Matteo Bottacchiari

PROFESSIONAL QUALIFICATION

01/07/2021 – CURRENT

Qualification to practise the profession of Industrial Engineer

Mechanics - "Albo A"

EDUCATION AND TRAINING

01/11/2020 – CURRENT

PH.D. IN THEORETICAL AND APPLIED MECHANICS – Sapienza University of Rome - Department of Mechanical and Aerospace Engineering

My research activity focuses on phase-field models for biological membranes with particular regard to their topological transitions in fusion and fission events. I'm also Guest Student at the Center for Life Nano- & Neuro-Science of the Italian Institute of Technology in Rome.

11/01/2018 – 13/01/2020

MASTER'S DEGREE IN MECHANICAL ENGINEERING – Sapienza University of Rome

Specialization in Energy

Final grade 110 cum laude/110

20/09/2016 – 10/01/2018

BACHELOR DEGREE IN PHYSICS – Sapienza University of Rome

Final grade 108/110

20/09/2012 – 23/03/2016

BACHELOR DEGREE IN MECHANICAL ENGINEERING – Sapienza University of Rome

Final grade 101/110

WORK EXPERIENCE

01/06/2020 – 01/10/2020

RESEARCH SCHOLARSHIP FOR A "NUMERICAL AND EXPERIMENTAL STUDY OF A MICROFLUIDIC SYSTEM FOR HOSPITAL ON A NEEDLE APPLICATIONS" – SAPIENZA UNIVERSITY OF ROME - DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

PUBLICATIONS

Topological transitions in fluid lipid vesicles: activation energy and force fields (preprint)

Matteo Bottacchiari, Mirko Gallo, Marco Bussoletti and Carlo Massimo Casciola
https://doi.org/10.21203/rs.3.rs-1533273/v1 – 2022

Currently (30 Sept 2022) *In-principle accepted* at *Communications Physics*. A preprint version of the paper is available online at *Research Square.*

TEACHING ACTIVITY

Teaching assistant (tutorship) for "Physics I"

Bachelor degree in Energy Engineering - Sapienza University of Rome
AY 2020/2021 - 2021/2022

Teaching assistant (tutorship) for "Mathematical Analysis I"

Bachelor degree in Mechanical Engineering - Sapienza University of Rome
AY 2020/2021 - 2021/2022

RESEARCH GRANT

17/11/2021 – 17/08/2022

Topological transitions in lipid vesicles (ToTraVes) - High Performance Computing Resources

Principal Investigator - Computational Research Grant- Italian SuperComputing Resource Allocation - ISCRA - Class C - Budget: 86400 core-hours

DIGITAL SKILLS

My Digital Skills

Computational Fluid Dynamics

ANSYS Fluent | ANSYS CFX

Computer programming

C language | Wolfram Mathematica programming | PETSc library | Basics of Julia | FFTW

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user