Rossana Droghetti

PhD Student in Physics

Rossana Droghetti

rossana.droghetti
@ifom.eu

Address
via L. di Pietro 5/e
Castiglione Olona
(VA) - 21043
Italy

About Me I am an hard-working person, curiosity and passion push me to go beyond my limits

Education

2018 - 2021, Universitá degli studi di Milano - Statale
Master Degree in Physics - Thesis title: Quantitative analysis of bacterial adaptation to stationary phase - graduation vote 110/110 cum laude.

October 2019 - March 2020, Technical University of Munich
Erasmus semester at TUM Physics Department.

2014 - 2018, Universitá degli studi di Milano - Statale
Bachelor Degree in Physics - Thesis title: A physical model for the evolution of replication profiles in yeasts - graduation vote 106/110.

2009 - 2014, "L. Geymonat" Scientific High School
Scientific High School diploma - graduation vote 96/100.

Attended schools and significant experiences

May 2022 - June 2022, *Visiting researcher*, Centre de Biologie Structurale, Montpellier, France
Three weeks visit at Professor Ciandrini's Lab, to collaborate on a project studying the consequences of authopagy during the slow growth of eukaryotes, and to help set up the experimental quantification of total protein mass and total RNA mass in bacteria.

June 2021 - July 2021, *Internship*, Technical University of Munich, Munich, Germany
Two months Internship at Professor Gerland's Lab, to conduct additional experiments related to my master thesis project, in preparation for a paper. This work was supported by the internship program of SFB1032 (link).

January 2021 - June 2021, *Master thesis project*, Technical University of Munich, Munich, Germany
My master thesis was an interdisciplinary experimental project carried out at Professor Gerland's Lab. My stay was supported by a six-months scholarship I was awarded with, provided by Universitá degli studi di Milano - Statale (link).

October 2019, *2019 Arnold Sommerfeld School - School on the Physics of Life*, Munich, Germany (link).
Main topics:
- Spatial population genetics,
- Information theory and optimality in biological networks,
- Statistical mechanics approaches for studying microbial growth.

July 2019, *Pre - doctoral school in QUANTITATIVE BIOLOGY*, IFOM - FIRC Institute of Molecular Oncology, Milan, Italy (link).
Main topics:
- Computational genomics,
- Single cells dynamics.

Rossana Droghetti

rossana.droghetti
@ifom.eu

Address
via L. di Pietro 5/e
Castiglione Olona
(VA) - 21043
Italy

June 2019, *Summer School on Classical Molecular Dynamics for Material Science, Nanotechnology and Biophysics*, **SISSA - Scuola Internazionale Superiore di Studi Avanzati, Trieste, Italy (link).**
School organized by CECAM - Centre Européen de Calcul Atomique et Moléculaire. Main topics:

- Basic concepts in C++ and bash programming language,
- Lectures, seminars and hands-on tutorial on classical molecular dynamics.

March 2018 - June 2018, *Bachelor thesis project*, **Université Pierre et Marie Curie, Paris, France.**
My bachelor thesis was an interdisciplinary theoretical project carried out in the Laboratory of Computational and Quantitative Biology at Pierre e Marie Curie University, in Paris.

November 2016 - 2017 - 2018, *High schools laboratories*, **AISF - Italian Association of Physics Students, Milan, Italy.**
Organization, with few other bachelor students, of a series of laboratory experiences for the students of Lombardy high schools, hosted in the Physics department of Universitá degli studi di Milano - Statale.

2015 - present, *Scout group Leader*, **Varese, Italy.**
Leader in the local scout group. Main tasks:

- activities organization, both weekends activities and the two weeks summer camp,
- children supervisions.

Communication Skills

September 2021, *IELTS Certification*
Brand score: 8.0 / 9.0

October 2019 - March 2020, *Erasmus Mobility Program*
Erasmus semester at Technical University Munich, Germany.

Languages
- English (IELTS brand 8.0)
- Italian (native)

Programming Skills

Known languages
- C++ (advanced level)
- Python (intermediate level)
- Mathematica (basic level)
- Bash (intermediate level)
- MATLAB (basic level)

Rossana Droghetti

rossana.droghetti
@ifom.eu

Address
via L. di Pietro 5/e
Castiglione Olona
(VA) - 21043
Italy

References

If you want to know something about me and my way of working, you should contact Marco Cosentino Lagomarsino, associate professor at Universitá degli studi di Milano - Statale, who has supervised me since my bachelor thesis.

○ Marco.CosentinoLagomarsino@unimi.it

Conference contributions and presentations

June 2022, *The future of the physics of life workshop*, Amsterdam, the Netherlands (link).
Poster presentation, title: "*Oscillations naturally arise from the ppGpp mediated incoherent feedback between amino acids and ribosomes.*"

June 2022, *2022 Annual Meeting of the International Physics of Living Systems (iPoLS) Network*, Montpellier, France (link).
Short talk presentation (accompanied by a poster), title: "*A mechanistic model for bacteria resource allocation out of steady state.*"

September 2021, *Munich Yeast Meeting 2021*, Online Zoom meeting (link).
Short talk presentation, title: "*An evolutionary model identifies the main evolutionary biases for the evolution of genome-replication profiles*"

November 2020, *Paris Biological Physics Community Day 2020*, Online Zoom meeting (link).
Short talk presentation, title: "*An evolutionary model identifies the main selective pressures for the evolution of genome-replication profiles*"

October 2019, *2019 Arnold Sommerfeld School - School on the Physics of Life*, Munich, Germany (link).
Poster presentation, title: "*Origin birth death model for the evolution of replication profiles in yeasts*"

Publications

In Peer-reviewed Scientific Journals

(square brackets [ ] indicate author position)

2020

- R Droghetti, N Agier, G Fischer, M Gherardi, M Cosentino Lagomarsino, **An evolutionary model identifies the main evolutionary biases for the evolution of genome-replication profiles** eLife, doi: 10.7554/eLife.63542. (link) [I]