

Youssef KHALIFEH

PERSONAL DATA

ADDRESS:

PHONE:

EMAIL:

SUMMARY

First year doctoral student in Mathematics and Control Theory fields. Graduated from Lebanese University MSc in Applied Mathematics (overall: 70.85/100) with more than one year experience assisting research projects involving modelling and analyzing water waves problems. Expert in Matlab and adapted to other programming languages.

EDUCATION

- 2023 - PRESENT **Cotutelle PhD Degree in Mathematics**
ED ST - Sciences and Technology
Lebanese University - Hadat
ED SI - Sciences and Engineering
CY Cergy Paris University - Cergy-Pontoise
Thesis Subject: "Control and Observation of a Korteweg-de Vries (KdV) type system."
Supervisors: Prof. S. Israwi & Prof. I. Haidar
Co-supervisors: Prof. J.P. Barbot
- 2021 - 2022 **Master 2 Degree in Partial Differential Equations and Numerical Analysis (PDE's and NA)**
Faculty of sciences I - Lebanese University - Hadat
Thesis Topic: "Mechanical Balance Laws For 2D Boussinesq Systems."
Supervisor: Prof. S. Israwi
- 2019 - 2020 **Master 1 Degree - Pure Mathematics**
Faculty of sciences I - Lebanese University - Hadat
- 2015 - 2019 **Bachelor's Degree - Mathematics**
Faculty of sciences V - Lebanese University - Nabatieh
- 2014 - 2015 **High School Certificate In General Sciences**
Sarafand High School

RESEARCH INTEREST

Mathematical Modeling, Partial Differential Equations, Numerical Analysis, Non-linear and Dispersive Water Waves Problem, Linear and Non-linear control theory

RESEARCH EXPERIENCE

Research Evaluation - Reviewer (*September 2023*)

Evaluates scientific researches for financial programs between Lebanese government and the European Union (Lebanon / France)

Research assistant (*May 2022 – present*)

- Worked as a volunteer research assistant in math labs
- Consulted with professors to improve the content and topics
- analyzed theorems and proofs
- Accomplished the required tasks correctly
- Commended by the head professor for accuracy and communication skills.

TALK

- JUNE 7, 2024 **11th Annual LSMS Conference, NDU university, Lebanon**
Mechanical Conservation Laws For 2D Boussinesq Systems
- JUNE 12, 2024 **Seminar at CAMS, AUB, Lebanon**
A New Extended KDV Equation: Theoretical Study, Numerical Validation
& Tsunami Application

WORKSHOP

Participation in Business Modeling and Commercialization Capacity Building at “Industrial Research Achievements Lebanon program” involving

- Two days attendance of capacity building training
- Pitching presentation for 5 minutes by Youssef Khalifeh entitled
“Control and Observation of a Korteweg-de Vries (KdV) type system”

TEACHING EXPERIENCE

- SPRING SEMESTER 2024 **Engineering Mathematics**
Arts, Sciences & Technology University in Lebanon
Instructor
- SPRING SEMESTER 2024 **Linear Algebra**
Arts, Sciences & Technology University in Lebanon
Instructor
- FALL SEMESTER 2023 **Linear Algebra**
Arts, Sciences & Technology University in Lebanon
Instructor
- 2022 - 2023 **General Mathematics**
CIS college - Lebanon
Instructor
- 2021 - 2022 **Mathematics**
ISMART institution - Lebanon
Instructor - intermediate & high school levels

PUBLICATIONS

- S. Israwi, Y. Khalifeh, and D. Mitsotakis. "Equations for small amplitude shallow water waves over small bathymetric variations." *Proceedings of the Royal Society A: Mathematical, Physical & Engineering Sciences*, September 2023. <https://doi.org/10.1098/rspa.2023.0191>

- Y. Khalifeh, S. Israwi. "A Numerical Validation of a New Extended KDV Equation"
(In preparation)
- Y. Khalifeh, I. Haidar. "Control of interconnected KDV's without damping term"
(in preparation)

NOTABLE ACCOMPLISHMENT

Shortlisted to the Industrial Research Achievements Lebanon program 2024
Capacity Building phase

SKILLS

- **Computer:** Basic Knowledge: MS Office , C++, Python, HTML, CSS
Advanced Knowledge: Matlab , \LaTeX
- **Languages:** Arabic (native); English (upper-intermediate); French (pre-intermediate).
- **Public Speaker:**
 - Attending conferences and seminars
 - Speaking at a conference and learn from leaders in the research field.
- **Supervising:** Assisting supervisor in overseeing senior projects
- **Leadership role** Selected as a lead student to present the scientific project at Industrial Research Achievements Lebanon program.

ACADEMIC FINANCIAL AWARDS

A research support project submitted by members of the educational staff
at the Lebanese University

REFERENCES

- **Samer Israwi**, Professor of Mathematics at Lebanese University and EDST
s.israwi83@hotmail.com
- **Ihab Haidar**, Professor of Mathematics at ENSEA, Quartz Laboratory
ihab.haidar@ensea.fr
- **Jean-Pierre Barbot**, Professor of Mathematics at ENSEA, Quartz Laboratory
barbot@ensea.fr

Date June 26, 2024

Signature _____