CURRICULUM VITAE

Moskov Amaryan
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EDUCATION

Candidate of Sciences (PhD), in Physics of Atomic Nuclei and Elementary Particles with thesis title "Electroproduction of Cumulative Protons". Yerevan Physics Institute, June 1993. Thesis Advisor: Prof. Kim Egiyan.

High Degree Diploma (comparable to M.S. in Physics), Armenian Pedagogical Institute, Yerevan, Armenia, June 1972.

EXPERIENCE

In June 2010 promoted to the rank of full professor.

In June 2008 awarded tenure by ODU Board of Visitors.

Since August 1, 2004, Associate Professor of Physics, Old Dominion University.

From July 1, 2002 - July 1, 2004, Elected as a Physics Analysis Coordinator of HERMES Collaboration of 32 Universities from 12 Countries, including USA.

January 1, 2001 - August 1, 2004, Foreign Scientist DESY, Hamburg, Germany.

August 1, 1997 - January 1 2001, Primo Ricercatore (Senior Scientist) at Istituto Nazionale di Fisica Nucleare, Sessione di Roma-1, Rome Italy.

January 1, 1997 - August 1, 1997, Visiting Scientist, NIKHEF, Amsterdam, The Netherlands.

January 1, 1994 - January 1997, Senior Scientist at YerPhI and Group Leader of the first Armenian team of physicists at DESY, Hamburg, Germany.

August 1, 1982 - December 31, 1994, Research scientist, YerPhI, Yerevan, Armenia.

November 20, 1974 - July 31, 1982, Junior Research Associate, YerPhI, Yerevan, Armenia.

November 10, 1973 - November 10, 1974, Military Service.

August 1, 1972 until November 1, 1973, Research Assistant, Yerevan Physics Institute (YerPhI), Yerevan, Armenia.

GRANTS AWARDED

Co-PI of INTAS Grant from European Union for 200 K ECU to build internet infrastructure in Yerevan, Armenia, 1994-1995. Renewed for period 1995- 1996 with award of 200 K ECU. Resulted in satellite connection between YerPhi and DESY, Germany providing internet connection also to other non commercial, scientific and educational institutions in Armenia.

G.E. Dodge (PI), P. Ulmer(Co-PI), S.E. Kuhn (Co-PI), C.E. Hyde (Co-PI), L.B. Weinstein (Co-PI), M. Amaryan (Co-PI): Grant "From Quarks to Nuclei". Renewed for a period from March 15, 2005 through March 14, 2008. Grant from the U.S. Department of Energy with a cumulative budget award funding of $1.720,000.00$.

G.E. Dodge (PI), S. Bueltmann(Co-PI), S.E. Kuhn (Co-PI), C.E. Hyde (Co-PI), L.B. Weinstein (Co-PI), M. Amaryan (Co-PI): Grant "From Quarks to Nuclei". Renewed for the period March 15, 2008 through

March 14, 2011. Grant from the U.S. Department of Energy with a cumulative budget award funding of $1.240,000.00$.

C.E. Hyde (PI), G.E. Dodge (Co-PI), S. Bueltmann(Co-PI), S.E. Kuhn (Co-PI), L.B. Weinstein (Co-PI), M. Amaryan (Co-PI): Grant "From Quarks to Nuclei". Renewed for period March 15, 2011 through March 14, 2014. Grant from the U.S. Department of Energy with a cumulative budget award funding of $2,234,000.00$.

C.E. Hyde (Co-PI), G.E. Dodge (Co-PI), S. Bueltmann(PI), S.E. Kuhn (Co-PI), L.B. Weinstein (Co-PI), M. Amaryan (Co-PI): Grant "From Quarks to Nuclei". Renewed for period March 15, 20014 through March 14, 2017. Grant from the U.S. Department of Energy with a cumulative budget award funding of $1,444,000.00$.

C.E. Hyde (Co-PI), G.E. Dodge (Co-PI), S. Bueltmann(PI), S.E. Kuhn (Co-PI), L.B. Weinstein (Co-PI), M. Amaryan (Co-PI): Grant "From Quarks to Nuclei". Renewed for period March 15, 2017 through March 14, 2020. Grant from the U.S. Department of Energy with a cumulative budget award funding of $1,749,000.00$.

C.E. Hyde (Co-PI), S. Bueltmann(PI), S.E. Kuhn (Co-PI), L.B. Weinstein (Co-PI), M. Amaryan (Co-PI): Grant "From Quarks to Nuclei". Renewed for period March 15, 2020 through March 14, 2023. Grant from the U.S. Department of Energy with a cumulative budget award funding of $2,341,000.00$.

