# national association of mathematicians



volume XXXVII number 4 winter 2006

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#### IN THE NEWS

Joint Meetings January 5 through January 8. NAM Schedule: SUNDAY January 7, 2007, 8:30 p.m.-9:15 p.m.(NAM Cox-Talbot Address)Why "Mathematicians of the African Diaspora"? (Scott Williams, University at Buffalo, SUNY 1023-01-417)

MONDAY January 8, 2007, 9:00 a.m.-9:50 a.m. (NAM Panel Discussion)HBCUs prepare to reform college algebra courses. Organizers: (Dennis Davenport, U. S. Military Academy)

MONDAY January 8, 2007, 10:00 a.m.-10:50 a.m. (NAM Business Meeting)

MONDAY January 8, 2007, 1:00 p.m.-1:50 p.m.(NAM Claytor-Woodard Lecture) Some mathematical models for modeling blood flow in the kidney. (Nathaniel Whitaker\*, University of Massachusetts, Amherst 1023-76-416)

NAM Undergraduate MathFest at Howard University in November 2006 was a success with the largest number of student presentations ever at a NAM MathFest. See the article inside.

We express our thanks to Dr. Dawn Lott for constructing and arranging the new official NAM website at http://www.nam-math.org/

The NAM Board is looking for a new editor of the Newsletter.

The president moves: Dr. Nathaniel Dean, president of NAM, has moved from Texas Southern University to the Texas State University at San Marcos.

# **Thomas Fuller, 1710-1790**

#### Scott Williams

In most discussions of people with extraordinary powers of mental calculation, there is some mention of Thomas Fuller. Thomas was born in 1710 somewhere between present day Liberia and Benin. He was shipped to America to be a slave in Virginia at the age of 14 in 1724.

We do not know exactly how Fuller's abilities were first observed. However, his computational ability was known far and wide, at a time, when Fuller was seventy, when less than 1% of the population could do arithmetic beyond counting fingers

and toes. In 1780, two "respectable" white men, William Hartshorne and Samuel Coates, sent for him to satisfy their curiosity. Knowing Fuller could neither read nor write, they asked Fuller how many seconds there were in a year and a half. He answered in about two minutes, 47,304,000.

Hartshorne and Coates asked Fuller a second question: How many seconds a man has lived who is 70 years, 17 days and 12 hours old. In 90 seconds Fuller answered 2,210,500,800. One of the gentlemen who employed himself with his pen in making these calculations told him he was wrong, and the sum was not so great as he had said - upon which the old man hastily replied: stop, master, you forget the leap year. On adding the amount of the seconds of the leap years the amount of the whole in both their sums agreed exactly. [American Museum, Vol.V, 62, Phila., 1799].

A third question was asked and satisfactorily answered. After which two other gentlemen required he give the amount of nine figures multiplied by nine. Fuller could find also the sum of geometrical progressions. [F.D.Mitchell, Mathematical prodigies, American Journal of Psychology, Vol. XVIII, 1907, p.62].

When someone who had witnessed his calculating abilities remarked that it was a pity he had not been educated, Fuller replied carefully, "It is best I got no learning; for many learned men be great fools."

Present day thinking is that Fuller learned to calculate in Africa before he was brought to the United States as a slave. Supporting evidence for this comes from John Bardot's 1732 account of the abilities of the inhabitants of Fida (on the coast of Benin):

The Fidasians are so expert in keeping their accounts, that they easily reckon as exact, and as quick by memory, as we can do with pen and ink, though the sum amount to never so many thousands: which very much facilities the trade the Europeans have with them.

Further evidence for this comes from a passage written by Thomas Clarkson in 1788 describing the purchase of African slaves:

It is astonishing with what facility the African brokers reckon up the exchange of European goods for slaves. One of these brokers has ten slaves to sell, and for each of these he demands ten different articles. He reduces them immediately by the head to bars, coppers, ounces... and immediately strikes the balance. The European, on the other hand, takes his pen, and with great deliberation, and with all the advantage of arithmetic and letters, begin to estimate also. He is so unfortunate, as to make a mistake: but he no sooner errs, than he is detected by this man of inferior capacity, whom he can neither deceive in the name or quality of his goods, nor in the balance of his account.

