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Research Institute of Physics
Ռադիոֆիզիկայի և հեռահաղորդակցության կենտրոն
Group Leader

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Group Leader

Education

Institution	Yerevan State University
Faculty	Radiophysics
Date	2018 - 2021
Degree name	PhD student

Institution	Yerevan State University
Faculty	Radiophysics
Date	2016 - 2018
Degree name	Masters

Institution	Yerevan State University
Faculty	Radiophysics
Date	2012 - 2016
Degree name	Bachelor

Scientific Rank/degree

Institution	Yerevan State University
Date	2021
Degree name	Candidate
Scientific Supervisor	Khachatur Nerkararyan
Research Topic	Modulation and absorption of the infrared radiation in micro and nanostructures with cylindrical symmetry

Language skills

Հայերեն English Русский

Work experience

Institution	Yerevan State University
Period of time	2025 till now
Rank/degree	Head of Working Group of Nano Optics and Modelling

Institution	Yerevan State University
Period of time	2021 till now
Rank/degree	Professor Assistant

Membership

Institution	Optica (formerly Optical Society of America)
Period of time	2018 till now

Publications

Article

Efficient conversion of the ultrashort THz pulse into a narrowband oscillation
Henrik Parsamyan, Davit Manukyan, Khachik Sahakyan, Torgom Yezekyan, Khachatur Nerkararyan

Journal of Physics D Applied Physics 2026 015110

https://iopscience.iop.org/article/10.1088/1361-6463/ae2928

Article

Nanometer-scale confinement of whispering gallery plasmonic modes upon slit excitation
Henrik Parsamyan, Roza Gabrielyan, Gurgen Arabajyan, Hovhannes Haroyan, Khachatur Nerkararyan

Nanoscale Advances 2026 1314 - 1321

https://pubs.rsc.org/en/content/articlelanding/2026/na/d5na00985e

Article

Resonant conversion of THz waves with orthogonal polarization upon transmission through a woven mesh
Tigran Abrahamyan, Henrik Parsamyan, Davit Manukyan, Khachatur Nerkararyan

Applied Optics 2025 123-128

Article

Resonant enhancement and confinement of microwave field in coupled conductive rod systems
Tigran Abrahamyan, Gor Ohanyan, David Hambaryan, Artyom Movsisyan, Henrik Parsamyan,

Hovhannes Haroyan, Arsen Babajanyan, Khachatur Nerkararyan

Physica Scripta 2025 025515

Article

Slotted gap-surface plasmon resonator as an efficient platform for sensing
Roza Gabrielyan, Gurgen Arabajyan, Torgom Yezekyan, Henrik Parsamyan

Optics Express 2025 2593-2603

Article

L-cysteine polymorph coatings for THz sensing metasurfaces
M. Zhezhu, A. Vasil'ev, H. Parsamyan, T. Abrahamyan, G. Baghdasaryan, S. Gyozalyan, D. Ghazaryan,

H. Gharagulyan

Results in Physics 2025 108351

Article

Revisiting THz absorption in GO and rGO liquid crystalline films
A. Vasil’ev, M. Zhezhu, H. Parsamyan, G. Baghdasaryan, M. Sargsyan, D.A. Ghazaryan, H. Gharagulyan

Optics & Laser Technology 2025 113628

Article

Investigation of the Mode Composition of a Terahertz Pulse in a Nonlinear Crystal Partially Filling a Waveguide with Parallel Plates [Исследование модового состава терагерцового импульса в нелинейном кристалле, частично заполняющем волновод с параллель...
A. S. Nikoghosyan, G. A. Parsamyan, A. A. Poghosyan, V. R. Tadevosyan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2025 354-360

https://link.springer.com/article/10.1134/S1068337225700690

Conference

TERAHERTZ RESPONCE OF GRAPHENE-LIKE STRUCTURES
L. Avanesyan, A. Vasil'ev, M. Zhezhu, H. Parsamyan, G. Baghdasaryan, M. Sargsyan, D. A. Ghazaryan,

