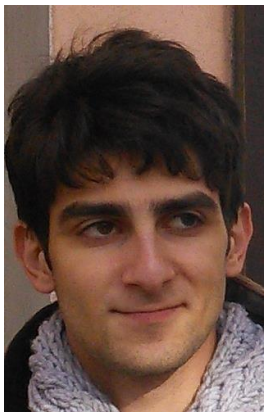
## PERSONAL INFORMATION

# Davit Baghdasaryan



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Sex Male | Date of birth 03/October/1991| Nationality Armenian

## WORK EXPERIENCE

**15 June 2015 – present**

Wolfram Research, Consultant
-Developer in Image and Signal Processing team
-Image Processing
-OpenCV
-Object detection/recognition
-Image measurements
-Image transformations/filters
-Face Detection
-Neural networks

**1 July 2017 – April 2018**

Visiting Lecturer Tumo Center for Creative Technologies
Teaching Wolfram Language to students

**15 November 2013 – 1 April 2014**

10X Engineering (NI partner)
-Software and RF system engineer intern
-LabVIEW

**1 September 2015 – 1 June 2016**

Personal Tutoring
Physics

**1 May 2014 – 1 September 2014**

Geno6
QA automatization project
Java, Cucumber, Jenkins

**1 January 2017 – 1 January 2018**

President of SPIE YSU student chapter

## EDUCATION AND TRAINING

September 2009 - June 2013

## Bachelor's degree

Bachelor n Physics (specialization: Department of General and Theoretical Physics ),

**Institute for Mathematics and High Technology**,

Russian-Armenian (Slavonic) University

Hovsep Emin Street 123, 0051 Yerevan (Armenia)

http://rau.am/eng

September 2013 – June 2015

## Master's degree

**Institute for Mathematics and High Technology**,

Russian-Armenian (Slavonic) University

Hovsep Emin Street 123, 0051 Yerevan (Armenia)

http://rau.am/eng

General

-Non-linear spectroscopy, quantum optics, semiconductor physics, optical and quantum informatics, optical properties of nanostructures, quantum and optical electronics.

September 2015 – May 2018

## PhD

Semiconductor Physics

Bachelor in Physics (specialization: Department of General and Theoretical Physics),

**Institute for Mathematics and High Technology**,

Russian-Armenian (Slavonic) University

- Semiconductor Physics

- Electronic properties of quantum nanostructures (quantum wells, wires and dots).

- Few and many Particle states

- Optical properties (interband and intraband transitions, impurity and exciton light absorption, direct and non-direct interband light absorption) of quantum nanostructures (quantum wells, wires and dots).
-Optical and electronic properties of Quantum Dashes.

- got my PhD degree in 2018.

## PERSONAL SKILLS

Mother tongue(s): Armenian, Russian

Other language(s)

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | B2 | C1 | B2 | B2 | B2 |

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

**Communication skills**

Good communication and team working skills

**Organisational / managerial skills**

Participated in organization of many scientific event.

I was a local organizer of IONS Armenia 2013, 2nd International Advanced School FOP 2014 (Frontires of Optics and Photonics), 3rd International Symposium "Optics and its Applications"(OPTICS-2015), 3rd International Advanced School FOP 2016 (Frontiers of Optics and Photonics), 4th International Symposium "Optics and its Applications"(OPTICS-2016).

Also, I have been involved in organization of Armenian Wolfram Technology Conference in Dilijan, Armenia September 26–27 2015 and Armenian Wolfram Technology Conference in Yerevan September 2016. I was faculty member and instructor in Wolfram Armenia Summer School, Yerevan, Armenia, TUMO, 2016.

**Digital competence**

Wolfram language (6+ yrs. experience)
C/C++ (4 yrs. experience),
LabVIEW (1 yr. experience),
GIT, CVS, Jenkins, JIRA
Microsoft Office, LaTeX
* Some experience and familiarity
* Python, Matlab,

**Conference organization**

- **2014** « Современные проблемы физики » Школа молодых ученых (13-15 май, 2014, Ереван, Армения) Org. Committee.
- **2014** 2nd international symposium on optics and its applications "Optics and its Applications" (1 - 5 Sep, 2014, Yerevan, Ashtarak, Armenia)
- **2014** Frontiers in optics and photonics (FOP) 2014 Вторая международная школа (30 - 5 сентябрь, 2014, Ереван-Аштарак, Армения) Org. Committee.
- **2015** 3nd international symposium on optics and its applications "Optics and its Applications" (1 - 5 Sep, 2015, Yerevan, Ashtarak, Armenia)
- **2015** Armenian Wolfram Technology Conference, Dilijan, Armenia September 26–27
- **2016** Wolfram Armenia Summer School, Yerevan, Armenia, TUMO Centre, August 7–20
- **2016** 4th International Symposium “OPTICS and its Applications” (OPTICS-2016) Yerevan and Ashtarak, Armenia, July 25-28

