

Doctoral student in Mathematics and Applications

Ph.D. Candidate in Mathematics specializing in stochastic and deterministic modeling applied to biological systems. Committed researcher and educator with a strong background in numerical analysis (MATLAB, Python) and a passion for making complex mathematical concepts accessible to students.



Teaching Assistant (TD) – General Mathematics

- Conducting weekly tutorials (TD) in General Mathematics, covering core undergraduate subjects: Linear Algebra, Geometry, and Analysis.
- Responsible for explaining complex theoretical concepts and leading practical problem-solving sessions to consolidate student understanding.
- Actively supporting first-year students in mastering fundamental mathematical techniques essential for future scientific studies.

Instructor – Digital Skills

- 60 hours of practical instruction (TD/Practical Work) for the "Digital Skills" module (Computer Science Department).
- Taught essential digital competencies, covering the Microsoft Office Suite (Word, Excel, PowerPoint), the history of computing, and fundamental principles of Artificial Intelligence (AI) and web architecture.
- Provided hands-on training to undergraduate students, bridging theoretical concepts with practical technological application.

Mathematics Instructor – Intensive Sessions

- Instructed undergraduate students in Analysis and Algebra through specialized courses and intensive tutorials.
- Clarified complex mathematical concepts and led practical exercise sessions to ensure student mastery of fundamental principles.
- Enhanced student performance in university examinations by providing targeted review sessions and academic support.

Master Thesis Project (PFE) / Research Internship

Developed and analyzed a stochastic chemostat model, specifically investigating microbial growth dynamics, biomass production. Validated the theoretical framework using MATLAB numerical simulations and quantitatively compared stochastic vs. deterministic dynamics to assess the impact of environmental fluctuations on system equilibria.

EDUCATION AND DEGREES OBTAINED

- Laboratory of Mathematical Analysis and Applications (LAMA).

Bachelor's Degree in Fundamental Mathematics

📍 University of Kenitra

High School Diploma, Life and Earth Sciences

📍 Assoul High School

TECHNICAL SKILLS

Word

Matlab

Excel

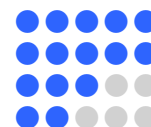
python

C & C++

\LaTeX

LANGUES

English



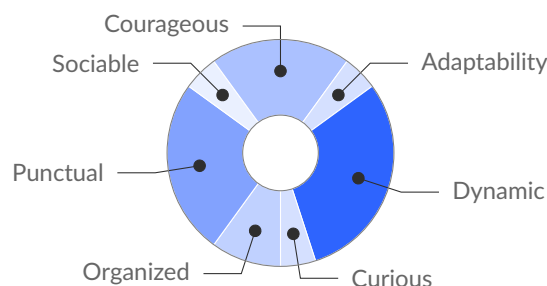
INTERESTS

Cinema

Football

Travel

QUALITIES



PROFESSIONAL SKILLS

Master's in Analysis and Applications

Faculty of Sciences, Rabat

2022 – 2024

Applied Mathematics & Modeling

- Stochastic Processes & Brownian Motion
- Mathematical Modeling (Biological & Physical Systems)
- Qualitative Study of Dynamical Systems
- Dynamic Optimization & Optimal Control

Analysis & Simulation

- Partial Differential Equations (PDEs)
- Functional Analysis & Measure Theory
- Numerical Analysis & Scientific Computing

Computational & Technical Tools

- **Programming:** Python (NumPy, Matplotlib), MATLAB.
- **Document Preparation:** \LaTeX , Beamer, TikZ/PGFPlots

PROGRAMMING & TOOLS

