

Finding Aid to The HistoryMakers® Video Oral History with Herbert Winful

Overview of the Collection

Repository:	The HistoryMakers®1900 S. Michigan Avenue Chicago, Illinois 60616 info@thehistorymakers.com www.thehistorymakers.com
Creator:	Winful, Herbert
Title:	The HistoryMakers® Video Oral History Interview with Herbert Winful,
Dates:	October 23, 2012
Bulk Dates:	2012
Physical Description:	7 MOV HD video files (3:28:27).
Abstract:	Electrical engineer Herbert Winful (1952 -) , former director and professor of materials research at Howard University, is professor emeritus of electrical engineering at the University of Michigan. Winful was interviewed by The HistoryMakers® on October 23, 2012, in Ann Arbor, Michigan. This collection is comprised of the original video footage of the interview.
Identification:	A2012_181
Language:	The interview and records are in English.

Biographical Note by The HistoryMakers®

Electrical Engineer Herbert Winful was born on December 12, 1952 in London, England and raised in Cape Coast, Ghana in West Africa. His father Herbert Francis was an engineer, and his mother Margaret Ferguson Graves was a teacher. As a child Winful was mesmerized by lasers and often dreamed of developing his own. As a sophomore attending the Massachusetts Institute of Technology (MIT) Winful was mentored by Dr. Hermann A. Haus – National Medal of Science honoree and pioneer in the field optical communications. Winful received his B.S. degree in electrical engineering in the 1975 from MIT. In 1981, he graduated from the University of Southern California earning his Ph.D. degree in electrical engineering. Dr. John Marburger--former science advisor to President George H.W. Bush--guided Winful's groundbreaking work on non-periodic structures.

From 1980 to 1986, Winful worked at GTE Laboratories (now Verizon Laboratories) in Waltham, Massachusetts. The Electrical Engineering and Computer Sciences (EECS) department at University of Michigan hired Winful as an associate professor in 1987. Through research and teaching he made fundamental contributions to multiple sub-disciplines in his field: nonlinear fiber optics, nonlinear optics in periodic structures and nonlinear dynamics of laser arrays, propagation of single-cycle pulses. Winful was promoted to full professor in 1992, and one year later the University of Michigan promoted him to an endowed professorship--Thurnau Professor. Throughout his career Winful studied problems involving the relationship between laser arrangement and production of power. Winful's most significant scholarly achievement was solving the scientific paradox of quantum tunneling time.

Winful's contributions have been recognized by professional and academic organizations. He was named a Fellow of the Optical Society of America and the American Physical Society and the Institute of Electrical and Electronic Engineers. The University of Michigan recognized Winful with the Amoco/University Teaching Award, the State of Michigan Teaching Award and the EECS Professor of the Year Award.

Herbert Winful was interviewed by The HistoryMakers on October 23, 2012.

Scope and Content

This life oral history interview with Herbert Winful was conducted by Larry Crowe, on October 23, 2012, in Ann Arbor, Michigan, and was recorded on 7 MOV HD video files. Electrical engineer Herbert Winful (1952 -) , former director and professor of materials research at Howard University, is professor emeritus of electrical engineering at the University of Michigan.

Restrictions

Restrictions on Access

Restrictions may be applied on a case-by-case basis at the discretion of The HistoryMakers®.

Restrictions on Use

All use of materials and use credits must be pre-approved by The HistoryMakers®. Appropriate credit must be given. Copyright is held by The HistoryMakers®.

Related Material

Information about the administrative functions involved in scheduling, researching, and producing the interview, as well as correspondence with the interview subject is stored electronically both on The HistoryMakers® server and in two databases maintained by The HistoryMakers®, though this information is not included in this finding aid.

Controlled Access Terms

This interview collection is indexed under the following controlled access subject terms.

Persons:

Winful, Herbert

Crowe, Larry (Interviewer)

Hickey, Matthew (Videographer)

Subjects:

African Americans--Interviews

Winful, Herbert--Interviews

Organizations:

HistoryMakers® (Video oral history collection)

The HistoryMakers® African American Video Oral History Collection

University of Michigan

HistoryMakers® Category:

ScienceMakers

Administrative Information

Custodial History

Interview footage was recorded by The HistoryMakers®. All rights to the interview have been transferred to The HistoryMakers® by the interview subject through a signed interview release form. Signed interview release forms have been deposited with Jenner & Block, LLP, Chicago.

Preferred Citation

The HistoryMakers® Video Oral History Interview with Herbert Winful, October 23, 2012. The HistoryMakers® African American Video Oral History Collection, 1900 S. Michigan Avenue, Chicago, Illinois.

Processing Information

This interview collection was processed and encoded on 8/23/2013 by The HistoryMakers® staff. The finding aid was created adhering to the following standards: DACS, AACR2, and the Oral History Cataloging Manual (Matters 1995).

Other Finding Aid

A Microsoft Access contact database and a FileMaker Pro tracking database, both maintained by The HistoryMakers®, keep track of the administrative functions involved in scheduling, researching, and producing the interview.