H. Gharagulyan

2025 24 - 24

https://crgconferences.com/functionalmaterials/

Conference

Resonances Induced by Structural Asymmetry in the THz Domain and Their Applications
Sara Gyozalyan, Marina Zhezhu, Alexey Vasil'ev, Henrik Parsamyan, Tigran Abrahamyan,

Gayane Baghdasaryan, Davit A. Ghazaryan, Hermine Gharagulyan

2025 85-86

https://indico.cern.ch/event/1548886/

Conference

Terahertz Response of Liquid Crystalline GO and rGO Thin Films
Lilit Avanesyan, Alexey Vasil'ev, Marina Zhezhu, Henrik Parsamyan, Gayane Baghdasaryan,

Maksim Sargsyan, Davit A. Ghazaryan, Hermine Gharagulyan

2025 43-44

https://indico.cern.ch/event/1548886/

Conference

Realizing multiple bound states in the continuum in optical and THz metasurfaces
T. Abrahamyan, H. Parsamyan, D. Hambaryan, Kh. Nerkararyan

2025 1

https://premc.org/conferences/nanop-nanophotonics-micro-nano-optics/submission/...

Article

Dielectric coated conductive rod resonantly coupled with a cut transmission line as a tunable microwave bandstop filter and sensor
David Hambaryan, Tigran Abrahamyan, Henrik Parsamyan, Artyom Movsisyan, Bill Minasyan,

Hovhannes Haroyan, Arsen Babajanyan, Kiejin Lee, Barry Friedman, Khachatur Nerkararyan

Heliyon 2024 e24477

Article

Gap-enhanced optical bistability in plasmonic core-nonlinear shell dimers
Artyom Movsisyan, Henrik Parsamyan

Nanoscale 2024 2030-2038

Article

Laser polarization as a critical factor in the SERS-based molecular sensing performance of nano-gapped Au nanowires
Simón Roa, Terunori Kaihara, María Laura Pedano, Henrik Parsamyan, Paolo Vavassori

Nanoscale 2024 15280 - 15297

Article

Broadband THz metasurface bandpass filter/antireflection coating based on metalized Si cylindrical rings
Karen Simonyan, Hermine Gharagulyan, Henrik Parsamyan, Ashot Khachatryan, Mkrtich Yeranosyan

Semiconductor Science and Technology 2024 095012

Article

High dispersion and bistability of the light transmission through a bilayer metasurface with resonant plasmonic elements
Davit Manukyan, Henrik A. Parsamyan, Khachatur Nerkararyan

Applied Surface Science 2024 161105

Article

Highly dispersive transmission conditions for a conductive rods-based ultrathin bilayer metastructure
Tigran Abrahamyan, Gor Ohanyan, David Hambaryan, David Kalantar, Henrik Parsamyan,

Hovhannes Haroyan, Arsen Babajanyan, Kiejin Lee, Khachatur Nerkararyan

Journal of Physics D Applied Physics 2024 355108

Conference

Engineering Electromagnetic Hotspots in Gap-Surface Plasmon Resonators
Henrik Parsamyan, Roza Gabrielyan, Gurgen Arabajyan, Torgom Yezekyan

2024 72 - 73

https://indico.cern.ch/event/1400449/overview

Article

Tunable ultra-broadband terahertz metamaterial absorber based on vanadium dioxide strips
Lilit Gevorgyan, Hovhannes Haroyan, Henrik Parsamyan, Khachatur Nerkararyan

RSC Advances 2023 11948-11958

Article

Dark-probe scanning near-field microscopy
Henrik Parsamyan, Torgom Yezekyan, Khachatur Nerkararyan, Sergey I Bozhevolnyi

New Journal of Physics 2023 103015

Conference

Filtering of terahertz radiation by a metasurface structure
Simonyan Karen, Parsamyan Henrik, Gharagalyan Hermine, Khachatryan Ashot, Yeranosyan Mkrtich

2023 48 - 48

http://www.docriga.lv/doc/history

Conference

Dielectric-Coated Conductive Rod Resonantly Coupled with a Cut Goubau Line as a Sensitive Microwave Sensor
Tigran Abrahamyan, Hovhannes Haroyan, David Hambaryan, Artyom Movsisy, Henrik Parsamyan,

