Jessie Levillain

Born on 03.26.1998
jessie.levillain@polytechnique.edu
Webpage

CENTRE DE MATHEMATIQUES APPLIQUEES (UMR 7641)
Ecole Polytechnique
Route de Saclay, 91128 PALAISEAU Cedex

WORK EXPERIENCE

CENTRE DE MATHÉMATIQUES APPLIQUÉES DE L'ECOLE POLYTECHNIQUE (CMAP), *PhD*   April 2021 -
PhD and research internship supervised by François Alouges and Aline Lefevbre-Lepot on magneto-elastic micro-swimmers.

POLITECNICO DI TORINO, *Pre-doctoral year of research abroad*   October 2019 - July 2020
Internship in the Energy department of Politecnico di Torino, supervised by Fabio Freschi, on "H-matrices and ACA method"as a part of the MICEV project.

UCD SCHOOL OF MATHEMATICS AND STATISTICS, *Internship*   April - August 2019
Internship supervised by Frédéric Dias and Daniel Giles, in the School of Mathematics and Statistics on "Extended Green's Law : Calculating Beta using machine learning".

DTU ENERGI, *Internship*   July 2018
Internship supervised by Kaspar Kirstein Nielsen, Christian Bahl and Rasmus Bjørk, entitled "Optimizing magnet structures with neural networks".

ENS PARIS-SACLAY, *Internship at CMLA*   January 2017 - June 2017
"Deep burst denoising": Image denoising thanks to neural networks (machine learning). Supervised by Jean-Michel Morel, Pablo Arias and Thibaud Ehret.

STUDIES

ENS PARIS-SACLAY   2017-2021
Civil servant and student - departement of Mathematics
M2 Analyse Modélisation Simulation at Université Paris-Saclay, M1 Hadamard at Ecole Normale Supérieure Paris-Saclay, Université Paris-Saclay and Ecole Polytechnique. Bachelor's Degree in Mathematics at ENS Paris-Saclay in partnership with Université Paris Diderot.

LYCÉE MARCELIN BERTHELOT   2015-2017
CPGE MPSI-MP*
Two intensive years of training in Mathematics, Physics, and computer Science, in order to take competitive examinations and enter the most prestigious engineering or research schools.

LYCÉE NOTRE DAME DE LA PROVIDENCE   2008-2015
High School
A-Level in Sciences with highest honors. Took part in the Concours Général in Physics and English.

TEACHING

ECOLE POLYTECHNIQUE, *Teaching fellow*   2021-2023
Course list:
- MAP350: Preparatory mathematics course, 1st year of Ingénieur Polytechnicien Program
- Computational mathematics (MAA106, Bachelor of Science, 1st year)
- Numerical linear algebra (MAA208, Bachelor of Science, 2nd year)
- Supervision of Bachelor Thesis (internships, Bachelor of Science,3rd year).

INSTITUT VILLEBON GEORGES CHARPAK, *Tutoring*   January 2021 - June 2021
Helping bachelor students in mathematics.

INSEP, *Mathematics guest teacher*   2017-2018
Classes for high-schoolers.

UNITED NETWORK EU, *Committee director*   2014-2018
IMUNA/United Network EU: Planning and chairing debates in English in Rome (IMUN) and Paris (FMUN) for high school students in English in direct partnership with the UN. Speeches and training classes for students on the subjects they will be debating on, and on rules of procedure during debates.

LYCÉE NOTRE DAME DE LA PROVIDENCE, *Tutoring*   2012-2015
Tutoring in Mathematics, English and all subjects for middle- and high-schoolers.

PUBLICATIONS

UCA FALL PROGRAM ON COMPLEX SYSTEMS, *Summer school*　　　　　October 2021
Two-week summer school, upcoming paper.

COMMUNICATIONS

KYOTO UNIVERSITY, JAPAN, *RIMS Fluid Dynamics Group seminar*　　　October 26th 2022

MICROSCALE OCEAN BIOPHYSICS ONLINE SEMINAR,　　　　　October 18th 2022
"Flagellar locomotion from a mathematical point of view"

CJC-MA, *Calais, France*　　　　　September 21st-23rd 2022
Talk during a mini-symposium on mathematical modelling applied to biological systems.

CANUM 2020+2, *Talk "Flagellar locomotion of micro-organisms"*　　June 13th-17th 2022
Talk during a mini-symposium on control and optimal control, invited by L. Giraldi and P. Lissy.

SHORT-TERM RESEARCH VISITS

RIMS, KYOTO UNIVERSITY, JAPAN, *3 weeks*　　　　　October 2022
With C. Moreau and K. Ishimoto.

ADMINISTRATIVE WORK

PHD STUDENT REPRESENTATIVE AT CMAP LAB COUNCIL,　　　　　2022

SKILLS & INTERESTS

Native language　　　　　　　　Advanced level in Python and Matlab, intermediate level in C/C++ and CamL
B2 Goethe Institute　　　　　　Advanced level in Latex, Beamer and office tools
C2 Cambridge, lived in America for 3 years
Italian: Professional working proficiency