Today no one knows exactly how Thomas Fuller or those from his native region of Africa performed complex calculations. However, the algorithms used were probably based on traditional African counting systems. The people of the Yoruba area of southwest Nigeria have a complex counting system with very high numbers that probably dates back to Fuller's time. Europeans arriving in the area were amazed at the complexity of Yoruba numeration. It is thought to have developed from counting the cowrie shells that were used for currency. Economic inflation may have raised the magnitude of the numbers to be counted. Yoruba numeration has a well-organized structure, base twenty with an intermediate base ten, that allows for easy calculation and has provisions for large numbers as multiples and powers of twenty. Yoruba also uses subtraction that is similar to the "IX" for nine in Roman numerals. For example, the numbers from fifteen to nineteen are expressed as subtractions from twenty, the base number. This may also help with calculation, since calculating with "twenty minus three" might be easier than dealing with seventeen.

Late in his life Thomas Fuller's remarkable powers of calculation made him a tool of abolitionists. But in 1790 he died at the age of 80 years, having never learned to read or write, in spite of his extraordinary power of calculation.

After his death, Fuller became a tool of psychics and psychologists. The latter, while denying blacks of mental abilities, supported the notion of idiot savant. Fuller, though extraordinarily quick at calculations, appears not so much the equal of idiot savants as someone who had taught himself quick calculations. Many of those who met him advertise his general self-taught intelligence and decried the system which prevented him from formal education.

There are surviving, today, an accounted, below, excerpted from the Columbian Centinial, December 29, 1790, No. 707, p.123, col.32, Boston, Massachusettes. Note the reference to an ancient mathematics puzzle known to the Egyptians. Also note its pro-abolitionist conclusion:

Died- Negro Tom, the famous African Calculator, aged 80 years. He was the property of Mrs. Elizabeth Cox of Alexandria. Tom was a very black man. He was brought to this country at the age of 14, and was sold as a slave.... This man was a prodigy. Though he could never read or write, he had perfectly

acquired the art of enumeration.... He could multiply seven into itself, that product by seven, and the products, so produced, by seven, for seven times. He could give the number of months, days, weeks, hours, minutes, and seconds in any period of time that any person chose to mention, allowing in his calculation for all leap years that happened in the time; he would give the number of poles, yards, feet, inches, and barley-corns in any distance, say the diameter of the earth's orbit; and in every calculation he would produce the true answer in less time than ninety-nine men out of a hundred would produce with their pens. And, what was, perhaps, more extraordinary, though interrupted in the progress of his calculation, and engaged in discourse necessary for him to begin again, but he would ... cast up plots of land. He took great notice of the lines of land which he had seen surveyed. He drew just conclusions from facts; surprisingly so, for his opportunities. Had his [Thomas Fuller] opportunity been equal to those of thousands of his fellow-men ... even a NEWTON himself, need have ashamed to acknowledge him a Brother in Science.

The article on Thomas Fuller is just one of many special articles on MAD: http://www.math.buffalo.edu/mad/special/

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# Mentorship Creates Network of Mathematicians

In decades of mentoring minority and women mathematicians, engineering professor William Massey has done more than foster a new, more diverse generation of mathematical scholars.

He has created a community of colleagues who support and inspire each other's research, including Massey's own.

"His mentorship is more than just one-on-one," said Otis B. Jennings, a member of Princeton's class of 1994 who is now an assistant professor at Duke University's Fuqua School of Business.

"It's sort of a meta-mentorship," said Jennings, who was advised on his senior thesis by Massey. "He creates the environment where people can make connections for mutual benefit. As a mentor you may help someone get a Ph.D. — but in the end you have a new colleague. And Bill is building a family of colleagues."

On Nov. 3, Massey, the Edwin S. Wilsey Professor of Operations Research and Financial Engineering and a 1977 Princeton alumnus, will receive the Blackwell-Tapia Prize at the Institute for Mathematics and its Applications in Minneapolis.