Detailed Description of the Collection

Series I: Original Interview Footage, October 23, 2012

Video Oral History Interview with Herbert Winful, Section A2012_181_001_001, TRT: 1:28:46
2012/10/23

Herbert Winful describes his mother's, Margaret Ferguson Graves, family background. His mother was born in Cape Coast, Ghana, in 1922. He talks about his grandfather Charles Emmanuel Graves' many occupations and his death. Winful was raised by his mother and grandmother, Rosanna Bilson, his father, Herbert Francis Winful, and mother having divorced when he was young. Winful discusses the history of the Fante, his family's tribe, as well the history of the slave trade in Ghana.

Families--Ghana.

Fanti (African people)--Ghana.

Slave trade--Ghana--History.

Video Oral History Interview with Herbert Winful, Section A2012_181_001_002, TRT: 2:31:48
2012/10/23

Herbert Winful talks about Fante tribal names and how the Fante navigate between their own culture and the culture of Great Britain. He describes his father's, Herbert Francis Winful, education and talks about the Achimoto High School in Accra, Ghana. It was this school that both his father and his mother, Margaret Ferguson Graves, attended. Winful describes his parents' courtship and their move to London, England where he was born. He discusses his parents' personalities and likeness and describes who he takes after. Winful talks about the time that Ghana received its independence from Great Britain in 1957 and Kwame Nkrumah, the country's first president. Winful describes his earliest childhood memory and the sights, sounds, and smells of his childhood.

Fanti (African people)--Ghana.

High schools--Ghana.

Ghana--History--1957-

Nkrumah, Kwame, 1909-1972.

Childhood--Ghana--1953-1970.

Video Oral History Interview with Herbert Winful, Section A2012_181_001_003, TRT: 3:29:21
2012/10/23

Herbert Winful describes the influence of Catholicism in Ghana and its interaction with the Fante tradition. He talks about his education under the British system of education as well as his early interest in science. Winful discusses the importance of his mother, Margaret Ferguson Graves to his education and the influence of his father, Herbert Francis Winful, in his interest in math and engineering. He describes meeting the Russian female astronaut Valentina Tereshkova, the first woman to go to space. Winful also describes the coup of Ghanaian President Kwame Nkrumah in 1966 and the changes that followed.

Catholic Church--Ghana.

Fanti (African people)--Ghana--Religion.

Education--Ghana.

Nikolaeva-Tereshkova, Valentina Vladimirovna, 1937-

Ghana--Politics and government.

Video Oral History Interview with Herbert Winful, Section A2012_181_001_004, TRT: 4:29:40
2012/10/23

Herbert Winful talks about his math courses in high school and compares the American and British education systems. Music was a large part of his life while at St. Augustine's High School, Cape Coast, Ghana and Winful also talks about the influence of television and radio during that time. Winful describes his graduation from St. Augustine's High School in 1971 and his decision to attend Lehigh University in Bethlehem, Pennsylvania. He discusses the experience of leaving Ghana to attend Lehigh University and learning about American culture. Winful describes his time at Lehigh University and his mentors there.

Mathematics--Study and teaching (Secondary).

High school students--Ghana.

Lehigh University.

Africans--Cultural assimilation--United States.

Mentors in education.

Video Oral History Interview with Herbert Winful, Section A2012_181_001_005, TRT: 5:30:56
2012/10/23

Herbert Winful talks about his transfer in 1972 from Lehigh University to the Massachusetts Institute of Technology after a year at Lehigh University. He describes his undergraduate research in lasers and his involvement in the African American community at MIT. Winful next attended the University of Southern California, Los Angeles, California for graduate school where he completed his doctoral research on nonlinear optics in 1981. After obtaining his Ph.D., Winful worked at GTE Labs where he did research on lasers and optics. In 1987, he left GTE Labs to become a professor at the University of Michigan in Ann Arbor, Michigan. Winful also talks about those who have influenced the leaders in nonlinear optics.

Transfer students--United States.

Massachusetts Institute of Technology.

Nonlinear optics.

University of Southern California--Graduate work.

GTE Laboratories, Inc.

Video Oral History Interview with Herbert Winful, Section A2012_181_001_006, TRT: 6:31:03
2012/10/23

Herbert Winful talks about leaders in the area of nonlinear optics. He explains optical phase conjugation and his teaching, research as well as information about his mentors at the University of Michigan. He talks about his research on laser arrays and coupling fiber lasers as well as the applications of his research, although he explains these applications were not the primary focus of his research. Winful discusses the future of lasers. He also describes his involvement in STEM (Science, Technology, Engineering, and Mathematics) education. Winful also talks about his concerns for the African American community.

University of Michigan.

Lasers--Research.

Technical education--United States.

African Americans--Education.

Science--Study and teaching--United States.

Video Oral History Interview with Herbert Winful, Section A2012_181_001_007, TRT: 7:26:53
2012/10/23

Herbert Winful describes his hopes for the African American community. Winful also talks about his relationship with the African American community as a naturalized citizen. He talks about his family and reflects upon his life and legacy. He describes his involvement in music outside of work. Winful describes his photographs.

Naturalization--United States.

African Americans--United States.

Families.

Photographs.