

10. Personnel

Alexander Abashian

Director

Emeritus Professor

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Education

1952: B.S. in Physics, Purdue University.

1957: Ph.D. in Physics, Johns Hopkins University.

Experience

1952-1955: Junior Instructor, John Hopkins University.

1955-1957: Research Assistant, Brookhaven National Laboratory.

1957-1959: Instructor, University of Rochester.

1959-1961: Staff Associate, Lawrence Berkeley Laboratory.

1961: Lecturer, University of Carolina at Berkeley.

1961-1964: Assistant Professor, University of Illinois.

1964-1966: Assistant Professor of Physics, University of Illinois.

1966-1972: Professor of Physics, University of Illinois.

1970-1971: Staff Administrator, Atomic Energy Commission.

1972-1980: Program Director, National Science Foundation.

1978: Visiting Professor, CERN

1978-1979: Guest Professor, University of Hamburg.

1980-1982: Physics Department Head, VPI & SU

1982- Professor of Physics, VPI & SU

1986-1987: Visiting Staff Physicist, KEK

1987-1990: Director, Institute for High Energy Physics, VPI & SU

1997- Emeritus Professor of Physics, VPI & SU

2000- Director, Center for the Advancement of Natural Discoveries using Light Emission (CANDLE)

Professional Organizations

Fellow American Physical Society

Member Division of Particles and Fields, APS

Fellow American Association for the Advancement of Science

Committees, Boards

1966-1969: ZGS Program Committee, Argonne National Laboratory

1971-1972: Trustee, Argonne National Laboratory Users Association

1974: HEP Future Facilities Panel, Woods Hole (ex officio)

1975: HEP Future Facilities Panel, Woods Hole (ex officio)

1977: ZGS Shutdown Committee, Argonne National Laboratory (ex officio)

1980: HEP Woods Hole Panel (ex officio)

1972-1980: DOE High Energy Physics Advisory Panel (ex officio)

Personnel

- 1980-1984:** SURA Board of Trustees
- 1982:** Technical Advisory Committee for University Pgms, DOE
- 1982-1983:** Chairman, 1983 DPF Annual Meeting
- 1989-1990:** Member, Organizing Committee for 1990 Physics in Collision
- 1989-1990:** Member, Organizing Committee for 1990 SE Conference on SSC
- 1997-1999:** Member, Universities Research Association Board of Overseers

Research Interests

- Properties of electroweak interactions
- Tests of symmetry principles
- Searches for new particles
- Detector development
- Accelerator facilities development

Conferences attended

Over 40 international conferences in high energy physics and related fields attended.

Invited Papers

- 1961:** Anomaly in $p+d \rightarrow {}^3\text{H}+X$, American Physical Society
- 1965:** Search for CP Violation, American Physical Society
- 1961:** Measurement of the Cross Section for νe Scattering, American Physical Society
- 1987:** Results from the AMY Experiment at TRISTAN
- 1988:** Searches for New Particles

Awards

- 1948-1952:** Special Merit Scholarship, Purdue University
- 1978:** Outstanding Performance and Special Achievement Award, NSF
- 1980:** Superior Accomplishment Award, NSF

Publications

Over 150 publications on high energy physics and particle instrumentation.

Vasili M. Tsakanov

Technical Director

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- 1959:** Born in Kirovabad, Azerbaijan. Nationality: Armenian.
- 1981:** Graduated from the Phys-math. Faculty of Rostov-Don State University, Rostov, Russia.
- 1981-1986:** Laboratory of High Energy Particle Beam Optics, Yerevan Physics Institute (YerPhI), Yerevan, Armenia. Design study of 1.8 GeV Dedicated Storage Ring for Synchrotron Radiation.
- 1986:** Laboratory for Linear Accelerators and New Acceleration Methods, YerPhI.
Wake fields and wake field acceleration. Design study of the 6 GeV electron stretcher ring.
- 1990:** Candidate of science (Ph.D.) thesis: “Wake Fields Generation in Accelerating Structures by Ultrarelativistic Electron Bunches”, supervised by Prof. E. Laziev (YerPhI).
- 1991:** Guest scientist to THD, Darmstadt, Germany. S-Band Linear Collider project.
- 1992:** Guest scientist to DESY, Hamburg, Germany. Participation in LC development. Survey talk on “New acceleration methods”, HEACC-92, Hamburg.
- 1993:** Acquired guest scientist position at the SSC Laboratory.
Termination of the visit due to October 1993- SSC termination.
- 1994-1999:** Collaboration YerPhI-DESY: Work on beam physics in Linear Colliders (SBLC, TESLA). Emittance preservation, lattice scaling and correction schemes.
- 1998:** Doctor of science thesis: “High gradient wake field acceleration and the dynamics of low emittance electron beams in linear accelerators”, YerPhI.
- 1999:** Member of SESAME Technical and Training Committees.
- 1999-2001:** Beam physics study for TESLA integrated with FEL. Head of Beam Physics Division, YerPhI.
- 1996-2001:** Associated Member of DESY Machine Physics Division. Convener of beam physics in main linac for HEP and FEL operations foresee for TESLA technical design report.
- 2001 -** Head of synchrotron radiation source department, YerPhI.
- 2000-2001:** Design study of 3 GeV third generation intermediate energy light source CANDLE in Armenia.
- 2001 -** Technical Director, Center for the Advancement of Natural Discoveries using Light Emission (CANDLE), Yerevan, Armenia.

