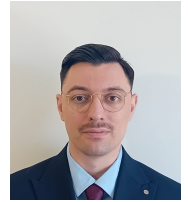


# Victor-Ovidiu Şlupic

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## Education

- 2023–present **Ph.D. in Theoretical Physics**, *University of Bucharest, Romania*  
**Thesis Topic**, *Quantum Field Theory on Noncommutative Space*, Supervisor: Ciprian Sorin Acatrinei
- 2021–2023 **Master's Degree in Physics for Advanced Technologies**, *Alexandru Ioan Cuza University of Iasi, Romania*  
**Thesis**, *Motion of particles around black holes*, Studied particle dynamics near static black holes using numerical simulations
- 2017–2023 **Master's Degree in Theoretical Physics**, *Stockholm University, Sweden*  
Completed part-time while pursuing other academic and professional opportunities, allowing for interdisciplinary growth and international research exposure.  
**Thesis**, *Multi-soliton solutions of the Cubic Szegő equation on the real line*
- 2014–2017 **Bachelor's Degree in Physics**, *Alexandru Ioan Cuza University of Iasi, Romania*  
**Thesis**, *Spontaneous Symmetry Breaking Mechanism and Gauge Theories*
- 2009–2014 **Secondary School Diploma in IT**, *Technical Institute "A. Volta", Italy*

## Publications

- July 2024 **E. M. Babalic, C. I. Lazaroiu, V. O. Slupic**, *Strong rapid turn inflation and contact Hamilton-Jacobi equations*, arXiv preprint arXiv:2407.19912 [hep-th]  
DOI: 10.48550/arXiv.2407.19912

## Research Experience

- 11/2023–present **Scientific Research Assistant**, *IFIN-HH DFT (Horia Hulubei National Institute for R&D in Physics and Nuclear Engineering), Romania*
- Investigating quantum field theories on noncommutative spaces using analytical and numerical methods
  - Analyzing mathematical frameworks for cosmological models with applications to inflation theory
  - Contributing to the development of computational tools for quantum field theory simulations

## Conferences, Workshops and Schools

- Jul 2025 **Modern Methods in Quantum Gravity and Cosmology**, *IFIN-HH, Bucharest, Romania*  
Participated in advanced Ph.D. school in theoretical physics at a European premier laser physics laboratory
- Jul 2025 **Pentagon of Physics Faculties**, *10th National Conference, Oradea, Romania*  
National physics conference featuring research presentations and academic collaboration
- Feb 2025 **CERN Winter School on Supergravity, Strings and Gauge Theory**, *CERN, Geneva, Switzerland*  
Participated in advanced theoretical physics training at Europe's premier particle physics laboratory
- Jan 2025 **Strings 2025**, *NYU Abu Dhabi University, UAE*  
(Online) International conference on string theory, quantum gravity, and related topics
- Sep 2024 **18th National Conference of Biophysics**, *Iasi, Romania*
- Aug 2024 **Summer School on Cosmology - Petnica Summer Institute**, *Petnica, Serbia*
- Jun 2024 **2nd Training School COST Action COSMIC WISPerS (CA21106)**, *Ljubljana, Slovenia*

- Apr 2024 **QFT AND NONLINEAR DYNAMICS: Dynamical aspects of multifield cosmological models**, Craiova, Romania
- Oct 2023 **ICTP Workshop on String Theory, Holography, and Black Holes**, International Centre for Theoretical Physics, Trieste, Italy
- Nov 2022 **FarPhys Conference**, Iasi, Romania  
Presented research on: *Thermodynamic stability of Reissner-Nordström Black Holes with quintessence and solid angle deficit*
- May 2022 **FTEM Conference**, Iasi, Romania  
Presented research on: *Particles trajectory around Kerr Black Hole*
- Jun-Jul 2015 **The Eighth Congress of Romanian Mathematicians**, Iasi, Romania
- Jul 2015 **XXXII International Conference on Phenomena in Ionized Gasses**, Iasi, Romania

## Professional Experience

- 08/2022–10/2023 **President & Founding Member**, Association of Physics Students (ASFIZ-UAIC), Alexandru Ioan Cuza University, Romania
  - Founded and led student organization with 80+ members (out of 210 registered physics students)
  - Organized academic lectures, workshops, and community-building events
  - Fostered interdisciplinary collaboration with other science departments
  - Contributed to projects at the Geometry and Physics Group (GAP): <https://events.theory.nipne.ro/gap/index.php/student-homepage>
  - Developed leadership and organizational skills while promoting physics education
- 01/2021–01/2022 **Software Engineer I**, Vitesco Technologies, Romania
  - Developed embedded software for electric vehicle control systems using physics-based modeling
  - Applied numerical methods and algorithm optimization for real-time control applications
  - Implemented data analysis tools for system performance evaluation using statistical methods

## International Experiences

- Aug 2019 **Nordita Master Class**, Nordic Institute for Theoretical Physics, Stockholm, Sweden  
Intensive advanced training in theoretical physics at Scandinavia's leading institute
- Jun-Sep 2016 **Erasmus+ Student Mobility**, University of Helsinki, Department of Physics, Finland  
International academic exchange focused on physics coursework and cultural experience

## Skills

### Languages

- Native proficiency Italian, Romanian
- Professional proficiency English (C1, IELTS Academic Exam: Band 7.5)

### Technical Skills

- Programming C (Advanced), Python (Advanced), MATLAB (Intermediate), Targetlink (Intermediate)
- Scientific Computing Mathematica (Advanced), Maple (Intermediate), OriginPro (Advanced)
- Specialized Knowledge Quantum Field Theory, General Relativity, Black Hole Physics, Noncommutative Geometry
- Soft Skills Scientific Writing, Project Management, Team Collaboration, Technical Presentations

## Extracurricular Activities

### **Rare Physics Book Collection**

- Curated collection of over 200 historical physics textbooks and monographs
- Notable items include:
  - Third reprint of Maxwell's *Electricity and Magnetism* treatises
  - Second reprint of Hilbert and Courant's *Methods Of Mathematical Physics*
  - First edition of Morse and Feshbach's *Methods of Theoretical Physics*