



GUENAKH MITSELMAKHER

EDUCATION

Ph.D. in Experimental Particle Physics 1974

Academic advisors: S. Korenchenko, B. Pontecorvo
Joint Institute for Nuclear Research, Dubna, Russia

M.S. In Physics 1968

Moscow State University, Moscow, Russia J

POSITIONS HELD

University of Florida, Gainesville, Florida, US

**Distinguished Professor of Physics,
Director, UF Institute for High Energy Physics and Astrophysics** 2004 – present
Professor of Physics, 1995 – 2004

Fermi National Accelerator Laboratory, Chicago, US

Scientist II 1994 – 1998

(in 1995-1998 joint appointment with the University of Florida)

Superconducting Supercollider Laboratory, Dallas, Texas, US

Scientist, Senior Scientist 1991 - 1994

Joint Institute for Nuclear Research, Dubna, Russia

**Deputy Director of the Laboratory of Particle Physics,
Collider Physics Department Head, Group Leader,
Scientist, Junior Scientist** 1968 - 1991

VISITING AND GUEST APPOINTMENTS

CERN, Geneva, Switzerland

Visiting Scientist 1986 - 1991, 1994 - Present

University of Zurich, Switzerland

Guest Professor 2011 – 2012

Fermi National Accelerator Laboratory, Chicago, US

Visiting Scientist 1998 - Present

Argonne National Laboratory, Chicago, IL

Visiting Scientist 1994 - 1998

Lawrence Livermore National Laboratory, US

Visiting Scientist 1993 - 1994

RESEARCH ACCOMPLISHMENTS

- Discovery of the Higgs boson with the CMS detector
- Measurement of properties of the Higgs boson decaying into four leptons
- Searches for the Supersymmetry with leptons in the final state with the CMS detector
- Development of high precision, high rate muon detectors based on Cathode Strip Chambers for the CMS detector at LHC
- Studies of the Top Quark physics with the CDF detector at Fermilab
- Development of the luminosity monitor based on gas Cerenkov counters for the CDF detector at Fermilab
- Searches for Gravitational waves with LIGO, development of coherent methods for searches and analysis of the Gravitational Waves with interferometers
- Construction of the DELPHI Hadron Calorimeter at CERN
- Initial development of ZFITTER: one of the major analysis tools for the Standard Model tests at LEP
- Tests of the Standard Model with the DELPHI detector at CERN
- Search for the lepton number violation in muon decay into three electrons. Improved the previous limit by two orders of two magnitude.
- First measurement of the pion charge radius
- First measurement of the pion Compton scattering
- First measurement of the pion polarizability constant
- Experimental test of the chiral anomaly hypothesis with the pion + gamma \rightarrow two pions scattering process
- One of the first searches for Axions with reactors
- Proposed a new type of detectors (cryogenic) for the neutrinoless double beta decay searches. Further development of this type of detectors led to many applications in particle physics and astrophysics (this field is sometimes called Quantum Calorimetry or Bolometry)
- More than 600 publications in major refereed journals

MANAGEMENT RESPONSIBILITIES AND SYNERGISTIC ACTIVITIES

- CMS collaboration at CERN: Scientific Leader of the CMS Endcap Muon Project and the co-Project Manager of the CMS Muon Project (1994- 2007). Member of the CMS Management Board and Steering Committee, later (2008-2011) co-Chair of the CMS Muon Institutional Board.
- Principal Investigator (PI) of the University of Florida CMS grant since 1995. The UF CMS group is one of the largest US University groups in LHC experiments.
- Principal Investigator (PI) of the University of Florida grant in Laser Gravitational Waves Observatory (LIGO) experiment.
- Initiated in 2003 the conference series "Physics at LHC" (since 2011 "LHC Physics", or LHCP): the main International conference dedicated to LHC physics, organized with the support from CERN and all the LHC Collaborations. Co-Chaired all the conferences from this series.

AWARDS

Commemorative Medal, Charles University, Prague	2003
Fellow, American Physical Society	2001
Dr. of Science, habilitation by the USSR State committee for attestation	1997
Prizes for research, awarded by the Joint Institute for Nuclear Research, Dubna	1974 - 1990