**Conference participation**

- 2014 III Международная молодежная научная школа-конференция <<Современные проблемы физики и технологий>> НИЯУ МИФИ 2014, «Двух электронные состояния и управление временем обмена состояниями в параболической квантовой точке» (10-13 апреля, г Москва) (Тезис)
- 2013 – 2016 Годичная конференция РАУ (RAU Annual Conference)
- 2014 2nd international symposium on optics and its applications "Optics and its Applications" (1 - 5 Sep, 2014, Yerevan, Ashtarak, Armenia) (ICTP certificate)
- 2015 3nd international symposium on optics and its applications
- "Optics and its Applications" 1- 5 Sep, 2014, Yerevan, Ashtarak, Armenia) (Oral presentation)
- 2015 Armenian Wolfram Technology Conference 2015
- 2015 17-я Всероссийская молодежная конференция по физике полупроводников и наноструктур, полупроводниковой опто- и наноэлектронике, Россия, Санкт-Петербург, 23 ноября 2015 г. — 27 ноября 2015 г.
- 2016 Frontiers in optics and photonics (FOP) 2016 международная школа (сентябрь, 2016, ЕреванАрмения)
- 2016 Wolfram Armenia Summer School, Yerevan, Armenia, TUMO Centre, August 7–20. Faculty member (https://education.wolfram.com/summer/school/armenia/)
- 2016 4th International Symposium “OPTICS and its Applications” (OPTICS-2016) Yerevan and Ashtarak, Armenia, July 25-28.
- 2016 Armenian Wolfram Technology Conference 2016
- 2017 Internationals Optical Metrology Congress Center Munich, Germany 25 - 29 June 2017

**Publications:**

1. Two-Electron States and State Exchange Time Control in Parabolic Quantum Dot, D. A. Baghdasaryan, E.M. Kazaryan, H.A. Sarkisyan, Physica E S1386-9477(13)00358-5 (2014)
2. Two-electron impurity in the parabolic quantum dot: uncertainty relation and perturbation approach, D. A. Baghdasaryan, H. Ts. Ghaltaghchyan, E. M. Kazaryan, H. A. Sarkisyan, Physica E (2015).
3. Baghdasaryan, D. A., D. B. Hayrapetyan, and E. M. Kazaryan. "Prolate spheroidal quantum dot: Electronic states, direct interband light absorption and electron dipole moment." Physica B: Condensed Matter 479 (2015): 85-89.
4. Baghdasaryan, Davit A., David B. Hayrapetyan, and Eduard M. Kazaryan. "Oblate spheroidal quantum dot: electronic states, direct interband light absorption and pressure dependence." The European Physical Journal B 88.9 (2015): 1-6.
5. Baghdasaryan, D. A., et al. "Impurity with two electrons in the spherical quantum dot with Unite confinement potential." Journal of Physics: Conference Series. Vol. 673. No. 1. IOP Publishing, 2016.
6. Baghdasaryan, Davit A., David B. Hayrapetyan, and Eduard M. Kazaryan. "Optical properties of narrow band prolate ellipsoidal quantum layers ensemble."Journal of Nanophotonics 10.3 (2016): 033508-033508.
7. D.A. Baghdasaryan, D.B. Hayrapetyan, E.M. Kazaryan Izvestiya NAN Armenii, Fizika Vol. 51, 2016.
8. Harutyunyan, V. A., D. B. Hayrapetyan, and D. A. Baghdasaryan. "Single-electron states in semiconductor nanospherical layer of large radius." Journal of Contemporary Physics (Armenian Academy of Sciences) 51.4 (2016): 350-359.
9. Baghdasaryan, D. A., D. B. Hayrapetyan, and V. A. Harutyunyan. "Optical transitions in semiconductor nanospherical core/shell/shell heterostructure in the presence of radial electrostatic field." Physica B: Condensed Matter 510 (2017): 33-37.
10. Baghdasaryan, D. A., E. M. Kazaryan, and H. A. Sarkisyan. "Photoionization and electrostatic multipoles properties of spherical core/shell/shell quantum nanolayer with off-center impurity." Superlattices and Microstructures 104 (2017): 69-77.
11. Baghdasaryan, D. A., et al. "Optical “Visualization” of Pythagorean Triples and Electrostatic Multipoles in Quantum Dash." Physica E: Low-dimensional Systems and Nanostructures 90, 170-174 (2017).
12. Baghdasaryan, D. A., et al. "Conical quantum dot: Electronic states and dipole moment." Journal of Contemporary Physics (Armenian Academy of Sciences) 52.2 (2017): 129-137.
13. Baghdasaryan, D. A. "Interband and intraband optical light absorption in quantum dash systems." SPIE Optical Metrology. International Society for Optics and Photonics, 2017.
14. Baghdasaryan, Davit A., David B. Hayrapetyan, Hayk A. Sarkisyan, Eduard M. Kazaryan, and Sergey I. Pokutnyi. "Exciton states and direct interband light absorption in the ensemble of toroidal quantum dots." Journal of Nanophotonics11, no. 4 (2017): 046004.
15. Hayrapetyan, D. B., Ohanyan, G. L., Baghdasaryan, D. A., Sarkisyan, H. A., Baskoutas, S., & Kazaryan, E. M. (2018). Binding energy and photoionization cross-section of hydrogen-like donor impurity in strongly oblate ellipsoidal quantum dot. Physica E: Low-dimensional Systems and Nanostructures, 95, 27-31.
16. Hayrapetyan, D. B., Baghdasaryan, D. A., Kazaryan, E. M., Pokutnyi, S. I., & Sarkisyan, H. A. (2018). Exciton states and optical absorption in core/shell/shell spherical quantum dot. Chemical Physics, 506, 26-30.
17. Baghdasaryan, D. A., Hayrapetyan, D. B., Kazaryan, E. M., & Sarkisyan, H. A. (2018). Thermal and magnetic properties of electron gas in toroidal quantum dot. Physica E: Low-dimensional Systems and Nanostructures, 101, 1-4.
18. DB Hayrapetyan, YY Bleyan, DA Baghdasaryan, HA Sarkisyan, S Baskoutas, EM Kazaryan, Biexciton, negative and positive trions in strongly oblate ellipsoidal quantum dot Physica E: Low-dimensional Systems and Nanostructures 105, 47-55 2019.
19. D. A. Baghdasaryan, E. S. Hakobyan,D. B. Hayrapetyan,H. A. Sarkisyan,E. M. Kazaryan, Nonlinear Optical Properties of Cylindrical Quantum Dot with Kratzer Confining Potential, Volume 54, Issue 1, pp 46–56, 2019
20. D. A. Baghdasaryan H. T. Ghaltaghchyan D. B. Hayrapetyan E. M. Kazaryan H. A. Sarkisyan, Electronic and Optical Characteristics of Core/Shell Quantum Dots 02 July 2020, Springer

