PRIME COLLOQUIUM TALK
BY SHELLY M. JONES

A Conversation about
Dr. Gloria C. Hewitt: Her Life, Her Work and Why She was a Great Educator
WOMEN WHO COUNT

Honoring African American Women Mathematicians

BY SHELLY M. JONES, PH.D.
ILLUSTRATED BY VERONICA MARTINS

AMERICAN MATHEMATICAL SOCIETY
“Gloria demanded work from the students and was willing to spend the amount of time needed to help them succeed. She was the type of professor that students should have.”

(Women Who Count, 2019)
Quote by Johnny W. Lott, Professor Emeritus
Department of Mathematical Sciences, The University of Montana, Missoula
Dr. Gloria Conyers Hewitt

EARLY LIFE
Born

October 26, 1935

- Sumter, South Carolina (Home of Shaw Air Force Base)
- Parents: Emmett and Crenella Conyers
- Her parents and siblings were all college graduates
- Her siblings (I know of two brothers) all earned graduate degrees
Mather Academy was the vision of Sarah Babcock Mather. It was founded by the New England Southern Conference (NESC) of the Women’s Home Missionary Society of the Methodist Church. With funding from Mather and Fanny O. Browning of Connecticut, the Browning Home and Mather Academy opened in 1887. Mather became a coeducational boarding school. In addition to Dr. Hewitt, another noteworthy alumnus of Mather is U.S. Representative James Clyburn, from the class of 1957.
Gloria entered Fisk University in Nashville, Tennessee, in 1952.

Fisk is a historically Black university and was formally called The Fisk Freed Colored School.

Under the tutelage of Department Chair, Lee Lorch, Gloria realized she was interested in pursuing a career in mathematics.

Fisk was founded in 1866. The Fisk University Historic District is listed on the National Register of Historic Places.

EDUCATION

- BS, Mathematics, Fisk University, 1956
- MS, Mathematics, University of Washington, 1960
- Ph.D. Mathematics, University of Washington, 1962

- Was offered two Teaching Assistantships, Accepted Univ. of Washington (Lee Lorch led)
- Dissertation Topic: Direct and Inverse Limits of Abstract Algebras
- Doctoral Advisor: Richard Scott Pierce
Professional Life

- Assistant Professor of Mathematics, University of Montana in Missoula, 1961

- Was offered the job twice! Even before finishing her Ph.D.

- The Math Chair, Art Livingston, at the time had previously been on the faculty at University of Washington when Gloria was a graduate student.

- Associate Professor and tenure, 1966
- Full Professor, 1972
- Chair of the Department of Mathematical Science from 1995 to 1999 (First African American woman to chair a math department in the U.S.)
- 38 years at the University of Montana
- Retired in 1999
- Professor Emerita
It cannot be understated that Gloria’s family played a vital role in her academic success. She said, “My parents believed that education was the only avenue through which an African American man or woman could better themselves. Therefore, they encouraged all of their children to attend college … I was proud of the fact that my parents could vote in the presidential election. Not everyone could in those days.” (Lattimore, R., 2001; www.mathematicallygiftedandblack.com)

They were all college educated. Her father was a Printer and her mother an elementary school Teacher.

Had it not been for her brother (or brothers) who saw her acceptance letters to two Teaching Assistantships, Gloria may not have accepted the opportunity at the University of Washington.

Her parents took care of her young son, Ronnie, so she could finish undergrad and then her father took care of him when Gloria went to Seattle for graduate school. Gloria had been married but was now a single mother. Her parents moved to Seattle!
Influencers

- Lee Lorch (showed up at her graduation even though he had been fired from Fisk)
- Fellow grad students at University of Washington
- Art Livingston, University of Washington
- Other Black women Mathematicians at Fisk: Evelyn Boyd Granville (Professor at Fisk), Etta Zuber Falconer, Vivienne Malone Mayes
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Etta Zuber Falconer was born in Tupelo Mississippi in 1933

- She received a Bachelor’s degree in mathematics from Fisk University in 1953 and an M.S. at the University of Wisconsin in 1954
- Was married to Dolan Falconer
- In 1969 she became the 10th African American woman to earn a Ph.D. in Mathematics from Emory University
- While in Atlanta, Dr. Falconer started a 37-year career at Spelman College

Spelman College
Sisters Chapel
Fighting for Women’s Rights

- Dr. Hewitt remembers a talk she gave at the very beginning of AWM [Association of Women in Mathematics]

- She and some colleagues set up a panel at Penn State. The auditorium was packed with thousands of women whose presence showed that women had a lot of interest in matters of equality in mathematics. Unfortunately, at that time women were not recognized, were not advanced to higher ranks and were not paid salaries equal to their male counterparts.

- In an interview with her colleague, Dr. Johnny Lott, Dr. Hewitt recalled a time when she felt demoralized at her university. Sometimes to the level of making her feel that she was not competent.

- When she started her career in the Math Department at U of M she was the only female faculty member.