National Science Foundation, Collaboration proposal for the major research infrastructure (MRI) (with Catholic University of America and Ohio University) "MRI Consortium: Development of a Neutral Particle Spectrometer for Hall C at 12 GeV JLab", M.Amaryan (Co-Pi) with C.E. Hyde (Co-PI), NSF Funding $100 KSept.1, 2015 - Aug31, 2018, plus$ 42 K ODU Cost Share.

M. Amaryan (Co-PI) , C.E. Hyde (Co-PI), S. Bueltmann(PI), S.E. Kuhn (Co-PI), L.B. Weinstein (Co-PI), S. Stepanyan (Co-PI) Supplemental proposal " Project for the Kaon Beam in HallD " to the main grant "From Quarks to Nuclei" award number DE-FG02-96ER40960, awarded 75 K for the period from July 15, 2022 until March 14, 2023.

Proposal submitted to the US Department of Energy by M. Amaryan (Co-PI) , C.E. Hyde (Co-PI), S. Bueltmann(PI), S.E. Kuhn (Co-PI), L.B. Weinstein (Co-PI), S. Stepanyan (Co-PI) awarded for the amount of 4,051,564.00 for the period of March 16, 2023 to March 15 2026.

Since 2005 at ODU I was a Co-Pi of awards totaling about $14M$.

HONORS, AWARDS AND PRIZES

July 1982 : winner of the award "The Best Young Scientist", Yerevan Physics Institute.

August 1997 - January 2001: Recipient of the fellowship: Distinguished Foreign Scientist, Istituto Nazionale di Fisica Nucleare, Rome, Italy.

January 2001-July 2001 : Recipient of the fellowship: Distinguished Foreign Scientist. NIKHEF, Amsterdam, The Netherlands.

July 2001 July 2004 : Recipient of the fellowship: Distinguished Foreign Scientist. Deutsche Elektronen Synchrotron, Hamburg, Germany.

September 2018, Elected Fellow of American Physical Society.

In 2023 Awarded Old Dominion University Eminent Scholar.

In 2025 ODU College of Sciences Distinguished Research Award.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

APS Member 2004, Fellow of American Physical Society since 2018.

HERMES at DESY, Germany, Collaboration Member.

CLAS at Jefferson Laboratory, Collaboration Member.

CLAS Membership Committee, ODU representative.

GlueX at Jefferson Laboratory, Collaboration Member, ODU representative.
Member of the Collaboration of K-long facility (KLF) at JLab, Elected as a Spokesperson in 2025.

PROFESSIONAL SERVICE

Referee for Physical Review C journal.
Referee for European Physics Journal A.
Referee for proposals from Deutsche Forschungsgemeinschaft.

UNIVERSITY SERVICE

• Member of the Undergraduate Committee.
• Member of the Teaching Portfolio Review Committee.
• Member of the Graduate Admission Committee.
• Chair of Strategic Planning of Physics Department Committee in 2018-2019.
• Member of the Faculty Search Committee in 2005.
• From the Fall of 2005 until Fall of 2019 member of the Graduate Committee.
• Since the Fall of 2006 Member of the Physics Department Safety Committee.
• Chair of the Faculty Search Committee in 2007.
• Since the Fall of 2008 until Fall of 2019 Chair of the Graduate Qualifying Examination Committee.
• In 2007 initiated and organized the signing of the International Memorandum of Understanding between Salahaddin University in Erbil city of Kurdish region in Iraq and ODU for students and faculty exchange program.
• Since 2004 devoted one hour per week advising students in the Physics Department Learning Center.
• In 2006, supervised senior theses of undergraduate student Benjamin Tokarz and in 2019 of undergraduate student Dakota Chrstian.
• Served in the Ph.D. committees of the following graduate students: Serkan Golge, Giovanni Chirilli, Mustafa Canan, Christian Schultz, Hashir Rashad, Ishwari Prasad Parajuli, Sunil Pokharel.
• Ph.D. Thesis advisor of graduate students:
– Heghine Seraydaryan (Ph.D. in 2011)
– Michael Kunkel (Ph.D. in 2014)
– Georgie Mbianda (PhD in 2017)
– Co-advisor of Sudeep Ghosh (PhD in 2019 in Indore Institute of Technology, India)
– Nilanga Wickramaarachchi (PhD in 2020)
– Torri Roark (PhD in 2020)
– Tyler Viducic (PhD in 2024)
-Supervisor of graduate student Daniel Barton.
-Supervisor of graduate student Sashi Nepal.

