Dr. Alessandro Ravoni

Via

## Education

2021 **Ph.D. in Physics**, Roma Tre University (with fellowship)
Thesis: “Autocatalytic networks and the origin of life”
Supervisor: Marco Pedicini

2017 **Master of Science, Physics, La Sapienza** University, Rome
*Thesis: “A model for active particles’ flux in one-dimensional channels”*
*Supervisor: Luca Angelalani*

2014 **Bachelor Degree in Physics, La Sapienza** University, Rome
*Title: “Docking Algorithms”*
*Supervisor: Anna Tramontano*

2009 **High School Diploma, specialization in scientific studies**, “Liceo Scientifico Statale Archimede”, Rome

## PhD schools, courses and attended conferences

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| Jul 2021 | NetSci2021, Network Science Society, online conference |
| May 2021 | Stochastic Thermodynamics II, Santa Fe Institute, online conference |
| Sep 2020 | MECO45: 45$^{th}$ Conference of the Middle European Cooperation in Statistical Physics, Babes-Bolyai University and the Transylvanian Branch of the Hungarian Academy of Sciences, online conference |
| Sep 2020 | NetSci2020: International School and Conference on Network Science, Network Science Society, online conference |
| Jul 2020 | ICCS2020: Tenth International Conference on Complex Systems, New England Complex Systems Institute, online conference |
| Sep 2019 | WIVACE 2019, XIV International Workshop on artificial life and evolutionary computation, Rende, Italy |
| Jul 2019 | Italian regional conference on complex systems, Trento, Italy |
| May 2019 | Biophysics@Rome conference - Rome, CNR |
| May 2019 | Statistical physics of complex systems, Nordita, Stockholm, Sweden |
| Sep 2018 | Disordered serendipity: a glassy path to discovery, La Sapienza University of Rome |
| Jul 2018 | ICCS: International Conference on Complex System IX - Cambridge, MA, USA, New England Complex Systems Institute |

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| May 2018 | 3RD SYSBIO.IT SCHOOL - Rome, IASI-CNR |
| Dec 2017 | Biophysics@Rome conference - Rome, CNR |
| Nov 2017 | High Performance Bioinformatics - Rome, Cineca |
| May 2017 | Introduction to R for data analytics - Bologna, Cineca |
| Apr 2017 | Debugging and Optimization of Scientific Applications - Rome, Cineca |

## Talks and presentations

Jul 2021 **Contributed talk**
"Long-term behaviors of autocatalytic sets"
NetSci2021, Network Science Society, online conference

Sep 2020 **Poster presentation**
"The impact of composition on the dynamics of autocatalytic sets"
NetSci2020: International School and Conference on Network Science, Network Science Society, online conference

Jul 2020 **Poster presentation**
"The impact of composition on the dynamics of autocatalytic sets"
ICCS2020: Tenth International Conference on Complex Systems, New England Complex Systems Institute, online conference

Sep 2019 **Contributed talk**
"Compositionality in autocatalytic networks"
WIVACE 2019, XIV International Workshop on artificial life and evolutionary computation, Rende, Italy

Jul 2018 **Poster presentation**
"Lattice model for active flows in microchannels"
ICCS: International Conference on Complex System IX – Cambridge, MA, USA, New England Complex Systems Institute, July 2018

## List of publications

**Ravoni A**., *Long-term behaviors of Autocatalytic Sets*, Journal of Theoretical Biology, 2021, doi.org/10.1016/j.jtbi.2021.110860

**Ravoni A**., *Impact of composition on the dynamics of autocatalytic sets*, Biosystems, Volume 198, 2020

**Ravoni A**., Angelani L., *Lattice model for active flows in microchannels*, Physical Review E, Volume 102, Issue 6, 2020

## Teaching activity

2019-2020 **Teaching assistant/tutor**
*Algorithms and data structures*, Undergraduate students, Faculty of

Mathematics, Roma Tre University

2018-2019 **Teaching assistant/tutor**
*Physics course*, Undergraduate students, Faculty of Engineering, Roma Tre University

## Skills

C, Python, Mathematica coding (excellent)
Data-analysis and visualization softwares (Gnuplot, SciDavis, Python)
Excellent knowledge of Windows, Unix, Mac OS operating systems
Text-editing tools (Latex, Notepad, Office, Emacs, gedit)
Machine Learning
Fast learner and problems solver
Strong organization and team working skills
Particular attention to details

*Last update July 2021*