

BILAL AL TAKI

Assistant Professor in Mathematics

📅 Mars 22, 1991 📍 French and Lebanese ☎ +33 7 85 68 63 09
📧 162 avenue paul vaillant couturier, 75014 Paris @ bilal.altaki.math@gmail.com

🌐 altaki.github.io/HP/



EXPERIENCE

Research and Teaching Fellow

LJLL, Sorbonne University

📅 Sept 2021– Aug 2022 📍 Paris, FR

- Teaching mathematics for first and second academic year students. Motivating students to achieve their potential.
- Working on research projects with applications to fluid dynamics problems. Cooperate with new people and performing applications using programming languages such as Python for instance.

Researcher

BICMR, Peking University

📅 Jan 2020 – Aug 2021 📍 Beijing, CH

- Working on a mathematical research project arising from fluid mechanics in collaboration with Prof. P. Zhang. This project has received fund from BOYA postdoctoral fellowship.

Research and Teaching Fellow

LJLL, Sorbonne University

📅 Jan 2019– Aug 2019 📍 Paris, FR

- Taught mathematics for first and second academic year students.

Researcher

ANGE, INRIA

📅 Sept 2017 – Dec 2018 📍 Paris, FR

- Working on a research project supervised by Jacques-Sainte Marie with interest on Tsunami problem.
- Taught introductory level courses in mathematics at Sorbonne University.

EDUCATION

PhD in applied mathematics

Grenoble-Alpes University

📅 2013 – 2016

Master degree in mathematics

Lebanese University & Nantes University

📅 2011 – 2013

Bachelor degree in mathematics

Lebanese University

📅 2008 – 2011

STAY ABROAD

- Lebanon, January 2020: Stay at Lebanese University; invitation from Prof. R. Talhouk.
- China, October-December 2019: Stay at BICMR; invitation from Prof P. Zhang.
- Germany, January 2019: Stay at Darmstadt University; invitation from Prof. M. Hieber.
- Germany, Sept-Oct 2022: Stay at TU Kaiserslautern; invitation from Prof. A. Hussein.

TEACHING ACTIVITIES

Please visit my home-page for more infos

- Sorbonne University (L1+L2)
 - Calculus I and Calculus II
 - Vectorial analysis and multiple integral
 - Introduction to differential equations
- University of Savoie Mont Blanc (L1+L2+L3)
 - Calculus I and Calculus II
 - Statistic
 - Linear Algebra
 - Probability
- Lebanese University (M2)
 - Model and numerical method in geosciences

SEMINAR TALKS

- Nov. 2019: Peking University, China.
- Jan. 2019: Darmstadt University, Germany.
- Nov. 2018: Aix-Marseille University, France.
- Mai 2018: University of Paris, France.
- Aug. 2016: Institute of Mathematics of the Czech Academy of Sciences, Czech Republic.

STRENGTHS

Hard-working

Autonomy

Motivator & Leader

Work in group

Python

Latex

Maple

Excel

Machine Learning

Data Science

html

DeepLearning

Pandas

TensorFlow

LANGUAGES

Arabic
French
English



PUBLICATIONS

Visit my account on Google-scholar for more details about my publications. Please click on the link appeared in each item below to get access on the papers.

PhD Thesis

- Al Taki, B. (2016). *On some heterogeneous model in fluid mechanics*. Retrieved from <https://tel.archives-ouvertes.fr/tel-01668531>

Journal Articles

- Al Taki, B. (2022). Well-posedness for a class of compressible non-newtonian fluids equations. *arXiv preprint arXiv:2202.03719*. Retrieved from <https://arxiv.org/abs/2202.03719>
- Al Taki, B., & Lacave, C. (2021). Degenerate lake equations: Classical solutions and vanishing viscosity limit. Retrieved from <https://arxiv.org/abs/2111.05041>
- Al Taki, B., Msheik, K., & Sainte-Marie, J. (2021). On the rigid-lid approximation of shallow water Bingham. *Discrete Contin. Dyn. Syst., Ser. B*, 26(2), 875–905. doi:10.3934/dcdsb.2020146
- Al Taki, B. (2020). A note on functional inequalities and entropies estimates for some higher-order nonlinear pdes. *To appear in Methods and Applications of Analysis*.
- Al Taki, B. (2017a). Global well posedness for the ghost effect system. *Commun. Pure Appl. Anal.*, 16(1), 345–368. doi:10.3934/cpaa.2017017
- Al Taki, B. (2017b). Viscosity effect on the degenerate lake equations. *Nonlinear Anal., Theory Methods Appl., Ser. A, Theory Methods*, 148, 30–60. doi:10.1016/j.na.2016.09.017

Proceedings

- Al Taki, B., Atsou, K., Casanova, J.-J., Goudon, T., Lafitte, P., Lagoutière, F., & Minjeaud, S. (2021). Numerical investigations of the compressible navier-stokes system. In *Esaim: Proceedings and surveys* (Vol. 70, pp. 1–13). Retrieved from <https://doi.org/10.1051/proc/202107001>

RESPONSIBILITIES

- Co-supervisor: M2 Internship of Mme. C. El Hassanieh (Sorbonne University Inria Paris and Lebanese University).
- Advance Competition: Participation in the jury of "Advance Coucours" at EPITA (correction, restitution of the results of the tests of the candidates, interviews).

AWARDS

- Boya postdoctoral fellowship

Project title: Mathematical and numerical analysis for a class of non-Newtonian fluid dynamics equations.

REFEREES

Prof. Alain Miranville

@ University of Poitiers

✉ alain.miranville@math.univ-poitiers.fr

Poitiers, FR.

Prof. Francisco Guillen-Gonzalez

@ University of Sevilla

✉ guillen@us.es

Sevilla, ES.

Prof. Pingwen Zhang

@ Peking University

✉ pzhang@pku.edu.cn

Beijing, CH.

Prof. Christophe Lacave

@ Grenoble-Alpes University

✉ christophe.lacave@univ-grenoble.fr

Grenoble, FR.

CERTIFICATIONS

Here is a list of courses that I have accomplished on Coursera.

- What is Data Science.
([Syllabus](#), [Certificate](#))
- Python for Data Science, AI & Development.
([Syllabus](#), [Certificate](#))
- Data Science with Python.
([Syllabus](#), [Certificate](#))
- Machine Learning with Python.
([Syllabus](#), [Certificate](#))
- Supervised Machine Learning: Regression and Classification.
([Syllabus](#), [Certificate](#))
- Advanced Learning Algorithms
([Syllabus](#), [Certificate](#))

PROJECTS

Here is a list of projects that I have done as a part of my self-training on Data Science and AI:

- Data Science with Python (🔗, 2022)
- Machine Learning with Python (🔗, 2022)
- Car's generation detection (🔗, 2022)