

# Nasab YASSINE

Teaching and Research in Mathematics

## PERSONAL INFORMATION

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DATE OF BIRTH: Lebanon | June 30, 1992  
NATIONALITY: Double citizenship: Lebanese-French  
GENDER | CIVIL STATUS: Female | Single  
ADDRESS: Université Bretagne Sud,  
Laboratoire de Mathématiques de Bretagne Atlantique (LMBA)  
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## EDUCATION AND DIPLOMA

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NOV 2018 Ph.D. Degree in MATHEMATICS, **Université de Bretagne Occidentale**, Brest, France.  
Thesis: "Quantitative Recurrence Properties in Infinite Measure"  
Advisors: Françoise Pène et Benoît Saussol

JULY 2015 Master 2 Research in DIFFERENTIAL GEOMETRY, **Lebanese University**, Beirut, Lebanon.

JULY 2014 Master 1 in PURE MATHEMATICS, **Lebanese University**, Beirut, Lebanon.

JULY 2013 Bachelor Degree in PURE MATHEMATICS, **Lebanese University**, Nabatieh, Lebanon.

2009-2010 Scientific Baccalaureate: High School **Manarat Jabal Amel**, Lebanon

## WORK EXPERIENCE

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NOV 2022- PRESENT	UNIVERSITÉ BRETAGNE SUD <i>Teaching and Research Assistant</i> Entity of Activity: Faculty of Sciences and Engineering Sciences- LMBA.
SEP 2021- AUG 2022	UNIVERSITÉ DE BRETAGNE OCCIDENTALE <i>Teaching and Research Assistant</i> Entity of Activity: Faculty of Sciences- LMBA.
MAY 2021	LEBANESE UNIVERSITY <i>Invited Lecturer</i> Entity of Activity: Faculty of Sciences, Department of Mathematics
MARCH-MAY 2021	IUT DE MORLAIX-UNIVERSITÉ DE BRETAGNE OCCIDENTALE <i>Teaching Assistant</i> Department: Gestion Administrative et Commerciale des Organisations (GACO)
SEP 2019-AUG 2021	IUT DE BREST-UNIVERSITÉ DE BRETAGNE OCCIDENTALE <i>Teaching Assistant</i> Department: Génie Électrique et Informatique Industrielle (GEII)
OCT 2018- AUG 2019	UNIVERSITÉ DE LORRAINE <i>Teaching and Research Assistant</i> Entity of Activity: - Faculty of Sciences and Technologies - IECL - IUT Nancy-Charlemagne (GEA).

## TEACHING EXPERIENCE

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- NOV 2022-CURRENT **Université Bretagne Sud**  
Complementary Mathematics: Introduce analysis tools and complex numbers.  
Integral Calculation: Develop analysis tools for engineering sciences.  
Algebra and geometry: Apply the reduction of endomorphisms to common problems in Linear Algebra and Geometry.
- SEP 2021-AUG 2022 **Université de Bretagne Occidentale**  
General Mathematics and Mathematics Tools (1<sup>st</sup> year undergraduate)  
Probability and statistics (2<sup>nd</sup> year undergraduate)  
Algèbre Linéaire (2<sup>nd</sup> year undergraduate)
- MAY 2021 **Lebanese university**  
Lectures in Measure Theory and Ergodic Theory for Master 2 students.
- 2019-2021 **IUT de Brest et Morlaix-Université de Bretagne Occidentale**  
Teaching students to learn Maths differently using (WIMS)  
Methodology for academic / university success  
Industrial data: Programming language C  
Lectures in General Mathematics  
Course in Statistical mastery of processes-Reliability and its application using Python Language.  
Integrated teaching in Linear Algebra.  
Lectures in Python (application of mathematics: practical work).
- 2018-2019 **Université de Lorraine**  
Evaluation of analytical methods applied to life and health sciences:  
Bio statistics (1<sup>st</sup> year undergraduates-Paces).  
Module of Logic and Linear Algebra, (1<sup>st</sup> year undergraduate).  
Financial Mathematics (2<sup>nd</sup> year undergraduate)  
Probability and statistics (2<sup>nd</sup> year undergraduate)

## RESEARCH EXPERIENCE

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### LINES OF RESEARCH

Quantitative recurrence- First return time in a small neighborhood  
Local Limit Theorem- Ergodic Theory- Dynamical systems  
Axiom A flows- Geodesic flows-  $\mathbb{Z}$ -extension of subshift of finite type.

### THEMES OF RESEARCH

It concerns studying the quantitative recurrence properties of dynamical systems preserving an infinite measure. We define the first return time of the orbit of a dynamical system to a small neighborhood of its starting point, and study its asymptotic behavior.

### MODELS STUDIED

Probabilistic model: where we consider the simple symmetric random walk.  
 $\mathbb{Z}$ -extension of a probability-preserving dynamical system:  $\mathbb{Z}$ -extension of a subshift of a finite type.  
We studied the recurrence in the framework of flows: we considered the case of Axiom A flows.

