

Sara Sottile

Ph.D. student

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Date of birth: 10/09/1995



Education

- Nov 2019 - Present **Ph.D. in Mathematics**, *University of Trento*, Trento, Italy.
Research fellowship in “mathematical models of epidemics”, Supervisor: Prof. Andrea Pugliese
- Oct 2017 - Jul 2019 **M.Sc. in Mathematics (Modellistic Curriculum)**, *University of Turin*, Turin, Italy.
Thesis: “Epidemic Models: a Switch Control for Networks”, Supervisor: Prof. Lorenzo Fatibene,
Co-supervisor: Prof. Xinzhi Liu, Grade: 110/110 cum Laude
- Jan 2019 - Apr 2019 **M.Sc. in Applied Mathematics**, *University of Waterloo*, Waterloo, Ontario, Canada.
Exchange Program, GPA: 86/100
- Sep 2014 - Oct 2017 **B.Sc. in Mathematics**, *University of Bari “A. Moro”*, Bari, Italy.
Thesis: “About Constitutive Equations in Thermodynamics”, Supervisor: Prof. Arcangelo Labianca,
Grade: 107/110
- Sep 2009 - Jul 2014 **Scientific High School Diploma**, *High School “A. Volta”*, Foggia, Italy.
Grade: 100/100

Employment and Academic Positions

- Nov 2019 - Present **Ph.D. position**, *University of Trento*, Departments of Mathematics.
- Nov - Dec 2018 **Administration activities**, *Research Area of School of Science of Nature*, Turin, Italy.
- Sep 29, 2017 **Scientific Entertainer**, *European Researchers’ Night 2017*, Bari, Italy.

Teaching experience

- Sep 2020 - Feb 2021 **Theacher assistant for the course Mathematical Modeling/Mathematical Biology**,
Joint course for M.Sc. in Mathematics, M.Sc. in Data science and M.Sc. in Quantitative and Computational Biology, University of Trento, Trento, Italy.
Blended teaching activity.

Thesis (Co)-Supervision

- Michela D’Amario *Parameters estimations for modelling the COVID-19 pandemic in Italy*, Master Thesis, University of Trento, 2021
- Claudio Meggio *A stochastic SEIR household model for COVID-19 epidemic including lockdown effects*, Master Thesis, University of Turin, 2021

Publications

- [1] **Sottile, S. and Liu, X.**, *Time-varying epidemic transmission in heterogeneous networks and applications to measles*, Journal of Biological Systems, Vol. 28, No. 4 (2020), pp. 1-26.

Preprints

- [1] **Sottile, S., Kahramanoğulları, O. and Sensi, M.**, *How network properties and epidemic parameters influence stochastic SIR dynamics on scale-free random networks*, 2020, Preprint.
<https://arxiv.org/pdf/2011.10595.pdf>
- [2] **Pugliese, A. and Sottile, S.**, *Inferring the COVID-19 infection curve in Italy*, 2020, Preprint.
<https://arxiv.org/pdf/2004.09404.pdf>

Talks

- 10 June 2021 **Ph.D. Seminars at University of Groningen**, *"Time-varying epidemic transmission in heterogeneous networks"*.
online

Participations

- 4-7 Feb 2020 **11th Conference on Dynamical Systems Applied to Biology and Natural Sciences - DSABNS**.
Trento (IT)
Presented a poster named *"Time-varying epidemic transmission in heterogeneous networks"*.
- 17-18 Feb 2020 **ISI Workshop on Learning, Algorithms and Networks**, *I.S.I. Foundation*, Turin.
Turin (IT)
- 18-20 May 2020 **Workshop Modeling the propagation of Covid-19**, *AMS, CNRS – EHESS*, Paris.
online
- 4 Dec 2020 **Warm-up for CSS2020**, *Young Researchers of the Complex Systems Society*.
online
- 7-11 Dec 2020 **Conference on Complex Systems 2020 - CSS2020**, *Complex Systems Society*.
online
- 2-5 Feb 2021 **12th Conference on Dynamical Systems Applied to Biology and Natural Sciences - DSABNS**.
online
Presented a contributed abstract entitled *"Susceptibility pockets at the end of an epidemic may allow for subsequent epidemic outbreaks"*.

Co-Organization

- Sep 2020 - Present **Doc in Progress**, *University of Trento*, Department of Mathematics.
Periodic seminars organized at Department of Mathematics of University of Trento.
<https://webmagazine.unitn.it/en/evento/dmath/84369/doc-in-progress>

Referee activity

- 2021 *Journal of Biological Dynamics*, *Rendiconti del Circolo Matematico di Palermo Series 2*

Awards

- Nov 2019 - Nov 2022 **Departments of Excellence Ph.D. Fellowship**, *University of Trento*, Trento, Italy.
Topic: Mathematical models of epidemics

Memberships

- Dec 2020 - Present **Complex Systems Society**.

IT Skills

- Programming MATLAB, Python, R, C/C++, Maple, XXP AUT, HTML
Operative Systems Windows, Linux
Softwares LaTeX, Word, Excel, PowerPoint

Languages

- Mother tongue Italian
Other languages English (B2), Spanish (A2)

Certificates

- Jun 2018 **English IELTS Academic**, Band Score 6.5 (CEFR Level B2).
Jun 2009 **ECDL Certification**, European Computer Driving Licence.