Sara Sottile
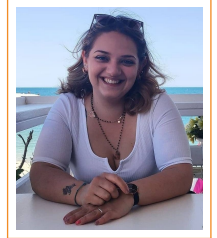
Ph.D. student

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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*, Deparments 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] **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.
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.

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.