

# KARIM AMIN

## UNIVERSITY LECTURER - MATHEMATICS

Houch ElHarimi, West Bekaa, Lebanon.

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Marital Status: Married

Sex: Male

Nationality: Lebanese

### EDUCATION

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#### **Ph.D. student, Mathematics.** (2018 - Present)

Ph. D. student, applied Mathematics, Politehnica University of Bucharest, Romania, European Union, under the supervision of Prof. Andrei Halanay.

\*Graduation year 2021.

Thesis title: Qualitative Analysis of Delay Differential Equations Modelling Tropical Diseases.

Research topic: New models for the evolution of Malaria and Chikungunya within host under treatment and considering the action of the immune response are developed. We obtain the equilibrium points and perform the stability analysis. The study of the stability is settled using the critical case theorem of Lyapunov-Malkin type that is proved. The numerical results complete the study, emphasizing that the mathematical models is in line with medical evidence.

#### **M.S. Mathematics.** (2006 – 2009)

Masters in Pure Mathematics (With Honor). Faculty of Science, Beirut Arab University (BAU), under the supervision of Prof. Abdel Nasser Kassar.

Thesis title: Theoretic Equations in Commutative Rings with Identity.

Research topic: We find solutions for equations involving Euler's Phi-Function. We study analogue equations involving  $\sigma$ ,  $\sigma^*$  and  $\phi^*$  functions. Programs are written using Mathematica software package where the solutions obtained provided many results concerning these equations.

#### **B.S. Mathematics.** (2003 – 2006)

BSc. in Pure Mathematics (With Honor). Faculty of Arts and Science, Lebanese International University (LIU).

### WORK EXPERIENCE

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**Lebanese International University** (2008 – present)

**Position:** Lecturer.

**Taught courses:** College Algebra, Calculus I, Calculus II, Calculus III, Linear Algebra, Ordinary Differential equations, Probability and Statistics.

**Bekaa Technical and Vocational Institute** (2007 – present)

**Position:** Teacher (BT, TS and LT classes).

**Omar Mokhtar Education Center** (2005 – 2007)

**Position:** Teacher (Middle and Secondary classes).

#### **PUBLICATIONS**

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1. **K. Amin**, I. Badralexi, A. Halanay, R. Mghames, A stability theorem for equilibria of delay differential equations in a critical case with application to a model of cell evolution, *Math. Model. Nat. Phenom.* 16 (2021) 36.
2. **K. Amin**, A. Halanay, I. Radulescu, M. Ungureanu, A Model for Cell Evolution in Malaria under Treatment Considering the Action of the Immune System, *Sci.Bull.UPB Series A*, vol.83 (2021), iss.3, pp.171-188.

#### **CONFERENCES**

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- **K. Amin**, Lebanese International Conference on Mathematics and Applications (LICMA-2019), Lebanon, 2019.
- **K. Amin**, T. Kadri, On New Equations Involving the Euler Phi Functions, 22<sup>th</sup> LAAS International Science Conference – Mathematics and Informatics, Lebanon, 2016.

#### **COMPUTER SKILLS**

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**Programming:** Mathematica, C++.

**Office Applications:** Word, Excel, Power point, scientific work place.

#### **LANGUAGES**

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**Arabic** (Native Language) and **Good English** (speaking and writing).

#### **REFERENCES**

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Available upon request.

Karim Amin