Aleksandr Hayrapetyan

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in **LinkedIn:** https://shorturl.at/eluL1

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WORK EXPERIENCE

Junior Researcher
Yerevan State University [10/2022 – Current]

Address: Alek Manukyan 1, 0001 Yerevan (Armenia)
Website: https://photonicsai.com/
Name of unit or department: Faculty of Physics, PhotonicsAI Lab - **Business or sector:** Professional, scientific and technical activities

I am doing research which is related to laser physics, non-linear physics, and machine learning.

Adjunct Lecturer
American University of Armenia [08/2023 – Current]

City: Yerevan
Country: Armenia
Website: https://aua.am/
Name of unit or department: Zaven & Sonia Akian College of Science and Engineering - **Business or sector:** Education

- *Database Systems / Database & Distributed Systems*

Adjunct Instructor
Yerevan State University [08/2022 – Current]

City: Yerevan
Country: Armenia

- *Machine Learning in Physics and Modern Technology*
- *Use of Neural Networks in Optics*

Teaching Associate (TA)
American University of Armenia [09/2021 – 08/2023]

Address: 40 Marshal Baghramyan Ave., 0019 Yerevan (Armenia)
Website: https://aua.am/
Name of unit or department: Zaven & Sonia Akian College of Science and Engineering - **Business or sector:** Education

- *Theory of Computing*
- *Databases & Distributed Systems*
- *Quantum Computing*

- *Data Structures and Algorithms in Data Science*
- *Mechanics*

Dataset Specialist
Krisp LLC [02/2022 – 09/2022]

City: Yerevan
Country: Armenia

Junior Researcher
IAPP NAS RA: Institute of Applied Problems of Physics NAS RA [12/2019 – 03/2022]

Address: 25, Hr. Nersessian Street, 0014 Yerevan (Armenia)
Name of unit or department: Plasma physics laboratory - **Business or sector:** Professional, scientific and technical activities

EDUCATION AND TRAINING

Ph.D student in Laser physics
Yerevan State University [09/2021 – Current]

Address: Alek Manukyan 1, 0001 Yerevan (Armenia)
Website: http://www.ysu.am/main/
Field(s) of study: Laser physics

MS in Computer and Information Science (MSCIS)
American University of Armenia [20/01/2020 – 06/2022]

Address: 40 Marshal Baghramyan Ave., 0019 Yerevan (Armenia)
Website: https://aua.am/
Field(s) of study: Computer and Information Science

MS in Physics
Yerevan State University [01/09/2019 – 15/06/2021]

Address: 1 Alex Manukyan, 0025 Yerevan (Armenia)
Website: http://www.ysu.am/main/
Field(s) of study: Physics
Final grade: 19.93
Thesis: CHARACTERIZATION AND STEERING OF LASER BEAM PARAMETERS BY LIQUID CRYSTALLINE WAVEPLATES

BA in Physics
Yerevan State University [09/2015 – 07/2019]

Address: 1 Alek Manukyan St., 0025 Yerevan (Armenia)
Website: http://www.ysu.am/main/en
Field(s) of study: Physics

Topic of BA Thesis: "Polarization Phase Grating"

Dental technician qualification
Yerevan State Base Medical College [09/2012 – 07/2015]

Address: 10 Koryun St., 0009 Yerevan (Armenia)
Field(s) of study: Health

Atendee
TUMO Center for Creative Technologies [03/2012 – 07/2019]

Address: 16 Halabyan St., 0038 Yerevan (Armenia)
Website: https://tumo.org/

LANGUAGE SKILLS

Mother tongue(s): **Armenian**

Other language(s):

English	**Russian**
LISTENING C1 **READING** C1 **WRITING** C1	**LISTENING** C2 **READING** C2 **WRITING** C1
SPOKEN PRODUCTION C1 **SPOKEN INTERACTION** C1	**SPOKEN PRODUCTION** C2 **SPOKEN INTERACTION** C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Programming Languages
Java / Python / Javascript / R

Operating Systems
Linux (Ubuntu, CentOS) / Windows OS (Windows 7,Windows 8,Windows 8.1,Windows 10)

Machine Learning Tools
Machine Learning Algorithms / Machine Learning Libraries / Deep Learning Libraries (PyTorch, Keras)

