Agatha Joumaa
PhD student in Mathematics

Skills

Matlab

Python

MS Office

Latex

Gams

Comsol

Arabic

French

English

Interests

▸ Latin and ballroom dancing

▸ Swimming

▸ Reading

Contact

📍 Lyon, France

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✉ agatha_jou@live.com

in Agatha Joumaa

Education

Ph.D. in Applied Mathematics	**2022-Present**

Université Côte d'Azur, IFP Energies Nouvelles and Inria
Thesis title: Optimization of the environmental performance of urban mobility via macroscopic and multimodal modeling approaches
Supervisors: Dr. Paola Goatin and Dr. Giovanni De Nunzio

MS in Applied and Computational Mathematics	**2020-2022**

Lebanese American University
GPA: 3.54/4

BS in Pure Mathematics	**2017-2020**

Lebanese University
GPA: 81.58/100 (Passed with High Honors)

Research experience

Master thesis and Publications:
- **Semi-Discrete Shocks for a Microscopic Pedestrian Model (Master thesis).**
- **Traveling solutions for a multi-anticipative car-following traffic model [1].**
- **A Macroscopic Model for Multi-Modal Traffic Flow in Urban Networks [2].**

MathinFoly Summer school
Spent eight days in Lyon, France, at L'Ecole Normale Supérieure de Lyon, collaborating with a team on research focused on optimizing the placement of fire alarms in buildings using mathematical models. Our project earned us second place.

Trash Treck Challenge-First Lego League
Building and Programming a robot with a team of seven people. Presented at the American University of Beirut.

Work experience

Mathematics tutor, teaching students from third grade to university level	**Aug 2021 - Nov 2022**

Rubix Education Center

Awards

- **Granted a 100% scholarship to pursue my master's degree at the Lebanese American University.**
- **Ranked first in Akkar Governorate and fourth in North Lebanon in the baccalaureate (18.07/20) by the Ministry of Education and Higher Education (MEHE).**

References

[1] N. El Khatib, A. Ghorbel, A. Joumaa, and M. Zaydan, "Traveling solutions for a multi-anticipative car-following traffic model," *Mathematical Modelling of Natural Phenomena*, vol. 18, p. 7, 2023.

[2] A. Joumaa, P. Goatin, and G. de Nunzio, "A macroscopic model for multi-modal traffic flow in urban networks," in *26th IEEE International Conference on Intelligent Transportation Systems ITSC 2023*, 2023.