

# Aghavni Albert Kutuzyan

## Research Institute of Physics

Laboratory of Ultrafast Optics and Photonics

Head of laboratory

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## Education

|             |                          |
|-------------|--------------------------|
| Institution | Yerevan State University |
| Faculty     | Department of Physics    |
| Date        | 2000 - 2005              |
| Degree name | PhD student              |

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| Institution | Yerevan State University |
| Faculty     | Department of Physics    |
| Date        | 1998 - 2000              |
| Degree name | Masters                  |

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|-------------|--------------------------|
| Institution | Yerevan State University |
| Faculty     | Probate-investigator     |
| Date        | 1996 - 1998              |
| Degree name | Qualified specialist     |

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| Institution | Yerevan State University |
| Faculty     | Department of Physics    |
| Date        | 1991 - 1996              |
| Degree name | Bachelor                 |

## Scientific Rank/degree

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|-----------------------|--------------------------------------------------------------------------------------------|
| Institution           | Yerevan State University                                                                   |
| Date                  | 2005                                                                                       |
| Degree name           | Candidate                                                                                  |
| Specialty             | Physico-mathematical sciences                                                              |
| Scientific Supervisor | Լևոն Մուրադյան                                                                             |
| Research Topic        | Գերկարճ լազերային իմպուլսների սպեկտրալ սեղմման որոշ առանձնահատկությունների վերլուծությունը |

## Language skills

Հայերեն English Русский

## Work experience

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|----------------|------------------------------------------------------------------|
| Institution    | Yerevan State University                                         |
| Period of time | 2018 till now                                                    |
| Rank/degree    | Scientific Director Laboratory of Ultrafast Optics and Photonics |

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| Institution    | Yerevan State University |
| Period of time | 2016 till now            |
| Rank/degree    | Associate Professor      |

## Scientific interests

- Ultrafast optics and laser physics, Nonlinear fiber optics, Optical solitons and similaritons

## Publications

Article

### **Self-referencing similariton-based spectral interferometry for ultrashort pulse complete characterization**

Aram Zeytunyan, Garegin Yesayan, Levon Mouradian, Aghavni Kutuzyan

Optics Communications 2024 130059

Article

### **Generation of a New Type of Similaritons in Optical Fibers [Генерация нового типа симиляритонов в оптических волокнах]**

A. Kutuzyan, V. Avetisyan, M. Sukiasyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 36-40

Article

### **ՄԴԵԿՏՐԱԼ ՓՈՒԼԻ ՇԵՂՈՒՄՆԵՐԻ ԵՎ ԱՂԱՎԱՂՈՒՄՆԵՐԻ ԱԶԴԵՑՈՒԹՅՈՒՆԸ ԳԵՐԿԱՐՃ ԻՄՊՈՒԼՍԻ ՏԵՍԵՐ ԿՐԱ**

Ավետիսյան Աննա, Ավետիսյան Վարդան, Կուտուզյան Աղավնի

Գալառի պետական համալսարանի գիտական հոդվածների ժողովածու 2024 87-97

Article

### **Influence of Noise Distortions of the Spectral Phase on the Profile of an Ultrashort Pulse [Влияние шумовых искажений спектральной фазы на профиль ультракороткого импульса]**

V. Avetisyan, M. Sukiasyan, A. Avetisyan, A. Kirakosyan, A. Kutuzyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024 149-153

Article

### **Self-Formation of Temporal Dark Solitons in a Single-Mode Optical Fiber [Самоформирование временных темных солитонов в одномодовом оптическом волокне]**

A. Kutuzyan, M. Sukiasyan, Ar. Kirakosyan, V. Avetisyan

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2024  
238-243

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*Article*

**Spectral Self-Compression of Chirp-Free Pulses in Anomalous Dispersive Optical Fibers**

Minas Sukiasyan, Vardan Avetisyan, Aghavni Kutuzyan

Photonics 2023 1207

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*Article*

**Formation of a new type of self-similar pulses in optical fibers with anomalous dispersion**

Aghavni Kutuzyan, Vardan Avetisyan, Meri Kalashyan, Minas Sukiasyan

Optics InfoBase Conference Papers (Frontiers in Optics) 2022 185766

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*Article*

**Measurement of the ultrashort pulse spectral phase based on dispersive Fourier transformation**

MINAS SUKIASYAN, NAREK KARAPETYAN, HRACH TONEYAN, AGHAVNI KUTUZYAN, LEVON MOURADIAN

Applied Optics 2019 2817-2822

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*Article*

**Similaritonic Method on Ultrashort Pulse Duration Measurement by Oscilloscope**

M.M. Sukiasyan, N. P. Karapetyan, H.A. Toneyan, A.A. Kutuzyan, L.Kh. Mouradian

Armenian Journal of Physics 2019 107-112

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*Article*

**Soliton-effect Spectral Self-compression for Different Initial Pulses**

Armene Grigoryan, Aghavni Kutuzyan, Garegin Yesayan

Progress in Physics 2018 35-37

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*Article*

**ЧИСЛЕННОЕ ИССЛЕДОВАНИЕ ПРОЦЕССА ФОРМИРОВАНИЯ СПЕКТРОНА: ФАЗОВЫЕ ОСОБЕННОСТИ**

Н. КАРАПЕТЯН, Г. ТОНЕЯН, А. КУТУЗЯН, М. СУКИАСЯН, В. АВЕТИСЯН, Д. ГУЛКАНЯН, К. АПРЕСЯН,  
Л. МУРАДЯН

Известия НАН РА. Физика (Journal of Contemporary Physics (Armenian Academy of Sciences) 2018  
173-180