SQL and NoSQL
PostgreSQL / Oracle SQL / Apache Cassandra / Mongodb / Mongoose

Version Control Tools and Cloud-Based Hosting Services
Git / GitHub

PUBLICATIONS

Publications

Publication Name: Inverse Brillouin Function and Demonstration of Its Application

Literature Source, place of publication, year, number: European Journal of Formal Sciences and Engineering, Rotenberg, Germany, September-December 2018 Volume 1, Issue 3

Number of Pages: 5

Web Site: http://journals.euser.org/index.php/ejef/article/view/4437

Publications

Publication Name: Optical solitons and Demonstration of Its Application

Literature Source, place of publication, year, number: Conference paper of ICSTR Prague – International Conference on Science & Technology Research, Czech Republic, Prague, 2019

Number of Pages: 11

Publications

Publication Name: Achromatic Cycloidal Diffraction Gratings

Authors:

- A. A. Hayrapetyan
- R. A. Aramyan
- M. R. Hakobyan
- R. S. Hakobyan

Literature Source, place of publication, year, number: Journal of Contemporary Physics (Armenian Academy of Sciences), 54(3), 262-266

Link: https://link.springer.com/article/10.3103/S1068337219030058

Publications

Publication Name : THE ROUSE MODEL OF VISCOELASTICITY AND DIFFUSION BEHAVIOR OF CHROMATIN

Authors:

- V. A. STEPANYAN,
- A. A. HAYRAPETYAN
- E. SH. MAMASAKHLISOV

Journal Name: «Journal of Contemporary Physics», vol. 55, No. 3, p.p. 254-258 (2020)

The article has already passed the review process and will be published in the third issue of the journal for 2020.

Link: https://link.springer.com/article/10.3103/S1068337220030123

NETWORKS AND MEMBERSHIPS

YSU SPIE Student Chapter Membership Certificate

Member from 2016 until 2020

Web Site: https://spie.org/?SSO=1

Yerevan State University & NAS Armenia OSA Student Chapter Membership Certificate

Member from 2018 until 2019

Web Site: https://www.osa.org/en-us/home/

CONFERENCES AND SEMINARS

11th International Conference on the Analysis of Images, Social Networks, and Texts (AIST 2023)
[American University of Armenia, 28/09/2023 – 30/09/2023]

International Conference Laser Physics 2023
[The Institute for Physical Research (IPR), 12/09/2023 – 15/09/2023]

Summer School at PhotonicsAI Lab
[Yerevan State University, 26/06/2023 – 08/07/2023]
Link: https://photonicsai.com/summer-school-at-photonicsai-2023/

PyData Yerevan 2022
[American University of Armenia, 12/08/2022 – 13/08/2022]
Link: https://pydata.org/yerevan2022/

International School on Modern Applications of Optics & Photonics (MAOP)
[Yerevan State University (YSU) / Russian-Armenian University (RAU), 29/08/2022 – 03/09/2022]

AI Conf Armenia 2022
[Yerevan State University, 25/06/2022]

IONS (International OSA Network of Students) Yerevan 2018
[Yerevan State University, 31/08/2018 – 02/09/2018]

FOP - Frontiers in Optics & Photonics 2017
[Yerevan State University, 19/09/2017 – 25/09/2017]

HONOURS AND AWARDS

Yerevan State University 100 Anniversary Bronze Medal

Yerevan State University [04/10/2019]

In the 2020 "Best Student" Republican Competition for the 1st place in the "Natural Science" field with a master's degree program

The Ministry of Education, Science, Culture and Sports of The Republic of Armenia [17/02/2021]

Norayr Kocharyan Award, First Dean of the Faculty of Physics of Yerevan State University

Yerevan State University [15/06/2021]

TRAININGS

"Systems Engineering" training course organized by RAFA Solutions

Web Site: https://rafasolutions.com/

Web Programming Training Course in AITC

Web Site: http://www.armindia.am/

JAVA Programming Training Course In AITC

Web Site: http://www.armindia.am/eng/home/

Linux OS Training Course in AITC

Web Site: http://www.armindia.am/eng/home/

Empowering Science: Python for Data Science in AITC

Web Site: http://www.armindia.am/eng/home/