BILAL AL TAKI

Researcher & Teacher in Mathematics

Mars 22, 1991 | French and Lebanese | 4 place Jussieu, 75005 Paris
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EXPERIENCE

Reseacher & Teacher
LJLL, Sorbonne University

Sept 2021– Ongoing | 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.

Researcher & Teacher
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 Darmastadt University; invitation from Prof. M. Hieber.

TEACHING ACTIVITIES

- Sorbonne University (L1+L2)
  - Calculus 1 and 2
  - Vectorial analysis and multiple integral
  - Introduction to differential equations
- University of Savoie Mont Blanc (L1+L2+L3)
  - Calculus 1 and 2
  - 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

LANGUAGES

Arabic
French
English

AWARDS

- Boya postdoctoral fellowship

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

PUBLICATIONS

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

PhD Thesis

- Al Taki, B. (2016). *On some heteregenous 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

REFEREES

Prof. Alain Miranville
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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
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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)