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*Article*

**Spectral Characteristics of Nonlinear-Dispersive Similariton Generated in Single-Mode Fiber without Gain**

H. Toneyan, K. Manoukyan, M. Sukiasyan, A. Kutuzyan, L. Mouradian

Armenian Journal of Physics 2017 192-198

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*Article*

**Spectral domain soliton-effect self-compression**

A.P. Grigoryan, G.L. Yesayan, A.A. Kutuzyan, L.Kh. Mouradian

Journal of Physics: Conference Series 2016 12015

<http://iopscience.iop.org/journal/1742-6596>

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Conference

**Spectral Peculiarities of Nonlinear-Dispersive Similariton**

Karapet Manukyan, Aghavni Kutuzyan, Levon Mouradian

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Conference

**Solitonic Self-Spectral Compression of Noisy Supercontinuum Radiation**

Hrach Toneyan, Minas Sukiasyan, Levon Mouradian, Aghavni Kutuzyan, Vardan Avetisyan,

Arsham Eremyan

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Conference

**Spectron's phase peculiarities: numerical study**

N.Karapetyan, H.Toneyan, A.Kutuzyan, L.Mouradian

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Conference

**Numerical analysis of spectron phase peculiarities**

Narek Karapetyan et al, Levon Mouradian, Hrach Toneyanan, Aghavni Kutuzyan

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Conference

**Experimental Demonstration of Self-Spectral Compression of Supercontinuum's Fraction by 4.1x**

V. Avetisyan, M. Sukiasyan, H. Toneyan, A. Kutuzyan, A. Yeremyan, L. Mouradian

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Conference

**Solitonic Spectral Self-Compression of Regular and Randomly Modulated Pulses**

M.Sukiasyan, H.Toneyan, A.Kutuzyan, V.Tsakanov, L. Mouradian

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Conference

**Numerical Study of Femtosecond Signal Spectral Self Compression**

Minas Sukiasyan, Aghavni Kutuzyan, Levon Kh. Mouradian, Hrach Toneyan,, Vardan Avetisyan

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Conference

**Phase Regularities of Spectron: Numerical Analysis**

Narek Karapetyan, Aghavni Kutuzyan, Levon Kh. Mouradian, Hrach Toneyan

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Conference

**Similariton Based Technique for Determination of Femtosecond Pulse Duration**

Karapet Manukyan,, Aghavni Kutuzyan, Levon Kh. Mouradian

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Conference

**4.1x Solitonic Self-Spectral Compression of Supercontinuum's Fraction**

Minas Sukiasyan, Vardan Avetisyan, Hrach Toneyan, Aghavni Kutuzyan, Arsham Yeremyan,

Levon Kh. Mouradian

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Conference

**Solitonic Self-Spectral Compression of Supercontinuum Fraction**

Vardan Avetisyan, Minas Sukiasyan, Levon Kh. Mouradian, Arsham Yeremyan, Aghavni Kutuzyan,

Hrach Toneyan

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Conference

## **NUMERICAL STUDY OF FEMTOSECOND SIGNAL SPECTRAL SELF-COMPRESSION**

Minas Sukiasyan, Hrach Toneyan, Vardan Avetisyan, Aghavni Kutuzyan, Levon Kh. Mouradian

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*Conference*

### **SIMILARITON BASED TECHNIQUE FOR DETERMINATION OF FEMTOSECOND PULSE DURATION**

Karapet Manukyan, Hrach Toneyan, Minas Sukiasyan, Aghavni Kutuzyan, Levon Kh. Mouradian

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*Conference*

### **Solitonic Self-Spectral Compression of Noisy Supercontinuum Radiation**

Hrach Toneyan, Minas Sukiasyan, Vardan Avetisyan, Aghavni Kutuzyan, Arsham Yeremyan,

Levon Kh. Mouradian

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*Conference*

### **Spectron and Dispersive Fourier Transformation: Phase Aspect**

N. Karapetyan, M. Sukiasyan, H. Toneyan, A. Kutuzyan, L. Kh. Mouradian

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*Conference*

### **Spectral phase measurement based on spectron shaping**

N. Karapetyan, M. Sukiasyan, H. Toneyan, A. Kutuzyan, L. Mouradian

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*Conference*

### **Determination of the Spectral Phase of Femtosecond Pulses based on Frequency-to-Time mapping**

Minas Sukiasyan, Aghavni Kutuzyan

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*Patent*

### **Լազերային գերկարճ իմպուլսների սպեկտրալ փուլի որոշման եղանակ**

Աղավնի Կուտուզյան, Մինաս Սուքիասյան, Վարդան Ավետիսյան, Մերի Զալաշյան

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*Conference*

### **The influence of spectral phase noise in the laser pulse reconstruction**

Anna Avetisyan, Minas Sukiasyan, Arthur Kirakosyan, Aghavni Kutuzyan

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*Conference*

### **Noise sensitivity in the spectral phase measurement technique based on dispersive Fourier transform**

M. Sukiasyan, A. Avetisyan, A. Kutuzyan

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*Conference*

### **THE INFLUENCE OF SPECTRAL PHASE VARIATIONS AND DISTORTIONS ON THE ULTRASHORT PULSE PROFILE**

AVETISYAN ANNA, KUTUZYAN AGHAVNI, AVETISYAN VARDAN

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