## Membership

- Member of International Society for Optics and Photonics (SPIE) (https://spie.org/) Armenian Chapter 2013-2018
- Vice-president of YSU & NAS RA SPIE student chapter 2016
- President of YSU SPIE student chapter 2017

## Certificates

- Certificate of Personal scholarships of the fund “Armenian Students”, 2011.
- Certificate of Personal scholarships after Samvel G. Kocharyants, 2014.
- Certificate of Wolfram technology associate Mathematica Student 2015.
- Certificate of completion of Microelectronics and introduction to EDA Synopsys Armenia Course, 2013.
- Certificate of Traineeship at the Department of semiconductors at MSU, Moscow, November, 2012.
- Certificate for participation in the International Advanced School "Frontiers in Optics & Photonics" (FOP-2014), 30 August - 5 September, 2014, Yerevan - Ashtarak, Armenia
- Certificate for participation in 3rd International Symposium on Optics and its Applications, 1-5 October 2015, Yerevan-Ashtarak, Armenia
- Certificate for participation in 3rd International Advanced School "Frontiers in Optics & Photonics" (FOP-2016), 29 February - 12 March, 2016, Yerevan - Ashtarak, Armenia
- Certificate for participation in 4th International Symposium on Optics and its Applications, 25-28 July 2016, Yerevan-Ashtarak, Armenia.
- Wolfram Certified Instructor Wolfram Research Inc 2017

## Grants

- «ԱՍՊԻՐԱՆՏԵՐԻ ՀԵՏԱԶՈՏՈՒԹՅՈՒՆՆԵՐԻ ԱՋԱԿՑՈՒԹՅԱՆ ԾՐԱԳԻՐ - 2016» ՄՐՑՈՒՅԹ (PhD Students Research support national program).
- Исследование одночастичных и многочастичных оптических явлений в квантовых точках Ge/Si Совместный Армяно-Российский грант ГКН МОН РА

- Надбавка к окладам молодых ученых - назначение ежемесячных надбавок стимулирующего характера к окладам молодых ученых РАУ