

Francesco Pinotti

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CURRENT POSITION

Postdoctoral researcher (April 2020 - Ongoing), in the Evolutionary Ecology of Infectious Disease (EEID) group at the University of Oxford. I am also a member of the mathematical modelling team in the context of the One Health Poultry Hub.

ACADEMIC CAREER

Research appointment (October 2019 - April 2020), at Pierre Louis Institute of Epidemiology and Public Health (IPLESP), Paris, France, in the team of Pierre-Yves Boëlle: “Transmissible diseases: modeling and surveillance”.

EDUCATION

Ph.D. candidate in Epidemiology and Public Health (2016-2019), Sorbonne University, Paris France. Thesis title: *Multi-strain dynamics on networks*. Expected defense date: 27/11/2019. Advisors: Chiara Poletto and Pierre-Yves Boëlle. Research work carried at Pierre Louis Institute of Epidemiology and Public Health (IPLESP) in the team “Transmissible diseases: modeling and surveillance”.

M2 “Theoretical Physics of Complex Systems” (2015-2016), University Paris Sud, Paris, France. Ranked 2nd among 29 participants. Degree obtained in the context of a Dual Master Degree in Physics.

Master Degree in Physics (2014-2016), Ferrara University (2014-2016), Ferrara, Italy. Final mark: 110/110 cum laude. Degree obtained in the context of a Dual Master Degree in Physics.

Bachelor in Physics (2011-2014), University of Ferrara, Ferrara, Italy. Final mark 110/110 cum laude.

AWARDS & FELLOWSHIPS

Student support award (2017), International School and Conference on Network Science, Indianapolis, Indiana, US.

PhD scholarship (2016-2019), Doctoral School Pierre Louis of Public Health, Paris, France.

Mobility Grant (2015-2016), University of Ferrara, Ferrara, Italy.

PEER-REVIEWED PUBLICATIONS

F Pinotti, U Obolski, P Wikramaratna, M Giovanetti, R S Paton, P Klenerman, C Thompson, S Gupta, J Lourenço, Real-time seroprevalence and exposure levels of emerging pathogens in infection-naïve host populations, *Scientific Reports* (2021).

J A Moreno López, B Arregui Garca, P Bentkowski, L Bioglio, **F Pinotti**, P-Y Boëlle, A Barrat, V Colizza, C Poletto, Anatomy of digital contact tracing: Role of age, transmission setting, adoption, and case detection, *Science Advances* (2021).

F Pinotti, P S Wikramaratna, U Obolski, R S Paton, D SC Damineli, L CJ Alcantara, M Giovanetti, S Gupta, J Lourenço, Potential impact of individual exposure histories to endemic human coronaviruses on age-dependent severity of COVID-19, *BMC Medicine* (2021).

A Ramadiah, D Di Gangi, D R Lo Sardo, V Macchiati, T Pham Minh, **F Pinotti**, M Wilinski, P Barucca, G Cimini, Network sensitivity of systemic risk, *Journal of Network Theory in Finance* (2020).

F Pinotti, L Di Domenico, E Ortega, M Mancastropa, G Pullano, E Valdano,

P-Y Boëlle, C Poletto, V Colizza, Tracing and analysis of 288 early SARS-CoV-2 infections outside China: A modeling study, *PLoS Medicine* (2020).

M Gilbert, G Pullano, **F Pinotti**, E Valdano, C Poletto, P-Y Boëlle, E D’Ortenzio, Y Yazdanpanah, SP Eholie, M Altmann, B Gutierrez, M UG Kraemer, V Colizza, Preparedness and vulnerability of African countries against importations of COVID-19: a modelling study, *The Lancet* (2020).

G Pullano, **F Pinotti**, E Valdano, P-Y Boëlle, C Poletto, V Colizza, Novel coronavirus (2019-nCoV) early-stage importation risk to Europe, January 2020, *Euro-surveillance* 25(4):pii=2000057 (2020).

F Pinotti, F Ghanbarnejad, P Hövel, C Poletto, Interplay between competitive and cooperative interactions in a three-player pathogen system, *Royal Society Open Science* 7 190305 (2020).

F Pinotti, É Fleury, D Guillemot, P-Y Boëlle, C Poletto, Host contact dynamics shapes richness and dominance of pathogen strains, *PLoS Computational Biology* 15(5): e1006530 (2019)

COMMITTEES

Scientific Committees: Internal referee at Spread of Pathogens in HealthCare Institutions and Networks: a modeling conference (SPHINx’19).

ACADEMIC SERVICES

Referee for peer-reviewed journals: Physical Review E, Mathematical Biosciences and Engineering, PLoS One, Journal of Theoretical Biology, Communication Physics.

INVITED SEMINARS

Interplay between cooperative and competitive effects in multi-pathogen systems, Berlin Technical University, Berlin, 22 Aug 2017.

CONTRIBUTED TALKS

Host contact dynamics shapes richness and dominance of pathogen strains (24-25 June 2019), Spread of Pathogens in HealthCare Institutions and Networks: a modeling conference (SPHINx’19), Paris, France.

Host contact dynamics shapes population diversity of pathogen strains (28 August - 5 September 2018), 2nd Erice International Conference on Mathematical and Computational Epidemiology (Erice MathCompEPi 2018), Erice, Italy.

Interplay between cooperative and competitive effects in multi-pathogen systems (11-15 June 2018), International School and Conference on Network Science (NETSCI’18), Paris, France.

Co-existence of multiple SIS processes on temporal networks: implications for control of bacterial infections in hospitals (19-23 June 2017), International School and Conference on Network Science (NETSCI’17), Indianapolis, Indiana, US.

Short talk Co-existence of multiple SIS processes on temporal networks: implications for control of bacterial infections in hospitals, Summer School Complex “Networks: Theory, Methods, and Applications”, Como, Italy, 15-19 May 2017.

POSTERS

Interplay between cooperative and competitive effects in multi-pathogen systems, Epidemics⁶ - International Conference on Infectious Disease Dynamics, Sitges, Spain, 29 Nov - 4 Dec 2017.

Co-existence of multiple SIS processes on temporal networks: Implications for control of bacterial infections in hospitals, Epidemics⁶ - International Conference on Infectious Disease Dynamics, Sitges, Spain, 29 Nov - 4 Dec 2017.

**SCHOOLS
ATTENDED**

Workshop of Scientific Evolutionary Writing (SEW), Paris, France, 30-31 January 2019.

Society of Young Network Scientists Pre-Conference Event: Special Session: Constructing Great Scientific Papers and Paper Unwind: Deconstructing Great Scientific Papers, Paris, France, 10 June 2018.

Complexity72h Workshop, Lucca, Italy, 7-11 May 2018.

Doctoriales Sorbonne Université, Paris, France, 9-13 April 2018.

Summer School Complex "Networks: Theory, Methods, and Applications", Como, Italy, 15-19 May 2017.

**SCIENTIFIC
VISITS**

Technical University Berlin, Berlin, Germany, 21-25 August 2017 and 11-15 December 2017.

Institute for Scientific Interchange (ISI foundation), Turin, Italy, 3-21 July 2017 and 4-8 December 2017.