L^AT_EX, PYTHON, FORTRAN

GENERAL SKILLS

INKSCAPE, GIMP, MICROSOFT OFFICE SUITE

Languages

Italian: Mother-tongue

English: Fluent

German: Intermediate

Certificate of Academic English C1+ level

Certificate of German language B1 level

Interests and Activities

Organizer of the webinar *Fatigue of metallic materials and additively manufactured components*.

I practice different amateur sports including soccer, basket, MTB, downhill, tennis, beach volley, and bouldering.

I have practised volleyball on a competitive level.

I play different musical instruments including guitar, bass, and drums.

I am passionate about technology and I love travelling.

Pisa, November 10, 2023

