

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

PERSON

Mtingwa, Sekazi , 1949-

Alternative Names: Mtingwa, Sekazi , 1949-

Life Dates: October 20, 1949-

Place of Birth: Atlanta (Fulton County), Georgia

Residence: 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

Johnson, W. Estella [SPOUSEOF]

Wife

Sawyer, Frank [CHILDOF]

Father

Graves, David [STEPCHILDOF]

Stepfather

Sawyerq, Stella [GRANDCHILD**OF**]
Paternal Grandmother

Green, Ollie Mae [GRANDCHILD**OF**]
Maternal Grandmother

Green, Luther [GRANDCHILD**OF**]
Maternal Grandfather

Sawyer, Graham [SIBLING**OF**]
Brother

Sawyer, Les [SIBLING**OF**]
Brother

Mtingwa, Makazi Ife [PARENT**OF**]
Daughter

Mtingwa, Sharifa Esi [PARENT**OF**]
Daughter

Green, Dorothy Eizabeth [CHILD**OF**]
Mother

Princeton University [STUDENT**OF**]
[from ? to 1976-06]

M.A., Ph.D.

Massachusetts Institute of Technology [STUDENT**OF**]
[from ? to 1971-06]

B.S.

Henry McNeal Turner High [STUDENT**OF**]
[from ? to 1967-06]

Diploma

Alonzo F. Herndon Elementary [STUDENT**OF**]
[from ? to 1962-06]

University of Rochester [EMPLOYEE**OF**]
[from 1976 to 1978]

Research Associate & Part-time Assistant Professor

University of Maryland [EMPLOYEE**OF**]
[from 1978 to 1980]

Postdoctoral Fellow, Center for Theoretical Physics

Fermi National Accelerator Laboratory [EMPLOYEEOF]
[from 1980 to 1981]

Ford Foundation Postdoctoral Fellow

Fermi National Accelerator Laboratory [EMPLOYEEOF]
[from 1981 to 1988]

Physicist

Argonne National Laboratory [EMPLOYEEOF]
[from 1988 to 1991]

Physicist

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

Professor of Physics

North Carolina A&T [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 [EMPLOYEEOF]
[from 1999 to 2000]

Professor & Interim Chair of Dept. of Physics

Massachusetts Institute of Technology [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 [EMPLOYEEOF]
[from 2006 to ?]

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

MIT Corporation [MEMBEROF]
Representatives

Sigma Xi [MEMBEROF]
Member

American Physical Society [MEMBEROF]
Member

American Association for the Advancement of Science [MEMBEROF]
Member

National Society of Black Physicists [MEMBEROF]
Member

National Technical Association [MEMBEROF]
Member

**West Suburban Coalition for the Election of Harold Washington for
Mayor of Chicago** [MEMBEROF]
Co-Chair of the West Suburban Coalition

**Selection Panel for Ford Foundation Predoctoral and Postdoctoral
Fellowships** [MEMBEROF]
Chair

**Selection Panel for National Science Foundation Predoctoral and
Postdoctoral Fellowships** [MEMBEROF]
Chair

Selection Panel for National Laboratory Associateships (Postdocs)
[MEMBEROF]
Chair

Edward Bouchet – Abdus Salam Institute (EBASI) [MEMBEROF]
Founding Member/Member of Governing Council

North Carolina A&T Karate Club [MEMBEROF]
Instructor

National Society of Hispanic Physicists [MEMBEROF]
Founding Member

Nuclear Energy Research Advisory Committee [MEMBEROF]
**Member of Committee/Member of Subcommittees on Isotope
Production and Nuclear Reactor Fuel Cycle R&D**

Fellowship Office [MEMBEROF]
Recruiter for Fellowship Applicants

African Laser Centre [MEMBEROF]
Founding Board Member/Principal Author of the Strategy &

Business Plan/Representative to the Americas

MIT Corporation Visiting Committee for the Department of Nuclear Engineering [MEMBEROF]

Review Panel for iThemba LABS, South Africa [MEMBEROF]
Chair of International Review Panel

African Physical Review [MEMBEROF]
Founding Member of the International Board of Editors

Saltpond Redevelopment Institute [MEMBEROF]
Consultant

Johns Hopkins University Policy Review Panel on Spent Nuclear Reactor Fuel Reprocessing and Recycling [MEMBEROF]
Chair

Proposed Julius K. Nyerere University of Science, Technology and Innovation [MEMBEROF]
Consultant

Synchrotron Research Roadmap Implementation Committee [MEMBEROF]
Consulting Scientist for Accelerator Physics

Interdisciplinary Consortium for Research and Educational Access in Science and Engineering (INCREASE) [MEMBEROF]
Vice-Chair of Executive Committee