Curriculum Vitæ et Studiorum

Marco Bussoletti

PhD student at Sapienza University of Rome | Adjunct professor at Temple University – Rome Campus

Education

2019 – now	PhD program in Theoretical and Applied Mechanics – scholarship winner. Sapienza University of Rome, Department of Mechanical and Aerospace Engineering. Research project: I'm currently investigating the mechanics and behavior of lipid membranes and their role in physiological and technological contexts, through the development of suitable physical models.
2017 - 2019	Master of Science in Mechanical Engineering (110/110 with honors). Sapienza University of Rome. MSc thesis: “Phase Field models for biological membranes: equilibrium configurations and dynamics”.
2014 - 2017	Bachelor of Science in Mechanical Engineering (110/110 with honors). Sapienza University of Rome.

Teaching Activity

2020 - 2022	Adjunct Professor of Engineering Dynamics - Temple University Rome Campus.
2019 - 2022	Teaching assistant of Calculus I, BSc in Aerospace Engineering - Sapienza University of Rome.
2020 - 2022	Teaching assistant of Calculus I, BSc in Civil Engineering - Sapienza University of Rome.
2020 - 2022	Teaching assistant of Calculus I, BSc in Environmental Engineering - Sapienza University of Rome.
2019 - 2020	Teaching Assistant of Engineering Dynamics - Temple University Rome Campus.
2019 - 2022	Teaching Assistant of Classical and Statistical Thermodynamics - Temple University Rome Campus.
	Co-advisor of 1 Master Thesis.

Acknowledgments

2020 Excellent Graduate – Sapienza University of Rome.
Awarded among the best graduate students for the academic year 2018/2019.

2019 Excellence Programme – Sapienza University of Rome.

Fundings and Grants

2021 Sapienza project – Avvio alla ricerca: A continuous mesoscale analysis of curvature-mediated protein aggregation on lipid bilayers. (PI, Euro 1500)

2021 Prace 23rd call: HPC simulations of natural and bio-inspired micro-cavitating systems. (Collaborator, 45 M core-hours in MARCONI m100)

2021 Iscra C Cineca: MAPA - A continuous Mesoscale Analysis of curvature-mediated Protein Aggregation on lipid bilayers. (PI, 128 k core-hours on GALILEO100)

2021 Iscra B Cineca: FHDAS. (Collaborator, 0.6 M core-hours on MARCONI m100)

2021 Prace DECI: SOLID - A full Scale simulatiOn on vapor fLow with Droplets: a physically consistent model to simulate droplet from nucleation to hydrodynamics. (Collaborator, 5.4 M core-hours on NAVIGATOR)

2020 Sapienza Large Project: Dynamics of Biological and Artificial Lipid Bilayer Membranes. (Collaborator, Euro 42000)

2020 Prace 20th call: BIMI - Bubble dynamics from nanoscale Inception to Macroscale hydrodynamic Interaction. (Collaborator, 35 M core-hours on MARCONI m100)

2019 Iscra C Cineca: PFMLB - Phase-Field Models for Lipid Bilayers. (PI, 4 k core-hours on MARCONI m100 and 140 k core-hours on GALILEO)

Scientific Production

2022 Bottacchiari M., Gallo M., Bussoletti M., Casciola C. M., “Topological transitions in fluid lipid vesicles: activation energy and force fields.”, submitted to Physical Review X (2022).

February 23rd 2022