

# Finding Aid to The HistoryMakers® Video Oral History with Ronald Mickens

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## Overview of the Collection

<b>Repository:</b>	The HistoryMakers®1900 S. Michigan Avenue Chicago, Illinois 60616 info@thehistorymakers.com www.thehistorymakers.com
<b>Creator:</b>	Mickens, Ronald E., 1943-
<b>Title:</b>	The HistoryMakers® Video Oral History Interview with Ronald Mickens,
<b>Dates:</b>	December 11, 2006
<b>Bulk Dates:</b>	2006
<b>Physical Description:</b>	6 Betacame SP videocassettes (2:56:20).
<b>Abstract:</b>	Physics professor and physicist Ronald Mickens (1943 - ) has written five advanced mathematics textbooks, contributed research to over 120 scientific papers, and served on the faculty at both Fisk University and Clark Atlanta University. Mickens was interviewed by The HistoryMakers® on December 11, 2006, in Atlanta, Georgia. This collection is comprised of the original video footage of the interview.
<b>Identification:</b>	A2006_159
<b>Language:</b>	The interview and records are in English.

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## Biographical Note by The HistoryMakers®

Physics professor and research physicist Ronald Mickens was born in Petersburg, Virginia on February 7, 1943 to Daisy Brown Mickens and Joseph Mickens. Mickens spent much of his youth with his maternal grandparents, and his grandfather, James Williamson, was responsible for introducing him to science. By the time Mickens was eight years old, he knew he wanted to become a scientist. Mickens attended Peabody High School in Petersburg where he took algebra, plane and solid geometry, chemistry, biology, and physics. Because he took courses during the summer, Mickens graduated early at the age of seventeen.

After high school, Mickens entered Fisk University with a full scholarship where he studied chemistry, mathematics and physics. He graduated in 1964 with his B.A. degree in physics and one of the highest academic averages in the history of the school. Mickens immediately enrolled in a graduate program at Vanderbilt University where, in 1968, he received his Ph.D. in theoretical physics. By that time he had been elected to the honor societies of Sigma Chi and Phi Beta Kappa. Additionally, Mickens won a Woodrow Wilson Fellowship, a Dansworth Fellowship, and a National Science Foundation Postdoctoral Fellowship, which allowed him to study at the Massachusetts Institute of Technology in Cambridge, Massachusetts. Beginning in 1968, Mickens spent two years conducting research in elementary particle physics at the MIT Center for Theoretical Physics. In 1970, Mickens returned to Fisk University where he accepted a teaching position in the physics department. During that time, he spent brief stints conducting research at other institutions including Vanderbilt University and the Joint Institute for Laboratory Astrophysics in Boulder, Colorado. In 1982, Mickens became a professor at Clark Atlanta University and was named a Callaway professor of physics in 1985. In 1987, he published a book on chaos theory entitled, *Difference Equations* .

Mickens has conducted research in the areas of complex functions, theoretical elementary particle physics, mathematical epidemiology and modeling of non-linear oscillations. He has authored five advanced mathematics textbooks in addition to his contributions to over 120 scientific research papers. In 1990, Mickens produced an

edited volume entitled, *Mathematics and Science*. Mickens' research in the area of African Americans in science allowed him to write, *The African American Presence in Physics and Edward Bouchet: The First African American Doctorate* as well as biographies of several African American women scientists. Mickens and his wife Maria, had two children, Lea Mickens and James Williamson Mickens.

Ronald Mickens was interviewed by *The HistoryMakers* on December 11, 2006.

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## Scope and Content

This life oral history interview with Ronald Mickens was conducted by Denise Gines on December 11, 2006, in Atlanta, Georgia, and was recorded on 6 Betacame SP videocassettes. Physics professor and physicist Ronald Mickens (1943 - ) has written five advanced mathematics textbooks, contributed research to over 120 scientific papers, and served on the faculty at both Fisk University and Clark Atlanta University.

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## 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®.

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## 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.

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## Controlled Access Terms

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

### Persons:

Mickens, Ronald E., 1943-

Gines, Denise (Interviewer)

Stearns, Scott (Videographer)

### Subjects:

African Americans--Interviews

Mickens, Ronald E., 1943---Interviews

African American scientists--Interviews

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African American physicists--Interviews

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## **Organizations:**

HistoryMakers® (Video oral history collection)

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The HistoryMakers® African American Video Oral History Collection

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## **Occupations:**

Physicist

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## **HistoryMakers® Category:**

ScienceMakers

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## **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 Ronald Mickens, December 11, 2006. The HistoryMakers® African American Video Oral History Collection, 1900 S. Michigan Avenue, Chicago, Illinois.

### **Processing Information**

This interview collection was processed and encoded on 5/30/2023 by The HistoryMakers® staff. The finding aid was created adhering to the following standards: DACS, AACR2, and the Oral History Cataloging Manual (Matters 1995).

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## **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.

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## Detailed Description of the Collection

### Series I: Original Interview Footage

Video Oral History Interview with Ronald Mickens, Section A2006\_159\_001\_001, TRT: 0:28:40 ?

Ronald Mickens talks about his family background. His father, Joseph Percival Mickens was born to Rosa and Willie who lived in Petersburg, Virginia. Mickens' mother, Daisy Brown Mickens, was born to James and Daisey Williamson. Mickens' maternal grandparents lived with his immediate family, and Mickens remembers hearing stories of Night Riders, Br'er Rabbit, and folk medicine from them. Mickens talks about his church experience saying that he stopped believing in God at age seven. Mickens' mother, Daisy Brown Mickens, worked as a companion to the wife of a white lawyer and also went to New Jersey to work. His father, Joseph Percival Mickens did various carpentry jobs for a living. Mickens finishes by talking about his siblings Carrol Lee and Calvin Lee Mickens.