Arsen Babajanyan, Khachatur Nerkararyan, Kiejin Lee

2023 1

https://atpi.eventsair.com/space-microwave-week-2023/

Study manual

Գիտափորձի ավտոմատացում LabVIEW միջավայրում
Տիգրան Աբրահամյան, Հենրիկ Պարսամյան

2023 93

Article

3D visualization of microwave electric and magnetic fields by using a metasurface-based indicator
Zhirayr Baghdasaryan, Arsen Babajanyan, Henrik Parsamyan, Barry Friedman, Seungwan Kim,

Jung-Ha Lee, Kiejin Lee

Scientific Reports 2022 6150

Article

Broadband tunable mid-infrared absorber based on conductive strip-like meta-atom elements
Henrik Parsamyan, Hovhannes Haroyan, Khachatur Nerkararyan

Materials Today Communications 2022 103692

Article

Analysis of bistability at the coupling between waveguide and whispering gallery modes of a nonlinear hemicylinder
Henrik Parsamyan, Khachik Sahakyan, Khachatur Nerkararyan

Journal of Physics D Applied Physics 2022 165102

Article

3D Visualization Method Based on Metastructure Optical Indicator of Thermoelastic Polarization Microscope for Electromagnetic Fields in Microwave and THz Ranges
A. Babajanyan, Zh. Baghdasaryan, H. Parsamyan, B. Friedman, K. Lee

NanoWorld Journal 2022 S4

Article

Resonant Interaction Between Microwaves and Thin Conducting Microstructure with Finite Length
T. Abrahamyan, H. Haroyan, D. Hambaryan, H. Parsamyan, K. Lee, A. Babajanyan, Kh. Nerkararyan

NanoWorld Journal 2022 S5

Article

Surface-standing-wave formation via resonance interaction of a finite-length conductive rod

with microwaves
Tigran Abrahamyan, Hovhannes Haroyan, David Hambaryan, Henrik Parsamyan, Arsen Babajanyan, Kiejin Lee, Barry Friedman, Khachatur Nerkararyan

Journal of Physics D Applied Physics 2022 445001

Article

Broadband Absorption of Microwaves in Periodic Cylindrical Structures
Lilit Gevorgyan, Henrik A. Parsamyan, Hovhannes Haroyan

Springer Proceedings in Physics (Optics and Its Applications) 2022 39–46

Article

Broadband Infrared Absorption Due to Low Q-factor Dipole Modes of Cr Strips
H. A. Parsamyan, D. S. Hambaryan, H. S. Haroyan

Springer Proceedings in Physics (Optics and Its Applications) 2022 59–68

Article

GRAPHITE-INSULATOR-METAL BASED METAMATERIAL ABSORBER AT X-BAND
D. Hambaryan, L. Gevorgyan, H. Parsamyan, A. Yesayan, H. Haroyan, Kh. Nerkararyan

IEEE Xplore 2022 15-17

Conference

Resonant interaction between microwaves and thin conducting microstructure with finite length
T. Abrahamyan, H. Haroyan, D. Hambaryan, H. Parsamyan, A. Babajanyan, Kh. Nerkararyan, K. Lee

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https://materialsconference.yuktan.com/

Article

Light control in a hemicylindrical whispering gallery microcavity-parallel plate waveguide system
Hovhannes Haroyan, Henrik Parsamayn, Khachatur Nerkararyan

Optics Communications 2020 126122(1-5)

Article

Near-perfect broadband infrared metamaterial absorber utilizing nickel
Henrik Parsamyan
Applied Optics 2020 7504-7509

Article

Broadband microwave absorption based on the configuration resonance of wires
Henrik Parsamyan, Hovhannes Haroyan, Khachatur Nerkararyan

Applied Physics A 2020 773

Article

Efficient broadband infrared absorbers based on core-shell nanostructures
Khachatur V. Nerkararyan, Sergey I. Bozhevolnyi, Henrik A. Parsamyan

Journal of the Optical Society of America B 2019 2643-2649
