Amel RAHMOUN
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🎓 Academic Profile

Experienced university lecturer with a strong background in mathematics, control theory, and interdisciplinary modeling. Over 15 years of teaching experience in undergraduate and graduate programs. Published researcher in mathematical control of biological systems (HIV models). Skilled in English-medium instruction and academic supervision in multicultural contexts.

Teaching Experience

Lecturer, University of Tlemcen – Algeria (2006–Present)

- 2021–Present: Course leader for *Calculus (L1)* and Optimal *Control (M1)* – Mathematics Department
- 2019–2021: Course supervisor for *General Mathematics* – Technology Department
- 2006–2019: Instructor in *General Mathematics* – Economics and Finance Department
- Responsible for lectures and tutorials in:
  - Real and Complex Analysis
  - Advanced Algebra
  - Dynamical Systems (including hybrid systems)
  - Control of Dynamical Systems
  - Topology
  - Technical English for Mathematicians

🎓 Education

- **Doctorate in Mathematics**, University of Tlemcen
  Thesis: *Multiple Control Techniques Applied to an HIV Transmission Model*
- **Master's in Mathematics**, University of Tlemcen
  Specialization: Hybrid Dynamical Systems
- **University Habilitation (HDR)**, University of Tlemcen
  Focus: Control Systems & Biomathematics
- **English Language Certificate (B2)** – University of Tlemcen

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📝 Publications – Journal Articles

- *"On the variance estimators in varying coefficients hilbertian autoregressive models", REVSTAT – Statistical Journal, (to appear).*
- ***"Reflection on the Importance of Mathematical Reasoning in Other Disciplines"*** , *Palestinian Journal of Mathematics,* (*To*

appear)

- *"Dynamic Modeling and Optimal Control of Type 2 Diabetes: An Application to Algerian Data", Operations Research Forum, (Springer Nature),* ***DOI :*** *10.1007/s43069-026-00616-3. (2026) ,*
- ***"Quadratic Criterion Minimization of a Linear Control Problem"****, The Mathematics Student, Vol. 94, Nos. 1–2, January–June pp. 85–99. ISSN: 0025-5742. 2025,*
- *"****Continuous Control Applied on an HIV-1 Within Host Model****"*, RAD HAZU – Matematičke Znanosti, 2020
- *"****Optimal Control Applied on an HIV-1 Within Host Model****"*, *Mathematical Methods in the Applied Sciences*, 2016
- *"****Bang-Bang Control Applied on an HIV-1 Within Host Model****"*, *Mediterranean Journal of Modeling and Simulation*, 2016
- ***"Bifurcation Analysis of the HIV-1 Within Host Model"****, Mathematical Methods in the Applied Sciences*, 2016

📚 Books & Internal Publications

- *Introduction to Hybrid Dynamical Systems*, European University Publishing, 2019
- *Mathematics Year 1 and 2 (LMD): Lessons and Corrected Exercises*, Tlemcen University, 2021–2023
- *Mathematics for First-Year University Students: Lessons and Exercises*, Tlemcen University, 2021

🌍 Languages

Language	Level
Arabic	Native
French	Fluent
English	Very Good (B2 Certificate)
Spanish	Good

💼 Skills & Competencies

- Mathematical Modeling, Optimal Control, Nonlinear Systems, Biomathematics
- English-Medium Instruction: Teaching and supervising academic modules in English
- Strong mentorship, course design, and interdisciplinary teaching skills
- Excellent adaptability to multicultural academic environments

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🏆 Achievements

- Over 19 years of university-level teaching experience
- Numerous publications in international peer-reviewed journals
- Teaching and supervising students in English, including technical modules
- Proven capacity to teach diverse subjects ranging from Algebra to Control Systems