Curriculum Vitæ

Nom : Bilal AL TAKI

Born : on 22 March 1991

Nationality : French and Lebanese

Qualification : Section 25 and 26 of CNU

CURRENT SITUATION :

Since September 2021, I have been recruited as a Temporary Lecturer and Research Assistant (ATER) at Sorbonne University. This contract is valid for one year.

Laboratoire Jacques-Louis Lions

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Google scholar link : click here

ORCID link : click here

CAREER

- 2019-2021 : Post-doc at BICMR, Peking University under supervision of Pingwen Zhang.
    Beijing, China.

- 2018-2019 : Researcher & Teacher (ATER position) at Sorbonne University
    Paris, France.

- 2017-2018 : Post-doc within ANGE Team managed by Jacques Sainte-Marie.
    INRIA Paris.

- 2016 -2017 : Lecturer at the University of Savoie Mont Blanc
    Chambéry, France.

- 2013-2016 : PhD thesis defended on 19/12/2016
    Assignment institution : Grenoble Alpes University and Lebanese University.
    Supervisor : Didier Bresch et Raafat Talhouk.
    Title : On some heterogeneous model in fluids dynamics .
    Reviewers : Alain Miranville (Poitiers) and Francisco Guillen-Gonzalez (Sevilla).

Committee : Mazen Saad (Centrale Nantes), Mathieu Colin (Bordeaux)

Emmanuel Maitre (Grenoble), Christophe Lacave (Grenoble)

Keywords : Partial differential equations, Geophysics fluids

Degenerate equations, Logarithmic Sobolev inequalities.

- 2012-2013 : M2R in applied mathematics

    Assignment institution : University of Nantes and Lebanese University.

    Supervisor : Jean-Francois Coulombel.

    Titre : Hyperbolic problem : theory and numerical scheme.

    Keywords : Hyperbolic problem, Kreiss-Lopatiniskii

    Finite volume, stability.

- 2011-2012 : Master M1 in applied mathematics.

    Assignment institution : Lebanese University 1-Beirut.

- 2009-2011 : License in applied mathematics.

    Assignment institution : Lebanese University 4-Zahlé.

TEACHING ACTIVITIES

- 2021-2022 : Teaching at Sorbonne University (192h)

    Level L1 : 1MA001 Analysis (Calculus I).

    Level L1 : 1MA003 Analysis (Calculus II).

- 2018-2019 : Teaching at Lebanese University (Cursus doctoral 36h with J. Sainte-Marie)

    Level M2 : Models and numerical methods in geosciences

    For more details about the course (http ://edst.ul.edu.lb/cursus152018.html).

- 2017-2019 : Teaching at Sorbonne University (110h)

    Level L1 : 1M001 Analysis and Algebra for the science.

    Level L2 : 2M256 Vectorial analysis and multiple integral

    2M110 Introduction to differential equations.

- 2016-2017 : Teaching at University of Savoie Mont Blanc (134h)

    Level L3 : M501 Probability and M401 Statistic (TD)

    Level L1 : M101 Real Analysis, M201 Functional Analysis et M202 Linear Algebra

RESEARCH PUBLICATIONS

- Published papers :

[1]. B. Al Taki, Viscosity effect on the degenerate lake equation, *Nonlinear Anal. 2017.*

[2]. B. Al Taki, Global well-posedness of the ghost effect system, *Commun. Pure Appl. Anal. 2018.*

[3]. B. Al Taki, K. Msheik, J. Sainte-Marie, On the rigid-lid approximation of the Shallow Water Bingham, *DCDS-B, 2020.*

[4]. B. Al Taki, A note on functional inequalities and entropy estimates for some higher-order nonlinear PDEs, *To appear in Methods and Applications of Analysis.*

[5] B. Al Taki, K. Atsou, J.-J. Casanova, T. Goudon, F. Lagoutière, P. Lafitte, S. Minjeaud, Numerical investigation of compressible Navier-Stokes equations, *ESAIM, Proceeding and Surveys, 2021*

- Submitted papers :

[6]. B. Al Taki, C. Lacave, Vanishing viscosity limit for the solution of the degenerate lake equations.

[7]. B. Al Taki, Well-posedness results for a class of non-Newtonian fluids equations.

CONFERENCES

- Mar. 2019 : Conference on the honor of Jean-Yves Chemin

    Institut poincaré, Paris.
- Nov 2017 : Workshop, an overview on free surface flows

    INRIA Paris.
- May 2017 : Conference on Complex Geometry and PDEs

    American University of Beirut
- July. 2015 : CEMRACS, Coupling Multi-Physics Models Involving Fluids

    CIRM, Marseille.
- June 2015 : Summer school MIS Evolution Equations : Long time behavior and control.

    University of Savoie Mont Blanc, Le Bourget du lac.
- Nov 2014 : Conference on PDEs in Complex Geometry and Singular Spaces

    American University of Beirut.
- Mars 2014 : Excellence seminar in mathematics

    L'académie francophone de Savoirs Gennevilliers, Paris, France.

SEMINARS

- Nov. 2019 : Seminar

    Peking University, China.
- Jan. 2019 : Seminar

    Darmstadt University, Allemagne.
- Nov. 2018 : Seminar.

    Aix-Marseille University, France.

- Mai 2018 : Seminar.

  University of Paris Diderot, France.
- Oct. 2017 : Seminar

  ANGE Team, INRIA Paris.
- Nov. 2016 : Journées EDP Rhônes Alpes Auvergnes

  Grenoble, France.

- Aug. 2016 : Prague Summer school

  Prague, Czekh.
- July 2016 : Seminar at LAMA Laboratory

  Chambéry, France.

- May 2015 : Interactions Colloque in mathematics

  Grenoble, France.

- June 2015 : Congress SMAI

  Karelis, France.

- Nov. 2014 : Forum doctoral at Lebanese University.

  Beyrouth, Liban.

STAY ABROAD

- January 2020 : Stay at the Lebanese University ; invitation from Prof. R. Talhouk
- October-December 2019 : Stay at BICMR ; invitation from Prof P. Zhang.
- January 2019 : Stay at Darmastadt University : invitation from Prof. Matthias Hieber.

Responsibilities

- Co-supervisor : M2 Internship of Mme. C. El Hassanieh (Sorbonne University & Inria Paris and Lebanese University).

Title : Multi-layer Shallow Water model.

Skills

- Languages : French, English, Arabic.
- Programming : Python (Intermediate level).
- Software : Maple.

Certifications

Here is a list of courses that I have accomplished on Coursera as a part of my interest in Data Science and Artificial Intelligence fields.

- 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).

References list

- Prof. Alain Miranville, Univ. of Poitiers (for research activities).
- Prof. Francisco Guillen-Gonzalez, Univ of Sevila (for research activities).
- Prof. Jacques Sainte-Marie, Sorbonne University (for research activities).
- Prof. Pingwen Zhang, Peking University (for research activities).
- Prof. Marie Postel, Sorbonne University (for teaching activities).
- Prof. Christophe Lacave, Univ. of Grenoble-Alpes (for research activities).
- Prof. Cédric Boutillier, Sorbonne University (for teaching activities).
- Prof. Frédéric Paugam, Sorbonne University (for teaching activities).

The recommendation letters are in my possession. It could be send to you upon request.