

PERSONAL INFORMATION

Date of birth: 02.04.1995

Place of birth: Goris, Syunik region, Armenia

Place of residence: St. Leningradyan 31/2, apt. 2, Yerevan, Armenia

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EDUCATION

2013-2017, Bachelor, Electronics and Nanoelectronics, Department of General Physics and Quantum nanostructures, Russian-Armenian University, Yerevan, Armenia

2017-2019, Master student, Electronics and Nanoelectronics, Department of General Physics and Quantum nanostructures, Russian-Armenian University, Yerevan, Armenia

2019-2023, PhD student, Semiconductor Physics, Department of General Physics and Quantum nanostructures, Russian-Armenian University, Yerevan, Armenia

2021, PhD student, Engineering Faculty, Department of Applied Physics and Photonics, Vrije Universiteit Brussel, Brussels, Belgium

2024, has been awarded the Degree of Doctor of Philosophy (Ph.D) in Physics

LANGUAGE PROFICIENCY

- Native: Armenian (fluent)
- Second: Russian (fluent)
- Foreign: English (good)

WORK EXPERIENCE

- 2019-..., Consultant in Wolfram Research (Group: Sound & Vision, Department: Algorithms R&D)
- 2018-..., Junior Laboratory Assistant in Russian-Armenian University (Lab: Mathematical Modeling of Quantum Nanostructures, Department: General Physics and Quantum Nanostructures)
- 2024-..., Junior Researcher in Institute of Applied Physics Problems NAS RA

MEMBERSHIPS

- 2017 - ..., RAU & NAS SPIE Student Chapter
- 2018 - 2019, Vice-President of RAU & NAS SPIE Student Chapter
- 2019 - 2020, President of RAU & NAS SPIE Student Chapter

AWARDS

- 2018, Kocharyants Scholarship, Russian-Armenian University
- 2021, Best PhD student, Russian-Armenian University

GRANTS

- 2021-2023, International Joint Research Projects Support Program "RA MESCS SC-RFBR-2020"
- 2021-..., Research Projects Support Program

CONFERENCES AND SCHOOLS

- Armenian Wolfram Technology Conference, Russian-Armenian University, Yerevan, Armenia, 2017
- Joint International Conference on Astrophysics for Young Scientists, Byurakan Astrophysical Observatory, Byurakan, Armenia, 2017
- International School on Metamaterials and Nanotechnologies ISMENA-2017, December, Tsaghkadzor, Armenia, 2017
- 1th International Summer School on Optics & Photonics (ISOP-2019), Yerevan, Armenia (Organizer)
- 1th International conference Laser Physics, Ashtarak, Armenia, 2019 (Poster Presentation)
- Armenian Wolfram Technology Conference, Dilijan, Armenia, 2019 (Organizer)
- SPIE Photonics Europe Digital Forum, Strasbourg, France, 2020 (Poster Presentation)
- International Youth Conference on Electronics, Telecommunications and Information Technologies (YETI-2020), Saint Petersburg, Russia, 2020 (Poster Presentation)
- International Youth Conference on Electronics, Telecommunications and Information Technologies (YETI-2021), Saint Petersburg, Russia, 2021 (Oral Presentation)

PUBLICATIONS

- D.B. Hayrapetyan, E.M. Kazaryan, M.A. Mkrtchyan, H.A. Sarkisyan. Long-wave Absorption of Few-Hole Gas in Prolate Ellipsoidal Ge/Si Quantum Dot: Implementation of Analytically Solvable Moshinsky Model. **Nanomaterials**, 10(10), 1896, 2020.
- T.A. Sargsian, M.A. Mkrtchyan, H.A. Sarkisyan, D.B. Hayrapetyan. Effects of external electric and magnetic fields on the linear and nonlinear optical properties of InAs cylindrical quantum dot with modified Pöschl-Teller and Morse confinement potentials. **Physica E: Low-dimensional Systems and Nanostructures**, 126, 114440, 2021.
- Kh.S. Khachatryan, M.A. Mkrtchyan, D.B. Hayrapetyan, E.M. Kazaryan, H.A. Sarkisyan. Adiabatic description of the electroabsorption in strongly prolate and oblate conical quantum dots. **Physica E: Low-dimensional Systems and Nanostructures**, 134, 114887, 2021.
- M.A. Mkrtchyan, D.B. Hayrapetyan, E.M. Kazaryan, H.A. Sarkisyan et al. Effects of an external magnetic field on the interband and intraband optical properties of an asymmetric biconvex lens-shaped quantum dot. **Nanomaterials**, 12(1), 60, 2021.
- A. Mkrtchyan, D.B. Hayrapetyan, E.M. Kazaryan, H.A. Sarkisyan, S. Baskoutas, D.A. Firsov, M.Y. Vinnichenko. One-and few-particle optics of the valence band in lens-shaped Ge/Si quantum dots. **Physica E: Low-dimensional Systems and Nanostructures**, 150, 115703, 2023.