Author of more than 50 papers reported at International Workshops and Conferences on Accelerators, published in NIMA, Phys. Rev. STAB, Journ. Tech. Physics, Rev. Sci. Instrum.

Yuri L. Martirosyan

Assistant Technical Director
Machine Physics

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- 1955:** Born in Tashir, Republic of Armenia. Nationality: Armenian.
- 1977:** Graduated for the Physical faculty of Yerevan State University, Yerevan, Armenia
- 1977:** Junior Research Assistant, Laboratory for Relativistic Electron Beam Physics, Yerevan Physics Institute (YerPhI), Yerevan, Armenia.
Main subject of the investigation: particle accelerators, FEL theory and application, new methods of acceleration.
- 1982:** Invention of new type of magnetic system for high current induction accelerator (Soviet License 768378).
- 1981-1987:** Design study and participation in construction of experimental device of high current induction accelerator with the time-constant alternating gradient toroidal magnetic field. Successful device operation and experimental verification of theoretical results. YerPhI.
- 1993:** Ph.D. Doctorate thesis: “Charge Particle Dynamics in Alternating sign Toroidal Magnetic Fields”, supervised by Dr. M. Petrossian.
- 1995:** Senior scientific researcher, YerPhI.
- 1998 –2001:** Convener of the Accelerator Physics Seminar in YerPhI
- 1999:** Leading Scientists, Beam Physics Division, YerPhI.
- 1999-2000:** Participation in DESY electron cooling project. Hamburg, Germany.
Design study of recirculator ring for electron cooling of PETRA proton beam.
- 2000-2001:** Design study of 3 GeV third generation intermediate energy light source CANDLE in Armenia. Leading physicist.
- 2001 -** Associate of Technical Director on Science, Leading Scientist - Coordinator of Machine Physics group, Center for the Advancement of Natural Discoveries using Light Emission (CANDLE), Yerevan, Armenia.

Author of more than 30 publications.

Vardan Sh. Avagyan

Assistant Technical Director
Engineering & Fabrication

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- 1955:** Born in Altay, Russia. Nationality: Armenian.
- 1975:** Laboratory Assistant, Low Temperature Laboratory, Yerevan Physics Institute (YerPhI), Yerevan, Armenia.
- 1980:** Graduated from the Faculty of Mechanical Engineering of Yerevan Engineering University, Yerevan, Armenia.
- 1982:** Graduated from Special Faculty of Moscow Tsiolkovsky Avia-Technological Institute, Moscow, Russia.
- 1982:** Developed cryogenic techniques at YerPhI.
- 1984:** Group leader, Accelerator division, YerPhI.
Main subject of investigations: vacuum technology and vacuum welding.
- 1987:** Group leader of “Vacuum welding of accelerator section units”.
- 1986-1990:** Post-graduate student at Institute of Electrowelding after E. O. Paton, Kiev, Ukraine.
- 1994:** Ph.D. Doctorate thesis: “Investigation and Development of the Technology for Diffusion Welding of Copper Disk-loaded Waveguides”, supervised by Prof. G. Kharchenko (Paton Institute, Kiev, Ukraine).
- 1994-1998:**
 - Collaborations YerPhI-CERN (Switzerland) and YerPhI-CEBAF (USA). Development of the diffusion welding technology for the construction of the mu-metal magnetic shield.
 - Collaboration YerPhI-DESY (Germany). Development of the diffusion welding technology of the copper-aluminum connection for the special power supply components.
 - TESLA project, DESY (Germany). Research and development of the diffusion welding technology for Connection of the titanium and stainless steel tubes.
- 2000:** Guest scientist at DESY, Hamburg, Germany.
The development of the vacuum brazing technology for titan-niobium connections in TESLA superconducting cavities.
- 2000-2001:** Design study of 3 GeV third generation intermediate energy light source CANDLE in Armenia. Leading engineer.
- 2001 -** Associate of Technical Director, Leading Scientist - Coordinator of Vacuum System group, Center for the Advancement of Natural Discoveries using Light Emission (CANDLE), Yerevan, Armenia.

