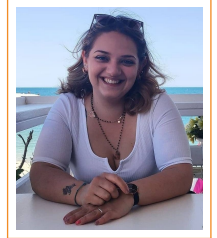


Sara Sottile

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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 2021 - Present **Theacher assistant for the course Calculus I**, *Joint course for B.Sc. in Computer Science and B.Sc. in Information Engineering*, University of Trento, Trento, Italy.
- Jan 2021 - Present **Supervision for the online exams**, *Department of Economics and Management*, University of Trento, Trento, Italy.
- 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.

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] **Ottaviano, S., Sensi, M. and Sottile, S.**, *Global stability of SAIRS epidemic models*, 2021, Preprint.
<https://arxiv.org/pdf/2109.05122.pdf>

- [2] **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>
- [3] **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 online **Ph.D. Seminars at University of Groningen**, *"Time-varying epidemic transmission in heterogeneous networks"*.

Participations

4-7 Feb 2020 Trento (IT) **11th Conference on Dynamical Systems Applied to Biology and Natural Sciences - DSABNS**.

Presented a poster named *"Time-varying epidemic transmission in heterogeneous networks"*.

17-18 Feb 2020 Turin (IT) **ISI Workshop on Learning, Algorithms and Networks, I.S.I. Foundation**, Turin.

18-20 May 2020 online **Workshop Modeling the propagation of Covid-19, AMS, CNRS – EHESS**, Paris.

4 Dec 2020 online **Warm-up for CSS2020, Young Researchers of the Complex Systems Society**.

7-11 Dec 2020 online **Conference on Complex Systems 2020 - CSS2020, Complex Systems Society**.

2-5 Feb 2021 online **12th Conference on Dynamical Systems Applied to Biology and Natural Sciences - DSABNS**.

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

Dec 2020 **Scholarships for Events on Complex Systems (SECS), Young Researchers of the Complex Systems Society**.
<http://yrcss.cssociety.org/secs/>

Memberships

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

IT Skills

Programming MATLAB, Python, R, C/C++, Maple, XXPAUT, 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.