Sofia JIJON ALBAN

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🌐 https://sjijon.github.io

Scientific interests

- Infectious diseases modeling
- Epidemic (re)emergence
- Behavioral epidemiology
- Game-theoretic approaches
- Numerical methods
- Infectious diseases control
- Open science

Education

2021. PhD in Epidemiology
Speciality: Biomathematics
Sorbonne Université
Paris - France

2015. Masters in Applied Mathematics
Speciality: Mathematical modeling
Sorbonne Université
Paris - France

2013. Bachelor in Mathematics
Escuela Politécnica Nacional
Quito - Ecuador

Current situation

Jan. 2022 – **Postdoctoral researcher at CNRS**

Research unit: Institute of ecology and environmental sciences of Paris (IEES Paris, UMR 7618 – CNRS & Sorbonne Université)
Team: Ecology and evolution of interaction networks (EERI)

Research project: Studying the dynamics of early epidemics.

Academic experience

Sep. 2020 – Dec. 2021. **Postdoctoral researcher at Cnam**

Research unit: Modeling, epidemiology and monitoring of health risks (MESuRS – EA4628)

Research project: Estimation of the risk of SARS-CoV-2 infection among healthcare workers in Egyptian quarantine hospitals

Sep. 2019 – Aug. 2020. **Teaching and research adjunct (ATER) at Sorbonne Université (SU)**

Teaching affectation: Biology Faculty – UFR 927.

Sep. 2015 – Jul. 2021. **PhD at Sorbonne Université**

Research unit: Pierre Louis Institute of Epidemiology and Public Health (IPLESP – UMRS 1136 SU & Inserm).
Team: Communicable diseases: surveillance and modeling.

Research project: Prevention of infectious diseases in the context of efficient treatment: a game-theoretic approach.
Manuscript available at https://theses.fr/s267442

Interdisciplinary mention: PhD program of the Public health doctoral network (RDSP) of the EHESP.

Publications

- Jijón, S., Molina J.-M., Costagliola D., Supervie V., Breban R. (2021) Can HIV epidemics among MSM be eliminated through participation in PrEP rollouts? *AIDS*, *AIDS*, 35(4):2347–2354. doi: 10.1097/QAD.0000000000003012

- Jijón, S., Supervie, V., and Breban, R. (2017). Prevention of treatable infectious diseases: a game-theoretic approach. *Vaccine*, 37(40):5339–5345. doi: 10.1016/j.vaccine.2017.08.040 .

- Jijón, S. and Merino, P. (2013). [Reduction of a population spreading problem using the Proper Orthogonal Decomposition method] *Revista Politécnica*, 32(3):1–10.

Preprints

- Jijón, S., Al Shafie, A., Temime, L., Jean K., El Kassas M. (2020). Risk of incident SARS-CoV-2 infection among healthcare workers in Egyptian quarantine hospitals. *Preprint posted in Medrxiv.* doi: 10.1101/2020.12.21.20248594

Other scientific contribution

Talks (selected)

○ Jijón, S., Al Shafie A., Temime L., Jean K., El Kassas M. Estimating the risk of incident SARS-CoV-2 infection among healthcare workers residing in Egyptian quarantine hospitals. First meeting of the Infectious Disease Modeling coordinated action group of ANRS-MIE, Paris, Oct. 18-19, 2021.

○ Jijón, S., Molina, J.-M., Costagliola, D., Supervie, V., and Breban, R. Can HIV epidemics be eliminated through voluntary participation to PrEP rollouts?. EACS 2019 (Basel, Switzerland), Nov. 6–9, 2019. Abstract available at EACS 2019 – Abstract book. *HIV Medicine*, 20(S9):35. doi: 10.1111/hiv.12814 .

Posters sessions (selected)

○ *(Upcoming)* Jijón, S., Czuppon, P., Blanquart, F. and Débarre, F. Estimating the date of emergence of an epidemic from detection data: An application to the SARS-CoV-2 pandemic. European Conference on Mathematical and Theoretical Biology (Heidelberg, Germany), Sept. 19–23, 2022.

○ Jijón, S., Al Shafie A., Temime L., Jean K., El Kassas M. Risk of incident SARS-CoV-2 infection among healthcare workers residing in Egyptian quarantine hospitals. ICPIC - 6th International Conference on Prevention & Infection Control (Geneva, Switzerland), Sept. 14–17 , 2021. **Poster selected for the guided poster tour "COVID-19 among healthcare workers"; chair: Benedetta Allegranzi (WHO).*

Seminars

○ (As organizer) [Causality in public health]. Interdisciplinary seminar organized within the framework of the RDSP, with the support of the Economy Center of University Paris 13 (CEPN), December 13, 2017. Website: https://causalitesantepublique.wordpress.com .

○ (As speaker) [Prevention of infectious diseases in the context of efficient treatment: a game-theoretic approach and an application to HIV epidemic]. Seminar organized by the MODEMAT Mathematical Modeling Centre (Quito, Ecuador), Feb. 23, 2017.

Peer-Reviews

Reviewer for Royal Society Open Science and BMC Infectious Diseases. Publons profile: https://publons.com/researcher/4268332/sofia-jijon/

Consulting

2022 "Mathematical modelling of the SARS-CoV-2 epidemic accounting for endogenous individual behaviors: A rapid narrative review and perspectives for low- and middle-income countries" (30-day technical consultancy).

Scientific popularization

○ Can you prevent an epidemic by getting vaccinated?, Pint of Science Festival (Paris), May 21, 2019.

Grants

2018. 1-year research allocation from ANRS (30,500€ gross).
2015. 3-year doctoral allocation from SU (∼60,000€ gross).

Tools

Numerics and modeling

Scientific text edition

LaTeX TikZ

Version control

Web

Languages

○ Spanish (native)
○ French (fluent)
○ English (fluent)

Complementary activities

Typesetting in LaTeX

○ Creation of templates, available at https://github.com/sjijon/TeX-templates

○ (Book) Cevallos, J. J., Moreno Avilés, H. [Solved problems of signal processing in FPGAs], ESPOCH University (Riobamba, Ecuador).

Cultural diffusion

Contribution in the management of the social networks and website development of the cultural centre Casa Mitómana (Quito, Ecuador).

Ballet

Professional training until 2006, and dear pastime since.