The prize is in recognition of his outstanding record of achievement in mathematical research and his mentoring of minorities and women in the field of mathematics. In a tribute to Massey's distinguished career as a pioneer in the field of applied mathematics called queueing theory, the institute has organized a two-day conference on topics related to Massey's research.



Robert Hampshire, William Massey, Arlie Petters, Otis Jennings

In addition to Jennings, minority and women Princeton alumni Massey has mentored include Andrea Bertozzi, a 1987 undergraduate and 1991 graduate alumna who is currently a full professor in mathematics and director of applied mathematics at the University of California-Los Angeles; Arlie Petters, who attended Princeton as a graduate student from 1988 to 1991 and is now a full professor of mathematics and physics at Duke University; and Robert Hampshire, a current Princeton engineering graduate student who will begin a teaching position at Carnegie Mellon in the spring.

Massey, the first African American Princeton undergraduate to have become a full professor at the University, also founded and continues to provide leadership for the annual Conference for African American Researchers in the Mathematical Sciences, now in its 12th year.

#### **Playing with Numbers**

Massey grew up in St. Louis, the son of a high school counselor and a home economics teacher. He loved numbers as a small child, and his mother playfully encouraged his talent by cutting up calendars for him and creating games. His mathematical abilities became fully manifest in a predominantly black public school for gifted students, and later in high school.

When it was time for college, his parents brought him east to visit Harvard, MIT and Princeton. "It certainly helped having parents who were educators," said Massey. "They were encouraging of me wanting to do mathematics. At the time, I didn't know that other black people even worked in math."

Massey remembers his own mentors as an undergraduate at Princeton with great fondness: mathematicians W. Stephen Wilson, Ralph Fox and Bernard Dwork; and physicists Cyrus Hoffman and Aaron Lemonick.

"I was lucky in who taught me," said Massey, who remembers that Wilson advised him to do something non-intuitive when he arrived at Princeton.

"I saw myself as a math major and had placed out of freshman math," Massey recalls. "Wilson told me to go ahead and take a freshman honors-level calculus class but sophomore-level physics. This turned out to be the best advice I could have gotten because I had been for the most part self-taught in math. [By taking the calculus class] I learned that my understanding of math was really cookbook mathematics; I was familiar with various formulae and how to manipulate them but not with the more sophisticated understanding of how to prove theorems."

Massey said that an early course with Lemonick imbued him with a love for physics. "I was thinking I didn't want to be that involved in physics but he actually got me excited about it. So rather than thinking of it as fulfilling a requirement, I took physics throughout my four years."

Graduating magna cum laude and Phi Beta Kappa with a degree in mathematics, Massey continued on to graduate school in mathematics at Stanford University, earning his Ph.D. in 1981. While at Stanford, he became friends with Erhan Çinlar, who was then at Northwestern University and is now Princeton's Norman J. Sollenberger Professor in Engineering. Çinlar, who will be delivering the plenary address at the conference in honor of Massey, tried to hire Massey right out of graduate school but Massey demurred. He instead went to Bell Labs, then in its heyday as one of the nation's premier research institutions, and stayed for 20 years.

#### Creating a Legacy

Massey credits his time at Bell Labs with not only fostering innovative research but also creating an environment that allowed minorities to flourish. He had first worked there his summer after he graduated from Princeton, and felt inspired by the sizable cadre of black scientists.

"Bell Labs of the 1970s, '80s and '90s was to black scientists what Harlem of the 1920s was to black writers, artists and musicians," said Massey. "It was a true renaissance."

Massey was in the mathematical sciences research center but rubbed elbows with researchers in electrical engineering and physics and many other fields. On a given day he might have bumped into Jim West, co-inventor of the modern day microphone, and then the next minute have run into the physicist Shirley Jackson, now president of Rensselaer Polytechnic Institute.

"There was no shortage of black individuals who were high-achieving in their respective fields," said Massey. "But they were also dedicated collectively to creating a legacy for the next generation."

Massey said that his mentoring philosophy grows out of the Bell Labs approach — and out of the notion that small steps cumulatively will lead eventually to momentous change.

Bell Labs hired its first African American scientist, W. Lincoln Hawkins, in 1942 but it would be 20 more years before it hired another African American researcher. By the time Massey first worked there, Bell Labs had a critical mass of black scientists.