African American families--Virginia--Petersburg.

African Americans--Religion.

African American mothers--Virginia--Petersburg.

African American children--Virginia--Petersburg.

Video Oral History Interview with Ronald Mickens, Section A2006\_159\_001\_002, TRT: 0:29:40 ?

Ronald Mickens talks about growing up in Petersburg, Virginia. There were four main employers in the town including the military base, a mental health facility, the cigarette factory and the chemical plant. He talks about neighborhood sports and significant holidays. Mickens always associated Easter with wearing new clothes and Christmas with the corn liquor that his father made. He remembers getting a dangerous chemistry set one year as a present. Mickens talks about frequenting the library and participating in its integration efforts during a peaceful student demonstration. Mickens goes on to discuss his education. He won a science fair by presenting Einstein's Theory of Relativity and was able to finish school early because he took summer classes. Mickens explains that he wanted to get out of Virginia so he chose to attend Fisk University in Nashville, Tennessee.

African American children--Virginia--Petersburg.

African Americans--Employment--Virginia--Petersburg.

African Americans--Education--Virginia--Petersburg.

African Americans and libraries--Virginia--Petersburg.

Einstein, Albert, 1879-1955.

Fisk University.

Video Oral History Interview with Ronald Mickens, Section A2006\_159\_001\_003, TRT: 0:29:30 ?

Ronald Mickens talks about his job as a paperboy. At nine years old, he began his operation with fifty customers and increased to five hundred over two years. He employed a Puerto Rican family to do deliveries and earned money from tips as well as from selling the copper wire newspaper binding. Mickens talks about the two high schools in Petersburg, which integrated after he had gone through school. He further explains Petersburg's segregation by saying that he was the only black boy entered in a soap box derby at age ten. Nonetheless, he did not encounter much hostility between races. Mickens goes on to talk about Fisk University and faculty members such as Dr. Samuel Massie and President Stephen Wright. He discusses the study of science and mathematics comparing

math to a language. At Fisk, Mickens took all possible math and physics courses, but also many liberal arts courses.

African Americans--Employment--Virginia--Petersburg.

Education, Secondary--Virginia--Petersburg.

Race Relations--Virginia--Petersburg.

Fisk University.

Education, Higher--Tennessee--Nashville.

Video Oral History Interview with Ronald Mickens, Section A2006\_159\_001\_004, TRT: 0:30:30 ?

Ronald Mickens explains how he avoided the Vietnam War. Despite receiving seven induction notices, he was able to stave off the draft board until age twenty-seven when he could no longer be drafted. Mickens goes on to talk about the Student Non-Violent Coordinating Committee and Stokely Carmichael's influence on Fisk University's campus. Mickens graduated from Fisk and enrolled in a Ph.D. program at Vanderbilt University. He shares a story about being discriminated against on his job. He goes on to explain his Ph.D. thesis about a branch of mathematics called complex functions that he used to determine the contents of a black box. Mickens finishes by using the analogy of cutting an iron bar to explain theoretical elementary particle physics. He talks about decreasing particle size from atoms to nuclei to quarks.

Vietnam War, 1961-1975--Participation, African American.

Student Nonviolent Coordinating Committee (U.S.).

Carmichael, Stokely.

Fisk University.

Vanderbilt University. Graduate School.

African American college students--Tennessee--Nashville.

Discrimination in employment--Tennessee--Nashville.

Elementary particles.

Video Oral History Interview with Ronald Mickens, Section A2006\_159\_001\_005, TRT: 0:30:20 ?

Ronald Mickens talks about particle accelerators as well as his current work projects. He used mathematics to model the spread of diseases, which is called mathematical epidemiology. Mickens then discusses the ethics of vaccination and his modeling of non-linear oscillations. Mickens also conducted research on the history of African Americans in science. After earning his Ph.D. degree from Vanderbilt University, Mickens did post doctoral research at Massachusetts Institute of Technology under a National Science Foundation Fellowship. There, he met James Young and Shirley Jackson. In 1970, Mickens accepted a teaching position at Fisk University, also doing short stints at Vanderbilt University, and at the JILA Joint Institute for Laboratory Astrophysics in Colorado. He and his wife decided to settle in Atlanta, where he took a job at Atlanta University in 1982. Mickens talks about research, teaching and textbook writing at Atlanta University.

Epidemiology--Mathematical models.

Scientists--Professional ethics.

African American scientists--United States.

Vanderbilt University. Graduate School.

Massachusetts Institute of Technology.

National Science Foundation (U.S.)

Science--Study and teaching--Tennessee--Nashville

Science--Study and teaching--Georgia--Atlanta

Nonlinear oscillations

Video Oral History Interview with Ronald Mickens, Section A2006\_159\_001\_006, TRT: 0:27:40 ?

Ronald Mickens describes his published works. He created an edited compilation from the perspective of several other math and physics researchers and how they have used his techniques. Mickens also wrote books on specific mathematical topics, advanced mathematics textbooks and a book on African Americans in physics. Mickens explains that the National Society of Black Physicists began when he and James Young organized a banquet honoring African Americans who made significant contributions to physics including Hunter, Donaldson, and Eagleson. Mickens credits his wife, Maria, for putting up with him and talks about his children, James Williamson and Lea Mickens. Mickens has no regrets about his career, and he would like to be remembered as an interesting person to be around.

African American scientists--United States.

National Society of Black Physicists.

African American physicists--United States.

African American families--Georgia--Atlanta.

African American children--Georgia--Atlanta.