Sofia JIJON ALBAN

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https://sjijon.github.io

Scientific interests

- Infectious diseases modeling
- 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

Sep. 2020 – Dec. 2021. **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, October 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), November 6–9, 2019. Abstract available at EACS 2019 – Abstract book. *HIV Medicine*, 20(S9):35. doi: 10.1111/hiv.12814 .

Posters sessions (selected)

- Jijón, S., Al Shafie A., Temime L., Jean K., El Kassas M. Estimating the risk of incident risk of SARS-CoV-2 infection and the contribution of different transmission routes among healthcare workers residing in Egyptian quarantine hospitals. Epidemics 8 - International Conference on Infectious Disease Dynamics, 30 November–3 December 2021.
- 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), 14–17 September 2021. **Poster selected for the guided poster tour "COVID-19 among healthcare workers"; chair: Benedetta Allegranzi (WHO).*
- Jijón, S., Molina, J.-M., Costagliola, D., Supervie, V., and Breban, R. Can HIV epidemics be eliminated through voluntary participation to PrEP rollouts?. ANRS seminar, November 25–26, 2019.

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), February 23, 2017.

Peer-Reviews

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

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

- Matlab
- R
- Mathematica

Scientific text edition

- LaTeX
- Ti*k*Z
- Markdown and notebooks

Version control

Git, GitHub

Web

HTML, WordPress

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 development of the website of the cultural centre Casa Mitómana (Quito, Ecuador).

Ballet

Professional training until 2006, and dear pastime since.