



David Abella Bujalance

Physicist. PhD candidate.



26 September 1997



Palma de Mallorca - Illes Balears
Mobility: Available



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Skills

Latex

Office

Fortran

Julia

Python

(*)[The skill scale is from 0 (Fundamental Awareness) to 6 (Expert).]

Languages

- Catalan - Native language
- Spanish - Native language
- English - Advanced level
- German - Primary level (currently learning)

Interests

As a physicist, my expertise lies in Statistical Mechanics and data analysis, offering a powerful toolkit to decipher complex problems. I'm driven by a passion for applying these skills to address global challenges and create meaningful change. Through critical thinking, I aim to create innovative solutions that lead to a brighter future.

Work Experience

- 2023-2024 Research Technician at IFISC (CSIC)
Research associated with the project Nou Lloguer and Next4Mob to continue renting market data analysis and modelling.
- 2022-2023 Young researchers scholarship by SOIB (UIB)
Research focussed on different agent-based models of human dynamics.
- 2022 Research Technician at IFISC (CSIC)
Research associated with the project APASOS-CSIC and Nou Lloguer for the renting market data analysis.
- 2021 Predoctoral contract at IFISC
8-month contract to continue the study of aging effects in threshold models with application in sociotechnical systems. Focused on the study of aging in Noisy Schelling segregation Model.

Education

- 2021-2024 PhD candidate at the Institute of Cross-Disciplinary Physics and Complex Systems (IFISC)
PhD in thesis in Physics of Complex Systems applied to computational human dynamics.
- 2019 - 2020 M.Sc Physics of Complex Systems at Universitat de les Illes Balears
Better understanding of the Complex Systems and Computational Social Science branch and the application of physics skills to an interdisciplinary scenario.
- Master thesis: Perturbations propagation in self-organized patterns.
- 2015 - 2019 B.Sc Physics at Universitat de Barcelona
Acquisition of useful skills to model physical systems and solve problems. Minor in Fundamental Physics.
- Bachelor thesis: Many-Body body contributions in Water clusters (published in ACS Nano).

Scientific publications

- 2024 Assessing the real estate spatial segmentation
(In submission)
- 2024 Ordering dynamics and aging in the symmetrical threshold model
New Journal of Physics. 26, 013033.
- 2023 Aging in binary state models: the Threshold model for complex contagion
Physical Review E. 107, 024101.
- 2023 Many-Body contributions in Water Nano-clusters
ACS Nano. 17 (3), 1959-1964.
- 2022 Aging effects in Schelling segregation model
Scientific Reports. 12, 19376.



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Collaboration and outreach events

- Sep-2023 Associate researcher at Queen Mary University of London (QMUL)
Collaboration with Vincenzo Nicosia to study modeling techniques for spatial segregation.
- 2022-2023 Poster Party
Part of the Poster party comitee organizing the otreach event at IFISC.
- Oct-2022 Conference of Complex Systems 2022
Volunteer and collaborator to the Conference on Complex Systems CCS 2022 in Palma.

Supplementary Education

- 2023 Participation at the Complexity72h Workshop
- 2022 Summer school about Artificial Intelligence "Retos de la IA" by AIHUB-CSIC
- 2022 X Summer school on Statistical physics of Complex Systems by GEFENOL (at IFISC)
- 2022 II Summer school on Complex Socio-Technical systems by COM-SOTEC (at IFISC)
- 2021 Introduction course to Artificial Intelligence at UBICS

Scientific presentations

- Feb-2024 Oral presentation "Assesing the real estate spatial segmentation" at CS3-24 (Barcelona - Spain)
- July-2023 Oral presentation "Aging in binary state dynamics: Ordering in threshold models" at NetSci23 (Viena- Austria)
- May-2023 Oral presentation "Aging in binary state dynamics: Ordering in threshold models" at CS3-23 (Santander - Spain)
- Oct-2022 Oral presentation "Aging in binary-state models: Threshold model of complex contagion" at CCS2022 (Palma - Spain)
- Sep-2022 Poster presentation "Aging in binary-state models" at II Summer school on Complex Socio-Technical systems (Palma - Spain)
- Aug-2022 Poster presentation "Aging in binary-state models" at X Summer school on Statistical physics of Complex Systems (Palma - Spain)
- May-2022 Poster presentation "Aging in Complex contagion" at FISES (Zaragoza - Spain)
- Mar-2022 Oral presentation "Aging effects in Schelling segregation model" at COMSOTEC Workshop (Tarragona - Spain)
- Oct-2021 Oral presentation "Aging effects in Schelling segregation model" at CCS2021 (Lyon - France)