

# Yuri Hovhannesi Avetisyan

✉ yuriav@ysu.am



## Institute of Physics

Chair of Radiophysics and Telecommunications

Professor

## Education

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| <b>Institution</b> | Yerevan State University             |
| <b>Faculty</b>     | Physics/Radiophysics and electronics |
| <b>Date</b>        | 1966 - 1972                          |
| <b>Degree name</b> | Qualified specialist                 |

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## Scientific Rank/degree

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| <b>Institution</b> | Yerevan State University      |
| <b>Date</b>        | 2009                          |
| <b>Degree name</b> | Professor                     |
| <b>Specialty</b>   | Physico-mathematical sciences |

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| <b>Institution</b>    | Yerevan State University   |
| <b>Date</b>           | 2006   |
| <b>Degree name</b>    | Doctor   |
| <b>Specialty</b>      | Physico-mathematical sciences  |
| <b>Research Topic</b> | Terahertz wave generation in nonlinear optical materials with periodical structure |

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| <b>Institution</b>           | Institute Radiophysics of NAS Armenia   |
| <b>Date</b>                  | 1979  |
| <b>Degree name</b>           | Candidate   |
| <b>Specialty</b>             | Physico-mathematical sciences   |
| <b>Scientific Supervisor</b> | Poghosyan P.S.  |
| <b>Research Topic</b>        | Difference Frequency Generation in the Millimeter Range in Nonlinear Crystals |

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## Language skills

Հայերեն Русский English

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## Work experience

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| <b>Institution</b>    | Yerevan State University |
| <b>Period of time</b> | 2010 till now            |

Rank/degree

Professor

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## Scientific interests

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- Terahertz generation in nonlinear crystals
  - Design and investigation power GaN HEMT in microwave
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## Participation in international conferences and seminars

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**28/08/2022 - 02/09/2022** - 47th International Conference on Infrared, Millimeter and Terahertz Waves  
Delf University  
Netherlands (the)

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## Membership

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**Institution** Society of Photo-Optical Instrumentation Engineers  
**Period of time** 2023 - 2023

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**Institution** Optica (formerly Optical Society of America)  
**Period of time** 1999 - 2023

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## Other information

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04:2001 - 03:2002 visiting Professor, Tohoku University, Japan 04:2011 - 09:2011 and 04:2012 - 09:2012  
visiting Professor, Osaka University, Japan

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## Publications

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*Article*

**Narrowband terahertz generation in a plane-parallel Rb:KTP crystal using a phase mask**

Yuri H. Avetisyan, Armen H. Makaryan

Journal of the Optical Society of America B: Optical Physics 2024 873-878

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*Article*

**Generation of THz radiation in a plane-parallel artificial PPLN crystal with a THz diffraction grating in output**

Y. Sahakyan, Yu. Avetisyan, A. Kirakosyan, A. Makaryan, V. Tadevosyan

IET Conference Proceedings 2024 42-44/208333

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*Article*

**Increasing bandwidth of Cherenkov-type terahertz emitters by free carrier generation**

Y. Avetisyan, N. A. Abramovsky, S. B. Bodrov, E. S. Efimenko, M. I. Bakunov

Optics Letters 2023 4921-4924

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Article

**Генерация узкополосного терагерцового импульса в кристалле ниобата лития с помощью фазовой маски**

Ю.О. АВETИСЯН, А.О. МАКАРЯН

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 555-563

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Article

**Narrow-band terahertz pulse generation in lithium niobate crystal using phase mask**

Y. H. Avetisyan, A.H. Makaryan

Journal of Contemporary Physics (Armenian Academy of Sciences) 2023 362–368

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Article

**High-energy multicycle THz pulse generation in artificial PPLN crystal**

Y. H. Avetisyan, A. H. Makaryan, M. I. Bakunov

Proceedings of SPIE - The International Society for Optical Engineering 2023 194067

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Article

**Laterally Emitting Nearly Single-Cycle THz Pulse Generation in Two-Dimensional Aperiodically Poled Lithium Niobate Crystal**

Y. Avetisyan, A. Makaryan, G. Arabajyan, M. Tonouchi

IEEE Xplore 2022 183280

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Article

**Terahertz generation in artificial two-dimensional periodically poled lithium niobate**

Yuri H. Avetisyan

Journal of the Optical Society of America B: Optical Physics 2021 1084 -1089

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Article

**Nearly Single-Cycle Terahertz Pulse Generation in Aperiodically Poled Lithium Niobate**

Yuri Avetisyan, Masayoshi Tonouchi

Photonics 2019 1-8

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Article

**Design of a Multistep Phase Mask for High-Energy Terahertz Pulse Generation by Optical Rectification**

Y. Avetisyan, A. Makaryan, V. Tadevosyan, M. Tonouchi

Journal of Infrared Millimeter and Terahertz Waves 2017 1439–1447

<https://www.springer.com/engineering/electronics/journal/10762>

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Article

**ИССЛЕДОВАНИЕ ПАРАМЕТРОВ ТЕРАГЕРЦОВЫХ ИМПУЛЬСОВ, ГЕНЕРИРУЕМЫХ В ОДНОДОМЕННОМ КРИСТАЛЛЕ LiNbO<sub>3</sub> С ПОМОЩЬЮ СТУПЕНЧАТОЙ ФАЗОВОЙ МАСКИ**

Г.К. АБГАРЯН, Ю.О. АВETИСЯН, А.О. МАКАРЯН, В.Р. ТАТЕВОСЯН

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2016 46-52

<http://www.flib.sci.am/eng/Fizika/Frame.html>

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Conference

**High Efficient Terahertz Generation Using Tilted-Pulse- Front Photoexcitation of**

## **Semiconductor Surface**

Yu. Avetisyan,, A. Makaryan, M. Tonouchi

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*Conference*

### **Terahertz pulses generation via optical rectification in LiNbO3 crystal by step-wise phase mask**

G. Abgaryan, Yu. H. Avetisyan, A. H. Makaryan, V. R. Tadevosyan

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*Conference*

### **Design of a multistep phase mask for high-energy THz pulse generation in ZnTe crystal**

Yuri H. Avetisyan, Armen Makaryan, Vahe Tadevosyan

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*Conference*

### **Noncollinear THz generation by optical rectification in periodically poled lithium niobate crystals**

Y. Avetisyan, R. Miroyan, V. Tadevosyan

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*Conference*

### **Pulse Sequence for Nearly Single-Cycle Terahertz Pulse Generation in Aperiodically Poled Lithium Niobate**

Y. Avetisyan, R. Miroyan, M. Tonouchi

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