"We see what happened at Bell Labs with Lincoln Hawkins," said Massey. "Imagine what could have happened at Princeton or any other research institution for that matter" if someone of Hawkins' stature had been hired back in the 1940s.

Massey, his protégés say, may well become to Princeton what Hawkins was to Bell Labs: a fulcrum that tips the institution into becoming a mecca for African American scientists.

"The more soldiers you have, the more soldiers you can train," observed Jennings. Massey and his protégés Bertozzi, Jennings, Petters and Hampshire all received graduate school funding from Bell Labs fellowships. Massey served as a mentor in the Bell Labs fellowship programs for minorities and women — the same programs in which he participated as an undergraduate. He conducted joint research with students funded by these programs over the summer, publishing seven papers with students as co-authors. In addition, he included his students as speakers at telecommunications conferences.

#### Queueing Up

Çinlar, who came to Princeton in 1985 and served as the founding chair of the Department of Operations Research and Financial Engineering, continued his efforts to tempt Massey back into academia for two decades. Finally, in 2001, Massey relented and came to Princeton as a full professor.

"One thing I learned from my experience with Bill Massey is that you have to keep after valuable people," said Çinlar. "You have to pursue them over quite a long period of time and get used to being spurned."

At Bell Labs, Massey had begun to make his mark in queueing theory by analyzing it from a dynamic rather than a static point of view. At Princeton, he has continued that research and has taught courses in queueing theory and Monte Carlo simulations.

Queueing theory is a key mathematical tool used to solve many problems of providing communications services, from the old-fashioned telephone service to Internet phenomena like Napster and YouTube. The success of a business model for a wireless telephone provider, for example, might hinge on how efficient that provider is at applying queueing theory.

"Even simple queuing theory involves a lot of complex mathematics and statistics, and understanding the type of queuing systems that arise in modern communication systems requires new mathematics and new analysis," said Douglas Arnold, director of the Institute for Mathematics and its Applications and an organizer of this year's Blackwell-Tapia Conference at which Massey will receive his award. "This is where Bill Massey has made outstanding contributions."

A much cited paper of Massey's showed how to create a mathematical description of wireless networks in which calls are being placed and received from moving vehicles. In 2005, The Journal of Blacks in Higher Education named Massey the second most frequently cited black mathematician in the world. Massey also has a patent on an optimal server staffing algorithm for call centers that is based on his research in queueing.

Three days after receiving the Blackwell-Tapia Prize, Massey (along with Robert Vanderbei) will be inducted as a fellow of the Institute for Operations Research and the Management Sciences — an honor accorded to fewer than 1 percent of the institute's membership and made in recognition of significant research contributions.

#### **Coming Full Circle**

In addition to carrying on his research from Bell Labs, Massey has built upon the mentoring efforts he began there. He has served as a board member for the National Association of Mathematicians, a mathematics organization for underrepresented minorities, and has hosted its annual presentations by doctoral recipients that provide students with an opportunity to showcase their research at a major international conference.

"Bill always coupled his mentoring with a lot of mathematical discourse," said Arlie Petters, who moved on to MIT after three years of graduate work at Princeton and earned his Ph.D. there. "It created an ideal setting for addressing a variety of ideas and techniques. I enjoyed those grad school days largely due to his mentoring style."

Massey also has been an active participant in the Blackwell-Tapia Conference, held every other year in honor of David Blackwell and Richard Tapia, two mathematical scientists who inspired many African American, Latino/Latina and Native American mathematicians. In receiving the third biennial Blackwell-Tapia Prize at this year's conference, he follows in the footsteps of Petters, who was the first recipient of the prize in 2002.

During the 1980s and 1990s, Massey was also a driving force in the Association of Black Princeton Alumni. "The reason ABPA is one of the best organized and largest affinity groups among Princeton alumni is due in part to his legacy," said Jennings. Massey served as moderator of a panel discussion about careers in academia at Princeton's recent "Coming Back and Looking Forward" conference for black alumni.

One former Princeton student who attended the Princeton conference described Massey's mentoring as a kind of "tyrannical affection." "If Bill takes a liking to you, you are in for a rigorous friendship," he said.

