



ANA-MARIA ORIȚĂ

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Ana-Maria Orița | Clermont-Ferrand, France

WORK EXPERIENCE

PERIOD	February 2024 — June 2024	
INSTITUTION	Université Clermont Auvergne – LMBP	Clermont-Ferrand, France
POSITION	Research Intern	
FUNDED BY	International Research Center on Innovative Transport and Production Systems	
TOPIC	Spectral analysis of the Laplacian: from continuous to discrete. Applications to the controllability of PDEs.	
	<ul style="list-style-type: none">Developed research on the spectral properties of the Laplacian in continuous and discrete settings, using high-order finite differences and finite elements.Investigated theoretical links between spectral behavior and controllability of 1d wave equation.	
PERIOD	August 2022 — August 2023	
EMPLOYER	WAY2VAT	Craiova, Romania
POSITION	Data Operator	
	<ul style="list-style-type: none">Performed accurate data entry and validation for global financial documents.Delivered training to new team members, improving onboarding and data consistency.Maintained data quality controls in collaboration with internal teams.Analyzed metrics to improve data accuracy and efficiency.	
PERIOD	May 2023	
EMPLOYER	SIGMA Center	Craiova, Romania
POSITION	Mathematics tutor	
	<ul style="list-style-type: none">Prepared students for tests and national exams.	

EDUCATION

PERIOD	October 2024 — Present	
INSTITUTION	Université Clermont Auvergne – LMBP	Clermont-Ferrand, France
DEGREE	PhD in Applied Mathematics	
FUNDED BY	International Research Center on Innovative Transport and Production Systems	
THESIS	Numerical analysis and controllability of some second order in time PDEs	
	<ul style="list-style-type: none">Explored the impact of high-order finite difference schemes on PDEs controllability, including wave and Euler–Bernoulli equations.Derived recurrence formulas for constructing high-order discretization matrices, enabling efficient and precise numerical control.Investigated spectral and structural properties of high-order discretization matrix coefficients to reveal stability and control patterns.	
PERIOD	September 2023 — July 2024	
DEGREE	Master 2 in Mathematics	
UNIVERSITY	Université Clermont Auvergne	Clermont-Ferrand, France
RESULT	Final average: 16.83/20	Ranked 1 st in the program
PERIOD	October 2022 — July 2024	
DEGREE	Master in Applied Mathematics	
UNIVERSITY	University of Craiova	Craiova, Romania
THESIS	Approximation of controls for the 1d wave equation	
	<ul style="list-style-type: none">Studied finite difference control approximations and spectral properties for the 1d wave equation.	
PERIOD	October 2019 — July 2022	
DEGREE	Bachelor in Mathematics and Computer Science	
UNIVERSITY	University of Craiova	Craiova, Romania
RESULT	Final average: 9.84 / 10	Ranked 1 st in the program
THESIS	Optimization elements in convex analysis	
	<ul style="list-style-type: none">Investigated convex programming problems, primal-dual structures, saddle point and Minimax theory for rigorous optimization analysis.	
PERIOD	October 2019 — July 2024	
DEGREE	Level I and II Teaching Diploma	
DEPARTMENT	Teacher Training Department	Craiova, Romania

SKILLS

Languages: Romanian (native), English, French, Spanish
Digital: Python, Julia, FreeFem++
Soft: analytical thinking, adaptability, time management, assertiveness, team-oriented

PROJECTS

INNOMATH	Innovative Enriching Education Process for Mathematically Gifted Students in Europe
	<ul style="list-style-type: none">Participated in workshops and discussions focused on enhancing educational strategies for gifted students in mathematics.
MATHLIFE	Math, or what you can do for a better life tomorrow
	<ul style="list-style-type: none">Participated in a team project that won funding for promoting mathematics education, raising awareness of the practical value of mathematics.
SCIENTIFIC DAYS	Journées Scientifiques de l'EDSF
	<ul style="list-style-type: none">Assisted in coordinating a two-day event showcasing PhD research through accessible presentations for both academic and non-specialist audiences.

PUBLICATIONS

- 2025 **Uniform boundary observability for a fourth order finite-differences semi-discretization of the 1-d wave equation.**
Nicolae Cindea , Ana-Maria Orița, Ionel Roventă
- Article available on [HAL](#).

TALKS

- **"Uniform observability and spectral effects in high-order finite difference approximations"** INTERNATIONAL CONFERENCE ON SCIENTIFIC COMPUTING AND ITS APPLICATIONS(SCA-2026), Faculty of Mathematical Sciences, South Asian University, New Delhi, India
- **"The mathematical modeling of waves"**, "Unirea" National College, February 2026, Turnu Măgurele, Romania
- **"Some remarks on high-order finite-differences schemes. Consequences on the observability of the wave equation."** Journée de l'équipe Equations aux Dérivées Partielles et Analyse Numérique du Laboratoire de Mathématiques Blaise Pascal, 2026 ([link](#)). Clermont Ferrand, France

CONFERENCES, SEMINARS AND SUMMER SCHOOLS

- **Journée de l'équipe Equations aux Dérivées Partielles et Analyse Numérique du Laboratoire de Mathématiques Blaise Pascal, 2026** ([link](#)). Clermont Ferrand, France
- **Journées Équations aux Dérivées Partielles Auvergne-Rhône-Alpes, 2025** ([link](#)). Lyon, France
- **9th Regional French-Romanian Summer School on Applied Mathematics, July 2024** ([link](#)). Sinaia, Romania