

Biographical Description for The HistoryMakers® Video Oral History with Sekazi Mtingwa

PERSON

Mtingwa, Sekazi

Alternative Names: Sekazi Mtingwa;

Life Dates: October 20, 1949-

Place of Birth: Atlanta, Georgia, USA

Residence: Hillsborough, NC

Work: Hillsborough, NC

Occupations: Nuclear Physicist

Biographical Note

Research physicist and physics professor Sekazi K. Mtingwa was born on October 20, 1949 in Atlanta, Georgia. After receiving his B.S. degrees in physics and pure mathematics (Phi Beta Kappa) from the Massachusetts Institute of Technology (MIT) in 1971, Mtingwa enrolled at Princeton University and graduated from there with his M.A. and Ph.D. degrees in theoretical high energy physics in 1976. Mtingwa

was awarded doctoral fellowships from the National Fellowships Fund and the Ford Foundation. Upon graduation, he was awarded post-doctoral fellowships and research assistantships at the University of Rochester, the University of Maryland at College Park, and Fermi National Accelerator Laboratory (Fermilab).

In 1981, Mtingwa joined Fermilab as a research physicist where he, along with James Bjorken, developed a theory of particle beam dynamics, “intrabeam scattering,” which standardized the performance limitations on a wide class of modern accelerators. Mtingwa also played an important role in the design and construction of two of the Antiproton Source accelerator systems at Fermilab that were used in the discovery of the top quark and other particles. During 1988-1991, Mtingwa joined the staff of Argonne National Laboratory where he performed research on a futuristic accelerator concept called wakefield acceleration. In 1991, Mtingwa joined the faculty at North Carolina A & T State University as Chair and Professor of physics. Mtingwa was named J. Ernest Wilkins, Jr. Distinguished Professor of Physics at Morgan State University in 1997 and then returned to North Carolina A & T State University in 1999. He served as the Martin Luther King, Jr. Visiting Professor of Physics at MIT from 2001 to 2003. He joined the faculty at Harvard University in 2003, where he served as Visiting Professor of Physics for two years. Returning to MIT in 2006, Mtingwa was named Lead Physics Lecturer in the Concourse Program in the Office of the Dean for Undergraduate Education. He was also appointed as the Faculty Director of Academic Programs in the Office of Minority Education. In 2011, he became Principal Partner of Triangle Science, Education & Economic Development, LLC and he was appointed Senior Physics Consultant at Brookhaven National Laboratory.

In addition to his research activities, Mtingwa is involved in a number of national and international

initiatives. He is a founder of the African Laser Centre (ALC) and was the principal author of the Strategy and Business Plan upon which the ALC is based. In 1977, Mtingwa was a co-founder of the National Society of Black Physicists (NSBP) and served as NSBP President from 1992 to 1994.

Mtingwa has been recognized by national and international organizations for his contributions to science. In 1996, he received the Outstanding Service Award for Contributions to the African American Physics Community from the National Society of Black Physicists. The National Council of Ghanaian Associations honored Mtingwa with the Science Education Award in 2007 for advancing science education among African peoples. Mtingwa was inducted into the African American Biographies Hall of Fame in 1994, and he was elected as a Fellow of the American Physical Society in 2008.

Sekazi Mtingwa is married to W. Estella Johnson; they have two daughters.

Research physicist and physics professor Sekazi K. Mtingwa was interviewed by The HistoryMakers on May 6, 2013.

Related Entries

Princeton University [STUDENTOF]
[\[from ? to ?\]](#)

M.A., Ph.D.

Massachusetts Institute of Technology [STUDENTOF]
[\[from ? to ?\]](#)

B.S.

Henry McNeal Turner High School [STUDENTOF]
[\[from ? to ?\]](#)

Diploma

Alonzo F. Herndon Elementary [STUDENTOF]
[from ? to ?]

University of Rochester [EMPLOYEEOF]
[from 1987 to ?]

**Research Associate & Part-time Assistant
Professor**

University of Maryland, College Park [EMPLOYEEOF]
[from 1961 to ?]

**Postdoctoral Fellow, Center for Theoretical
Physics**

Fermi National Accelerator Laboratory [EMPLOYEEOF]
[from 1980 to ?]

