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Studies: Graduate studies, Faculty of Physics, University of Bucharest 2007-2010
Master Degree in Condensed Matter Physics, University of Bucharest, 2010-2012.

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"Spectral and transport properties in tow-dimensional quantum structures"

Postdoc positions – National Institute of Materials Physics Bucharest (2020-2022)
Project Title: Edge states manifestation in non-Hermitian topological systems

Positions: 2011 – 2016 Research Assistant *(National Institute of Materials Physics - Bucharest);*
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Research interests: Spectral properties of 2D materials in different geometries
Non-Hermitian Topological Systems
Quantum transport in topological and low dimensional quantum structures

Publications: 14 ISI papers (according to Web of Science) and 144 citations without self-citations

Awards: Radu Grigorovici Prize of the Romanian Academy 2016, for the group of papers:
"*Phosphorene confined systems in magnetic field, quantum transport, and superradiance in the quasiflat band*"[Phys. Rev. B 93, 075408] and "N*on-Hermitian approach of edge states and quantum transport in a magnetic field"* [Phys. Rev. B **94**, 195431]
https://acad.ro/premiileAR/liste/2016.pdf

List of Publication:

1. "*Phase extraction in disordered isospectral shapes"* Mugurel Tolea, **Bogdan Ostahie**, Marian Nita, FeliciaTolea, Alexandru Aldea Physical **Review E 85, 036604 (2012).**

2. "*Nonadiabatic generation of spin currents in a quantum ring with Rashba and Dresselhaus spin-orbit interactions"* Marian Nita, D. C. Marinescu**, Bogdan Ostahie**, Andrei Manolescu, Vidar Gudmundsson **Journal of Physics: Conference Series 338 (2012) 012013.**

3. "*Persistent charge and spin currents in a 1D ring with Rashba and Dresselhaus spin-orbit interactions by excitation with a terahertz pulse"* Marian Nita, **Bogdan Ostahie**, D. C. Marinescu,Andrei Manolescu, Vidar Gudmundsson **Physica E 46, 12 (2012).**

4. "*Spectral and transport properties of the two-dimensional Lieb lattice"* Marian Nita, **Bogdan Ostahie**, Alexandru Aldea **Physical Review B 87, 125428 (2013)**.

5. "*Topological properties of the mesoscopic graphene plaquette: Quantum spin Hall effect due to spin imbalance*" **Bogdan Ostahie**, Marian Nita, Alexandru Aldea **Physical Review B 89, 165412 (2014).**

6. "*Transmission phase lapses at zero energy in graphene quantum dots*" Marian Nita, Mugurel Tolea, **Bogdan Ostahie Physica Status Solidi-Rapid Research letters 8, 790-793 (2014).**

7. "*Electric manipulation of edge states in graphene and the effect on the quantum Hall transport"* **Bogdan Ostahie**, Marian Nita, Alexandru Aldea **Physical Review B 91, 155409 (2015).**

8. *"Phosphorene confined systems in magnetic field, quantum transport, and superradiance quasiflat band*" **Bogdan Ostahie**, Alexandru Aldea **Physical Review B 93, 075408 (2016).**

9. "*Non-Hermitian approach of edge states and quantum transport in a magnetic field"* **Bogdan Ostahie**, Marian Nita, Alexandru Aldea **Physical Review B 94,195431 (2016).**

10. "*Localization Properties of Zig-Zag Edge States in Disordered Phosphorene"* Marian Nita, **Bogdan Ostahie**, Mugurel Tolea, Alexandru Aldea **R. Phys. Status Solidi RRL2018, 12, 1800051**

11. "*Edge-state mechanism for the anomalous quantum Hall effect in a diatomic square lattice"* **Bogdan Ostahie**, Marian Nita, Alexandru Aldea **Physical Review B 98,125403 (2018).**

12. *"Spectral analysis, chiral disorder and topological edge states manifestation in open non-Hermitian Su-Schrieffer-Heeger chain"* **Bogdan Ostahie**, Alexandru Aldea **Phys. Lett. A 387, 127030 (2021).**

13. *"Interface effects on the energy spectrum and quantum transport in two-dimensional topological heterostructures"* **Bogdan Ostahie**, Alexandru Aldea **Appl. Surf. Sci., 587 Article 152769 (2022).**

14. *"Multiparticle quantum walk: A dynamical probe of topological many-body excitations"* **Bogdan Ostahie**, Doru Sticlet, Cătălin Paşcu Moca, Balázs Dóra, Miklós Antal Werner, János K. Asbóth, and Gergely Zaránd **Physical Review B 108, 035126 (2023).**