- Intersectionality at play
Dr. Hewitt, was awarded a National Science Foundation Science Faculty Fellowship for the 1965-66 academic year, to pursue postdoctoral study in categorical algebras at the University of Oregon.

This was the first fellowship of its kind ever awarded in Montana.

In 1969, she was named a lecturer in an NSF program administered by the Mathematical Association of America.

Was a Reader and Table Leader for the AP Calculus Exam.
Dr. Hewitt has supervised one Ph.D. student, Frank Hannick, and numerous Masters students. There was not a mathematics doctoral program during her early tenure at U of M.

Dr. Hewitt felt that there should be a more intimate relationship between the student and a faculty member. She was very concerned about assisting undergraduate students; hence, she was a mentor to many of them.

During her time as Chair of the Department of Mathematical Sciences, Dr. Hewitt increased the visibility of the department, raised over $500,000 in gifts to endow innovative new programs to support undergraduate and graduate mathematics students, and oversaw renovations to modernize the Mathematics building.
Let $\kappa$ be an ordinal number. A $\kappa$-ary operation on a set $A$ is a mapping $O : A^\kappa \rightarrow A$ of all well ordered sequences (of type $\kappa$) of elements of $A$ into $A$. Let $\langle \kappa_0, \cdots, \kappa_\alpha, \cdots \rangle_{\alpha < \beta}$ be a well ordered sequence of ordinal numbers. An abstract algebra of type $\langle \kappa_0, \cdots, \kappa_\alpha, \cdots \rangle_{\alpha < \beta}$ is a system $\langle A ; O_0, \cdots, O_\alpha, \cdots \rangle_{\alpha < \beta}$, where $A$ is a nonempty set and $O_\alpha$ is a $\kappa_\alpha$-ary operation on $A$. The concepts of isomorphism, homomorphism, subalgebra, and direct union of abstract algebras are defined in the usual way (see [2]). Henceforth, we will not distinguish between the abstract algebra $\langle A ; O_0, \cdots, O_\alpha, \cdots \rangle_{\alpha < \beta}$ and the set $A$ of its elements. The concept of free union is defined relative to a class $\mathfrak{A}$ of algebras. It will always be assumed that the algebras in $\mathfrak{A}$ are of the same type. Explicit mention of this assumption will usually be omitted.
Major Works

Contributions

- In addition to her university work, Dr. Hewitt has been a consultant to numerous academic institutions and an active participant in many professional organizations, including the Mathematical Association of America (MAA), American Mathematical Society (AMS), National Association of Mathematicians (NAM), and the Association for Women in Mathematics (AWM).

- Except for two year-long assignments at the National Science Foundation and at Case Western Reserve University, Dr. Hewitt has worked at the University of Montana (38 years).

- Served on the Board of Governors of the Mathematical Association of America

- She was profiled in the book, *Notable Women in Mathematics: A Biographical Dictionary* (F. Fasanelli, 1998) as well as several mathematics & mathematics education journal articles (NCTM, 2001)

- Dr. Hewitt has been an important part of the Mathematics community for over 50 years.
National Association of Mathematicians

- Life Member of NAM
- 1987 NAM’s National Meeting – Participated on a panel to discuss, “Re-Thinking the Teaching of Calculus”
- 1992 conducted NAM’s first survey (with the AMS) of Black graduate students in mathematics. There were about 200 Black students at that time. (Book written with MAA)
- Board of Directors, 1997-1999, Majority Institution Member
- 1997 Undergraduate MATHFest Presentation, “The Third Hardest Thing”
- Was featured in “Spotlight on a Mathematician” by Dr. Johnny L. Houston, Fall 1999
Her Legacy

The Gloria C. Hewitt Graduate Scholarship in Mathematical Sciences, supports Masters and Ph.D. students in Mathematics with preference given to students from underrepresented minorities.

At a special colloquium and talk to announce the scholarship: Emily Stone (Math Dept. Chair), Ron Irving (Professor Emeritus, University of Washington), Gloria Hewitt (Honoree), Gail Irving (Ron Irving's wife), and Edray Goins (Past President of NAM)
Shelly M. Jones
jonessem@ccsu.edu

- Professor Mathematics Education, Central CT State University
- Educator since 1991 (Middle School Math Teacher, Mathematics Supervisor, Professional Development Provider, Mathematics Teacher Educator)
- President Elect, Benjamin Banneker Association (BBA)
- Position Papers Editor, NCSM: Mathematics Education Leadership
- Teachers 2 Teachers Global Team Member
- Author, Women Who Count: Honoring African American Women Mathematicians
- Contributing Author, The Brilliance of Black Children in Mathematics: Beyond the Numbers and Toward New Discourse
Resources to Help Broaden the Participation of Under-Represented Minorities

Mathematically Gifted & Black

CAARMS
Conference for African American Researchers in Mathematical Sciences

The Benjamin Banneker Association

AWM
Association for Women in Mathematics