# OUSSAMA LANDOULSI

Address: University Sorbonne Paris Nord, France.          E-mail:landoulsi@math.univ-paris13.fr
Department of Mathematics
99, avenue Jean-Baptiste Clément
93430 Villetaneuse-France

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**Current**
**Academic**
**Appointments**

**Temporary teaching and research assistant,**          **2020-2021**
University Sorbonne Paris Nord, France.
Department of Mathematics.

**Visiting Researcher,**          **2019-2020**
Florida International University, USA.
Department of Mathematics and Statistics
Under supervision of Prof. Svetlana Roudenko.

**Education**

**PhD. in Math,**          **October 2020**
University Sorbonne Paris Nord, France.
Thesis: *Dynamics of the focusing nonlinear Schrödinger*
*equation outside of a smooth, compact and convex obstacle.*
Advisor: Prof. Thomas Duyckaerts.

**MS. in Math,**          **2015-2016**
University Sorbonne Paris Nord, France
Master thesis under supervision Prof. Thomas Duyckaerts.
Excellence Scholarships.

**BS. in Mathematics,**          **2011-2015**
University Tunis El Manar, Tunisia.

**Research**
**Interest**

**Mathematical physics and Partial Differential Equation:**
- Pure Math: analysis of nonlinear dispersive equations, well-posedness, blow-up, asymptotic behavior, classification of solution.
- Applied Math: Numerical simulation for nonlinear PDEs in various domains.

**Publications**
**and**
**Preprints**

[1] **O. Landoulsi,** *"Construction of a solitary wave solution for the nonlinear Schrödinger equation outside a convex obstacle in the $L^2$-supercritical case"*,
**Discrete Contin. Dyn. Syst. Series-A (2021).**
[2] **T. Duyckaerts, O. Landoulsi and S. Roudenko** *"Threshold solutions in the focusing 3D cubic Schrödinger equation outside a strictly convex obstacle"*, arXiv:2010.07724v1.
[3] **O. Landoulsi,** *"On Blow-up solutions to the nonlinear Schrödinger equation in the exterior of a convex obstacle"*, arXiv:2012.13335.
[4] **O. Landoulsi, K. Yang and S. Roudenko,** *"Soliton-obstacle interaction in the 2D focusing NLS equation: Numerical study,"* (preprint).

**Talks**

Applied Math seminar, Florida International University, Miami, USA.     May 2020
Graduate student seminar, Florida International University, Miami, USA.  April 2019

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| | Nonlinear PDEs seminar, University Paris 13, France. | June 2018 |
| | Graduate student seminar, University Paris 13, France. | Jan 2018 |

**Teaching Experience**

**At Florida International University, USA.**

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| Fourier Analysis. | Summer 2020 |

**At University Sorbonne Paris Nord, France.**

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| Real Analysis II. | Winter 2019 |
| Probability and descriptive Statistics. | Spring 2019 |
| Probability I. | Fall 2018 |
| Linear Algebra. | Spring 2017 |
| Real Analysis I. | Winter 2017 |

**Conferences and research stays**

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| Visiting Researcher Florida International University, Miami, FL, USA. | April 2019 |
| Workshop on PDE and their applications, LMAH, Normandie, France. | June 2019 |
| Workshop on Nonlinear Partial Differential equations, Cergy-Pontoise University, France. | May 2019 |
| Conference on Nonlinear phenomena in dispersive equation, University of Lille, France. | May 2018 |
| Conference and Summer School: Fluids, Dispersion and Blow-up, Henri Poincar Institute, France. | July 2017 |
| French-American conference on nonlinear dispersive PDEs, Centre International de Rencontres Mathmatiques, (CIRM), France. | June 2017 |
| Conference Landau Damping and Inviscid damping, IHP and University Paris 13. | May 2016 |
| International conference on advances, in Applied Mathematics, Hammamet, ICAMM, Tunisia. | Dec 2018 |
| Conference and summer school, Nonlinear Waves, Institut des Hautes tudes Scientifiques, (IHES), France. | June 2016 |

**Technical Skills**

Programming:  Matlab, C++, C.
General: Data Structures, Algorithm, Object Oriented Programming.
Application: Tex, Latex, MS Office, Word, Excel, PowerPoint.

**Language Skills**

Fluent English, French and Arabic.