Jennings acknowledged that Massey can be tough on his mentees. "Bill holds himself to a very high standard and if you are going to do business with him you had better hold to that standard as well. Bill likes to brag that I had never worked hard until I met him. He is a refreshing combination of brilliance, perseverance and concern for others."

But, Jennings emphasized, Massey is in the business of creating peers, not acolytes.

"As I mature as a researcher my appreciation of Bill continues to grow," said Jennings. "I have always been able to confide my research dreams and aspirations to him. But our relationship has experienced an evolution. Now I have an independent perspective that I hope he benefits from as much as I benefit from his insight. We have come full circle."

by Teresa Riordan reprinted from the Oct. 23, 2006, Princeton Weekly Bulletin

#### **USCOTS 07**

United States Conference on Teaching Statistics Announcement and Call for Contributors!

The second biennial United States Conference on Teaching Statistics (USCOTS 07) will be held on May 17-19, 2007 at the Ohio State University in Columbus, Ohio, hosted by CAUSE, the Consortium for the Advancement of Undergraduate Statistics Education. The target audience for USCOTS is teachers of undergraduate and AP statistics, from any discipline or type of institution. Teachers of statistics at two year colleges and those planning a career in statistics education are especially encouraged to attend.

The theme of USCOTS 07 is "Taking Statistics Teaching to the Next Level." Some topics include developing the second course; increasing student motivation; taking student learning to the next level using the latest technology; and implementing the GAISE guidelines.

USCOTS 07 is a 'hands-on' conference with plenary sessions from leaders in statistics education, working

breakout sessions, interactive idea exchange forums, and networking opportunities. The distinguished plenary speakers for USCOTS 07 are Jessica Utts, Allan Rossman, Paul Velleman, Dick DeVeaux, and Mike Shaughnessy.

We are calling for proposals for the Idea Exchange Forum (formerly known as the spotlight sessions) for USCOTS. This forum provides an opportunity for conference participants to display, demonstrate, present, and discuss their favorite examples, activities, methods, and ideas. Due to limited space, the Idea Exchange Forum will be limited to 80 presenters. Proposal details available: http://www.causeweb.org/uscots/Call%20 for%20contributions.pdf

Registration is \$150 before April 1, 2007, and \$200 thereafter. Registration includes conference lunches and a banquet dinner. Resource materials on teaching statistics will also be provided to all participants. Some registration grants are available.

To register for USCOTS 07, visit the website at www.causeweb.org/uscots. For more information, contact Dr. Deb Rumsey, USCOTS 07 Program Chair: rumsey@stat.ohio-state.edu.

# The Inter-Disciplinary Research Experience for Undergraduates at Florida A&M University

The Florida A&M University will sponsor the fifth Inter-Disciplinary Research Experience for Undergraduates (FAMU-IREU). Participants will consist of undergraduate students majoring in chemistry, biology, physics, computer science, engineering and mathematics. The FAMU-IREU will be offered to students who will be classified as juniors or seniors during the following Academic Year. Participants will work in inter-disciplinary teams to solve real-world problems. Team members will blend the theories from these disciplines to develop and analyze solutions to complex problems taken from scientific, industrial and governmental organizations. Each team will develop a research paper that includes computer simulations and analyses.

The FAMU-IREU Program will be held during the months of June and July. Each participant will receive a \$2,500 stipend and an allowance for housing, meals, and travel.

We request that you share this information with your students and encourage them to apply. The point of contact person is Dr. Roselyn Williams, P. O. Box 5766, Tallahassee, Florida 32314-5766, PH (850) 412-5236, FAX (850) 599-8571, E-mail Roselyn.Williams@famu.edu.