## PUBLICATIONS

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- 2018 **Quantitative recurrence of some dynamical systems preserving an infinite measure in dimension one,**  
*Discrete and Continuous Dynamical Systems-A* 2018, 38 (1): 343-361. DOI: 10.3934/dcds.2018017
- 2023 **Quantitative recurrence for  $\mathbb{Z}$ -extension of three-dimensional Axiom A flows,**  
*to be submitted.*

## QUALIFICATIONS

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- 2020 Qualification "Maître de conférences" delivered by the National Council of Universities (CNU), Section 26 (Applied Mathematics and Applications of Mathematics).
- 2019 Qualification "Maître de conférences" delivered by the National Council of Universities (CNU) Section 25 (Pure Mathematics).

## SCIENTIFIC VISIT

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- 2018 PH.D. VISITING RESEARCHER  
Entity of Activity: Loughborough University, England, United Kingdom  
Duration: One month (August 2018)  
Host: Prof. Wael Bahsoun

## SCIENTIFIC ACTIVITIES/ RESPONSIBILITIES

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- SEP 2021-AUG 2022 Ph.D. Students and ATER Vice-Representative at the Council of the Mathematical Department, Brest France
- JUN -SEP 2021 Supervision of Master 2 internship, Lebanese University
- NOV 2021 Member of the defense committee of two Master 2 theses in Lebanon.
- MAY-JUN 2021 Internship tutor  
Subject: Measurements on optical fibers  
Entity of Activity: IUT de Brest (GEII) and École Nationale d'Ingénieurs de Brest
- DEC 2019 & DEC 2020 Participation in defenses (member of the jury)  
PT1 module (communication posters on scientific themes)  
Entity of Activity: IUT de Brest (GEII)
- MAY 2020 & MAY 2021 Member of the DUT admission jury at IUT de Brest (GEII)
- JUN 2019 Participation in the organizing committee of the "SFdS Statistics Days"  
Entity of Activity: Université de Lorraine, Nancy, France
- 2016- 2018 Ph.D. Students' Representative  
Institut Brestoise du Numérique et des Mathématiques (IBNM), Brest France
- 2017 Organizer of the seminar for Ph.D students at LMBA, Brest France
- 2017 Member of the scientific committee of the Lebesgue Ph.D. meeting 2017

## OTHER SCIENTIFIC ACTIVITIES

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### Invited talks in seminars and conferences

- Seminar of Mathematics of LMBA, Vannes France Jun 2023
- A Long Mathematical Doctoral Day, Beirut Lebanon July 2019
- Probability and Statistics Seminar, IECL, Nancy France March 2019
- Dynamic Days Europe 2018, Loughborough, England Sep 2018
- Colloque Jeunes Probabilistes et Statisticiens, Île d'Oléron France May 2018
- Paroles aux jeunes chercheurs en dynamique et géométrie, Rennes France Sep 2017
- Infinite Measure Dynamics, Brest France June 2017
- Seminar of Ergodic Theory, Rennes France Jan 2017
- Jussieu (University of Paris VI) January 2017
- Seminar of Analysis and Probability, Brest France Nov 2016

### Attended and Upcoming Conferences

- GALS: Geometry and Asymptotics of Large Surfaces, Paris Janvier 2024
- Rare Events in Dynamical Systems, ESI, Vienna Austria March 2024
- Conference Probability and Dynamics, Biological Centre of Roscoff, France May 2023
- Dynamics Days Europe 2022, Aberdeen, Scotland August 2022

Systèmes Dynamiques en Pays Léonard Brest, France June 2021  
CIRM: Progrès récents sur les marches aléatoires April 2021  
Spring School on Transfer Operators (Classical and Modern Techniques March 2021  
Smooth Ergodic Theory and Partially Hyperbolic Systems, Loughborough England April 2019  
CIRM: Probabilistic Limit Theorems for Dynamical Systems, Marseille France Oct-Nov 2018  
Lebesgue PhD meeting 2018, Brest France Oct 2018  
Lebesgue PhD meeting 2017, Rennes France Oct 2017  
Lebesgue PhD meeting 2016, Angers France Oct 2016  
Martingales, Chaînes de Markov et Systèmes dynamiques, Aber-Wrac'h, France March 2016  
Mixing Flows and Averaging Methods, Vienna Austria April-May 2016  
Dynamique à Porquerolles, Île de Porquerolles, France June-July 2015

## LANGUAGES

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ARABIC: Native Language  
ENGLISH: Professional working proficiency  
FRENCH: Professional working proficiency

## COMPUTER SKILLS

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DACTYLOGRAPHY	TEX, HTML
PROGRAMMATION	C/C++, Python
OPERATING SYSTEM	Windows( 8,10 ), Linux( Ubuntu )
SOFTWARES	Inkscape, Maple