TEACHING

• Physics 723/823. Introduction to Nuclear and Particle Physics. Fall 2004, Fall 2005, Fall 2006, Fall 2007, Fall 2008, Fall 2010, Fall 2011, Fall 2012, Fall 2016, Spring 2017
• Physics 454/554. Thermal Physics. Spring 2005, Spring 2006, Spring 2007, Spring 2008, Spring 2010, Spring 2020, Summer 2020.
• Physics 112N. Introduction to General Physics. Summer 2005, Summer 2006, Summer 2007, Summer 2008, Fall 2009, Summer 2009, Summer 2010, Summer 2011, Summer 2012, Spring 2013, Summer 2013, Fall 2014, Fall 2015, Spring 2016.

• Physics 111N. Introduction to General Physics. Summer 2015, Summer 2017, Summer 2018, Summer 2019, Spring 2020, Summer 2020, Spring 2021, Summer 2021, Spring 2022, Summer 2022.

• Physics 313. Elements of Astrophysics. Spring 2009, Spring 2011, Spring 2012, Spring 2018, Spring 2019.

• Physics 415. Introduction to Nuclear Physics. Spring 2011.

• Physics 319. Classical Mechanics. Spring 2015.

• Physics 707/807 Statistical Mechanics. Fall 2017, Fall 2018, Fall 2019.

• Physics 232. University Physics II. Fall 2022, Spring 2023, Summer 2023, Fall 2023, Spring 2024, Fall 2024, Spring 2025, Fall 2025.

Talks on Conferences and Workshops

• N* physics and nonperturbative quantum chromodynamics. Proceedings of the Joint ECT*/JLab Workshop, Trento, Italy, May 18-29, 1998. "Strangeness and Charm Production with HERMES". Invited talk.

• International Workshop on Deep Inelastic Scattering and QCD (DIS99), Zeuthen, Germany,

April 1999. "Spin asymmetries in photoproduction of high-pt hadron pairs". Published in Nucl. Phys. Proc. Suppl. 79: 535-537, 1999.

• International Workshop on the Structure of the Nucleon (Nucleon 99), Frascati, Italy, 7-9 Jun 1999. "Double spin asymmetry in photoproduction of high-pt hadron pairs" Published in Nucl.Phys. A666:304-309, 2000.

• 14th International Spin Physics Symposium (SPIN 2000), Osaka, Japan, 16-21 Oct 2000. "Deeply virtual Compton scattering at HERMES". Published in AIP Conf. Proc. June 1, 2001, Volume 570, pp. 428-432. Invited talk.

• ECT* Conference on the Spin Structure of the Proton, Trento, Italy, 23-28 Jul 2001. "DVCS and exclusive meson production at HERMES". Published in Nucl.Phys.Proc.Suppl.105:104,2002. Invited talk.

• 10th Workshop on High-Energy Spin Physics: NATO Advanced Research Workshop, Nor Amberd, Armenia, June 30-July 3, 2002. " Electroproduction of real photons via DVCS at HERMES.". Published in Nor-Amberd 2002, Spin structure of the nucleon,pp. 85-94. Invited talk.

• International Workshop on Deep Inelastic Scattering and QCD (DIS03) April2003. St.Petersburg, Russia. "Exclusive reactions at Hermes". Invited talk. • Talks since 2005:

– APS Meeting, April 2005, Tampa, FL, USA. "Pentaquarks: Challenges and Pitfalls" Invited talk. – H. Seraydaryan, M. Amarian, G.Gavalian for the CLAS Collaboration, "(1020) Photo-production in Neutral Decay Channel p $\rightarrow$ p $\rightarrow$ pKSKL ". DNP annual meeting, October 23-26, 2008, Oakland, California.

– G. Gavalian, M. Amarian, C. Nepali for the CLAS Collaboration," $\Sigma^{+}(1385)$ photoproduction on proton". DNP annual meeting, October 23-26, 2008, Oakland, California.

– C. Nepali, M. Amarian, G. Gavalian for the CLAS Collaboration," Photoproduction of $\Lambda(1520)$ and interference effect in particle production". DNP annual meeting, October 23-26, 2008, Oakland, California.

– M. Kunkel, M. Amaryan, M. Paolone and D. Weigand for the CLAS Collaboration, "Dalitz Decay of Pseudo-Scalar Mesons". HADRON2011, International Conference, June 13-17, Munich, Germany, (received Best Poster" Award).

– M. Amaryan, PrimeNetWorkshop, "Decay of Pseudoscalar Mesons in CLAS". September 26-29, Juelich, Germany.

– M. Amaryan, "Photoproduction and Decay of Light Mesons in CLAS". Light Meson Decay Workshop, Newport News, August 5, 2012.

– M. Amaryan, "Decay of Light Mesons in CLAS". Chiral Dynamics 2012, Newport News, August 6-12.

