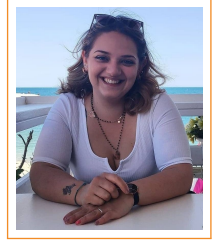


Sara Sottile

Ph.D. student

Department of Mathematics
University of Trento
Via Sommarive 14, 38123 Povo - Trento, IT
☎ (+39) 0461 281701 - 1658
✉ sara.sottile@unitn.it
📁 [sarasottile.github.io](https://github.com/sarasottile)



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: "On 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.
- Apr 2021 - Sep 2021 **Research collaboration**, *Astra Zeneca*.
Collaboration for the project "Valutazione economica dell'introduzione del vaccino antinfluenzale vivo attenuato (Fluenz Tetra®) nella popolazione giovanile italiana (2-6 anni)"
- 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 **Teaching 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.
Taught in English.
- Jan 2021 - Present **Supervision for online exams**, *Department of Economics and Management*, University of Trento, Trento, Italy.
- Sep 2020 - Feb 2021 **Teaching 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.
Taught in English.

Mentoring

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

Publications

- [1] **Boccalini, S. et al.**, *Health Technology Assessment (HTA) of the introduction of influenza vaccination for Italian children*, Journal of Preventive Medicine and Hygiene (2021), Vol. 62(Issue 2 Suppl. 1), pp. E1-E128, <https://doi.org/10.15167/2421-4248/jpmh2021.62.2s1>.
Rizzo, C., Sottile, S. and Pugliese, A., Chapter 6: “*Valutazione economica dell'introduzione del vaccino antinfluenzale vivo attenuato (Fluenz Tetra®) nella popolazione giovanile italiana (2-6 anni)*”.
- [2] **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.
<https://doi.org/10.1142/S0218339020500217>

Preprints

- [1] **Ottaviano, S., Sensi, M. and Sottile, S.**, *Global stability of multi-group SAIRS epidemic models*, 2021, In preparation (will appear soon).
- [2] **Ottaviano, S., Sensi, M. and Sottile, S.**, *Global stability of SAIRS epidemic models*, 2021, Preprint.
<https://arxiv.org/pdf/2109.05122.pdf>
- [3] **Sottile, S., Kahramanoğlu, 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>
- [4] **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*”.

5-10 Jul 2021 **Networks 2021: A Joint Sunbelt and NetSci Conference**.
online

Schools

30 Aug - 3 Sep 2021 **High-Performance Computing summer school 2021, Project M&S: Modelling and Simulation**, *University of Trento*, Trento, Italy.
Trento (IT)

29 Nov - 1 Dec 2021 **Karlstad Autumn School “Interacting Particles meet Homogenization and Measure Theory”**, *Karlstad University*, Karlstad, Sweden.
online

Responsibilities

- Dec 2020 - Present **Elected representative of the Ph.D. students at the Department of Mathematics, University of Trento.**
- Nov 2021 - Present **Member of the “Open Science Commission”, University of Trento.**

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://docinprogressunitn.wordpress.com/>
- 11 Mar 2021 **PhD Opening Day 2021, University of Trento, Department of Mathematics.**
<https://webmagazine.unitn.it/en/evento/drmath/90585/phd-opening-2021>

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 - Dec 2021 **Complex Systems Society.**

IT Skills

- Programming Python, R, MATLAB, 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.**