Ford Foundation Postdoctoral Fellow

Fermi National Accelerator Laboratory [EMPLOYEEOF]
[from 1961 to ?]

Physicist

Argonne National Laboratory [EMPLOYEEOF]
[from 1972 to ?]

Physicist

North Carolina A&T State University [EMPLOYEEOF]
[from 1991 to 2004]

Professor of Physics

North Carolina A&T State University [EMPLOYEEOF]
[from 1991 to 1994]

Professor & Chair of Dept. of Physics

Morgan State University [EMPLOYEEOF]
[from 1997 to 1999]

J. Ernest Wilkins, Jr. Distinguished Professor of

Physics

North Carolina A&T State University [EMPLOYEEOF]
[from 1965 to ?]

Professor & Interim Chair of Dept. of Physics

Massachusetts Institute of Technology (MIT)
[EMPLOYEEOF]
[from 2001 to 2003]

**Martin Luther King, Jr. Visiting Professor of
Physics**

Harvard University [EMPLOYEEOF]
[from 2003 to 2005]

Visiting Professor of Physics

Massachusetts Institute of Technology (MIT)
[EMPLOYEEOF]
[from 1994 to ?]

**Senior Lecturer in Concourse Program (Learning
Community) & Faculty Director of Academic
Programs in the Office of Minority Education**

Massachusetts Institute of Technology Corporation
[MEMBEROF]
[from 1971 to 1975]

**In first group of 5 Representatives from Recent
Classes.**

Sigma Xi, The Scientific Research Society [MEMBEROF]
[from 1971 to ?]

Member

American Physical Society (APS) [MEMBEROF]
[from 1971 to ?]

Member

**American Association for the Advancement of
Science (AAAS)** [MEMBEROF]
[from 1976 to ?]

Member

National Society of Black Physicists (NSBP) [MEMBEROF]
[from 1977 to ?]

Member

National Technical Association [MEMBEROF]
[from 1980 to ?]

Member

**West Suburban Coalition for the Election of Harold
Washington for Mayor of Chicago** [MEMBEROF]
[from 1983 to 1984]

Co-Chair of the West Suburban Coalition

Delete [MEMBEROF]
[from 1984 to ?]

Chair of a number of such panels

Edward Bouchet Abdus Salam Institute (EBASI)
[MEMBEROF]
[from 1988 to ?]

**Founding Member; Member of Governing
Council**

Delete [MEMBEROF]
[from 1991 to 2001]

**Instructor (Hold 1st degree black belt in Tai
Kwon Do.)**

National Society of Hispanic Physicists [MEMBEROF]
[from 1996 to ?]

Founding Member

Nuclear Energy Research Advisory Committee
[MEMBEROF]
[from 1998 to 2008]

**Member of Committee; Member of
Subcommittees on Isotope Production and**

Nuclear Reactor Fuel Cycle R&D

Fellowship Office [MEMBEROF]

[from 2001 to 2007]

Recruiter for fellowship applicants

African Laser Centre [MEMBEROF]

[from 2001 to ?]

Founding Board Member; Principal Author of the Strategy & Business Plan; and Representative to the Americas

Massachusetts Institute of Technology Corporation

Visiting Committee [MEMBEROF]

[from 2002 to 2006]

iThemba LABS [MEMBEROF]

[from 2004 to ?]

Chaired International Review Panel

African Physical Review [MEMBEROF]

[from 2006 to ?]

Founding Member of the International Board of Editors

Saltpond Redevelopment Institute [MEMBEROF]

[from 2007 to ?]

Consultant

Johns Hopkins University Policy Review Panel on Spent Nuclear Reactor Fuel Reprocessing and

Recycling [MEMBEROF]

[from 2009 to 2010]

Chair of Panel

Delete [MEMBEROF]

[from 2009 to ?]

Consultant

**Synchrotron Research Roadmap Implementation
Committee** [MEMBEROF]

[from 2009 to ?]

Consulting Scientist for Accelerator Physics

**Interdisciplinary Consortium for Research and
Educational Access in Science and Engineering**

(INCREASE) [MEMBEROF]

[from 2010 to ?]

Vice-Chair of Executive Committee