– M. Amaryan, "Light Meson Decay in CLAS". Future Directions in Spectroscopy, JLAB, Newport News, November 20, 2014. Invited talk.

– M. Amaryan, "Meson Spectroscopy with CLAS6". The International Workshop on PWA for Hadron Spectroscopy, Ashburn, VA, April 14, 2015.

– M. Amaryan, editor of Mini-Proceedings of Workshop on Physics with Neutral Kaon Beam at JLab (KL2016)", Newport News, VA, USA, February 1-3, 2016, arXiv:1604.02141 [hep-ph].

– M. Amaryan, "The KL Facility at JLab". APS Meeting, Washington DC, January 28-31, 2017.

– M. Amaryan, editor of Mini-Proceedings of Workshop on Excited Hyperons in QCD Thermodynamics at Freeze-Out (YSTAR2016). Newport News, VA, USA, November 16-17, 2016, arXiv:1701.0734 [hep-ph].

– M. Amaryan, "The KL Facility at JLab and K Interactions" , K Interactions Workshop (PIK2018). Newport News, VA, USA, February 14-15, 2018.

– APS Meeting, April 2019, Denver, Colorado, USA. "Hadron Spectroscopy with secondary KL beam at GlueX". Invited talk.

– GlueX-Panda Workshop, May 2019, Washington DC, USA. "Hadron Spectroscopy with secondary KL beam at GlueX". Invited talk.

– MIAPP Workshop, October 2019, Munich, Germany. Physics opportunities with KL beam at JLab. Invited talk.

– "Hadron Spectroscopy with Secondary KL Beam in Hall D". Jefferson Lab User Group Meeting. Invited talk. June 23, 202.

–Strong2020 Workshop, September 2022, Munich, Germany. "KL Facility at JLab". Invited talk.

– Intersection of nuclear structure and high-energy nuclear collisions INT, Seattle, February 6-10, 2023. "KLF at JLab". Invited talk.

–International workshop on CLAS12 physics and future perspectives at JLab. "K-long Facility in Hall D". Invited talk. Paris, France, 21-24 March, 2023.

-International Conference NSTAR2024 "K-long Facility at JLab for the strange hadron spectroscopy", York, UK, June 17-21, 2024.

International Conference Hadron 2025. "K-long Facility at JLab", Osaka, Japan, March 30-April 1st.

Current Research Program

I am involved in experimental programs in Hall B and Hall D. Currently my main focus is on a research program of hadron spectroscopy in the GlueX experiment in Hall D at JLab. It includes studies related to the photoproduction of K^* and ϕ mesons.

Besides these I work on the realization of different components of the K-long Facilty (KLF) in Hall D for a strange hadron spectroscopy. In August 2023 Experimental Readiness Review at JLab approved our ongoing developments to modify Hall D beamline and prepare for KLF experiment. According to Hall D schedule the installation of necessary components will be done by 2027 and experiment will start running in 2029. The proposal for KLF (where I acted as a co-spokesperson) has been approved by PAC48 at JLab to run for 200 days of the beamtime and will occupy Hall D for a few years. My research in Hall D is conducted with the graduate students Daniel Barton and Sashi Nepal and postdoctoral associate Vitaly Baturin, who is supported by 50

Selected Papers by Moskov Amaryan

• M. C. Kunkel et al. [CLAS], "Exclusive photoproduction of π^0 up to large values of Mandelstam variables s, t and u with CLAS," Phys. Rev. C 98, no.1, 015207 (2018) doi:10.1103/PhysRevC.98.015207. [arXiv:1712.10314 [hep-ex]].

• H. Seraydaryan et al. [CLAS], "-meson photoproduction on Hydrogen in the neutral decay mode," Phys. Rev. C 89, no.5, 055206 (2014) doi:10.1103/PhysRevC.89.055206 [arXiv:1308.1363 [hep-ex]].

• A. Airapetian et al. [HERMES], "Measurement of azimuthal asymmetries associated with deeply virtual Compton scattering on an unpolarized deuterium target," Nucl. Phys. B 829, 1-27 (2010) doi:10.1016/

j.nuclphysb.2009.12.004 [arXiv:0911.0095 [hep-ex]].

• A. Airapetian et al. [HERMES], "Measurement of the spin asymmetry in the photoproduction of pairs of high p(T) hadrons at HERMES," Phys. Rev. Lett. 84, 2584-2588 (2000) doi:10.1103/PhysRevLett.84.2584 [arXiv:hep-ex/9907020 [hep-ex]].

The full list of 275 papers cited 18000 times with h-index=75 in high energy physics database as of today can be found here:

https://inspirehep.net/literature?sort=mostrecentsize=25page=1q=fin