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 Temporary Lecturer and Research Assistant (ATER) at Sorbonne University. This contract is valid for one year.

Laboratoire Jacques-Louis Lions

Sorbonne Université

4 place Jussieu 75005, Paris, France.

Email : bilal.altaki.math@gmail.com

CAREER

- 2019-2020 : 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).

  Level L3 : TBD (next semester).

- 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.

• Work in progress :

[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 : PhD thesis of Mme. C. El Hassaieh (Sorbonne University & Inria Paris and Lebanese University)

Title : Mathematical and numerical analysis of some dispersive models in fluid mechanics

- 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.