Author of 18 publications and 2 patents.

Eduard M. Laziev

Leading Scientist
Linac & RF System

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- 1933:** Born in Akhaltsikhe, Republic of Georgia. Nationality: Armenian.
- 1956:** Graduated from the Radiocommunication Department of Moscow Electrotechnical Communication Institute, Moscow, Russia.
- 1956 –1958:** Engineer, Cosmic Ray Division, Yerevan Physics Institute (YerPhI), Yerevan, Armenia. Main subject of activity – cosmic rays electronics.
- 1958 –1962:** Senior-Scientist, Yerevan Electron Synchrotron Initial Team. Main subject of activity – Injector Linac Design.
- 1962 –1972:** Head of Linear Accelerator Laboratory, YerPhI. Main fields of activity - Injector Linac Construction, Commissioning and Operation. Charged Particles Microwave Radiation. Microwaves.
- 1967:** Candidate Degree, Yerevan State University. Doctorate thesis: “Wave Propagation and and Charged Particles Radiation in a Waveguide”.
- 1972 –1987:** Deputy-Director, YerPhI, Head of Accelerator Physics Department. Main fields of activity: Yerevan Synchrotron Operation, Development and Improvement. Charged Particles Beam Physics. Energy Exchange between Beam and Microwave Structures. Beam Diagnostics. TBA and FEL problems.
- 1985:** Doctor of Science Degree, High Energy Physics Institute, Protvino, Moscow, Russia. “Charged Particles Spontaneous Radiation in a Waveguide”.
- 1987:** Professor of Yerevan State University and YerPhI, Yerevan, Armenia.
- 1987 –1995:** Head of Accelerator Physics Division, YerPhI. Main fields of activity: Yerevan Synchrotron Improvement. YerPhI High-Current Linac Creation. Charged Particles Beam Physics. Energy Exchange between Beam and Microwave Structures. Beam Diagnostics. TBA and FEL problems.
- 1995 –1999:** Invited leading scientist-researcher of Joint Institute for Nuclear Research, Dubna, Moscow region, Russia. Main subject of activity: The IREN Facility Design and Creation.
- 1999 –2002:** Head of Accelerator Physics Division, YerPhI. Main fields of activity: Yerevan Synchrotron Improvement. Charged Particles Beam Physics. Energy Exchange between Beam and Microwave Structures. Beam Diagnostics. TBA and FEL problems. Design study of CANDLE synchrotron light source.

Author of more than 150 publications.

Arshaluys G. Meliksetyan

Consultant on Civil Engineering

1925: Born in Shnokh, Alaverdi region, Republic of Armenia. Nationality: Armenian.

1948: Graduated from the Hydrotechnical faculty of Yerevan Polytechnical Institute, Yerevan, Armenia.

Construction of the main center of Gumush hydroelectric power station (HPS), Hrazdan, Hrazdan region, Armenia:

1948-1949: Assistant foreman

1949-1951: Foreman

1951-1953: Chief foreman

1953-1954: Director

1954-1961: Director of the construction of the hydroelectric station of Arzni HPS, Arzni, Armenia.

1961-1963: Chief engineer of Yerevan heat-electric generating station (HEGS) construction, Yerevan, Armenia.

1963-1965: Deputy chief engineer of all the hydroelectric power stations in Armenia at “ArmHidroEnergoStroi”, Yerevan, Armenia.

1965: Received award of Honored builder of Republic of Armenia.

1965-1969: Director of Yerevan HEGS construction, Yerevan, Armenia.

1969-1988: Director of Armenian Atomic Electric-Station (AES) construction, Metsamor, Armavir region, Armenia.

1988: Received Doctorate in Technical Sciences, Yerevan Polytechnical Institute, Yerevan, Armenia.

1988-1989: Assistant Professor, Chair of Hydroenergetic Construction, Yerevan Polytechnical Institute, Yerevan, Armenia.

1989 - Professor, Chair of Hydroenergetic Construction, Yerevan Architectural-Construction University, Yerevan, Armenia.

Directed the construction of more than 1000 civil, industrial and cultural buildings.

Author of 21 scientific and guidance publications.

Received 7 state awards.