#### **Examples of Possible Research Topics**

Group Theory and Its Application to Physical Problems: This team of students will look at groups of symmetry of molecules and crystals. It will relate the physical properties of these bodies to the subgroups, conjugate elements, cosets, factor groups, normal subgroups, composition series, direct product of groups and other group theoretical concepts. It will begin with a detailed study of the point symmetry groups. Then the team will represent molecules, crystals, and other geometric figures as subsets S in three-space, and find matrix representations of the groups acting on S. The team will also analyze the symmetrical properties of the atoms. It will look at the group properties of other physical notions such as parity, tensor character, spinor, and angular momentum. Other interesting investigations may be made using different coordinate systems, different geometries, or novel geometric figures. The topics discussed will include group theory, geometry, linear algebra, and select topics in chemistry and physics.

**Economic Growth Theory:** This team will analyze various mathematical models of economic growth theory. It will adjust these models to describe economies comprised of sectors of varying characteristics. For example, it will analyze the economic impact that a total population has on poor and under privileged sectors and the economic impacts of interactions among under privileged and privileged sectors. The team will review articles by Sir Arthur Lewis, a 1979 Nobel Laureate in Economic Sciences. The topics discussed will include multivariable calculus and the calculus of variation.

**Educational Statistics:** A major responsibility of today's university programs is to demonstrate quantitatively the success of the programs. Using simulated data, this team will design a model academic department and will use various statistical methods to demonstrate that the program is successful in meeting its performance criteria. The team will develop various quality control techniques to assess and improve the department's program.

# The Smith College Women in Mathematics Program

Smith College was the undergraduate alma mater of the first two African America women to get the Ph.D. in Mathematics. The Smith College Mathematics Department is starting two new and unusual programs for women next fall. They will form the core of Smith's Center for Women in Mathematics and they will be supported by a substantial grant from the National Science Foundation. Smith is hoping minority students will be a significant presence in the Center.

The first program is a junior year program. Majors from other schools around the country will spend their junior year at Smith taking a concentration of mathematics courses. They will benefit from a department centered on women, a relatively rich curriculum (approximately 20 different upper-level courses per year), and the small classes of a liberal arts college. Smith and the NSF will make up the difference between Smith's fees and those at the students' home institutions.

The second program is a post-baccalaureate program in mathematics. It's for women who discovered their love for mathematics too late to major in the subject, or too late to have a major strong enough to get into a good graduate school. It's a chance for women with BAs to return to college and spend a year taking undergraduate mathematics, their expenses covered by Smith and by the NSF.

Please visit the website: www.math.smith.edu/center

If you know of women who might be interested in either program, tell them to email Ruth Haas, the chair of the mathematics department: rhaas@smith.edu.

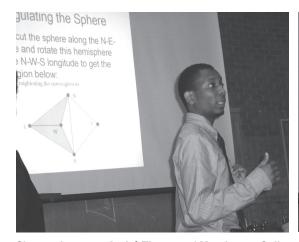
Ruth Haas and Jim Henle, co-directors, The Center for Women in Mathematics

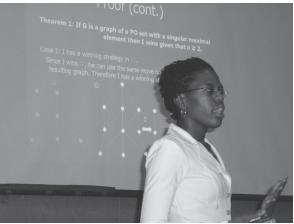
# **Please Pay Your NAM Dues**

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# Howard University Hosts Undergraduate MATHFest XVI

Over one hundred mathematics enthusiasts gathered at Howard University to celebrate the joy of mathematics and to pass this joy on to the undergraduate majors representing over a dozen schools. The conference was held November 9-11, 2006. There were nineteen student presentations from schools including, Mississippi Valley State University, Savannah State University, Spelman College, Morehouse College, Florida A&M University, Central State University, the University of Maryland, Howard University, and Morgan State University. Greetings were given by Dr. James Donaldson, Dean of the College of Arts and Sciences, Howard University; Dr. Leon Woodson, Executive Secretary of NAM; President Nathaniel Dean; and Vice President Dawn Lott.





Shown above are André Thomas of Morehouse College speaking on "Triangulation of the Torus and the Sphere" and Carmen Smith of Spelman College speaking on a "Partial-Order Game".

There were three invited addresses. Dr. Irene L. Moshesh, who recently completed her doctoral program at Howard University, spoke on the topic, "Image Partition Regularity of Affine Transformations". Dr. Leon Woodson spoke on "The Riordan Group". Chase G. Adams, III, who has successfully defended his dissertation and should soon receive his Ph.D. from Howard University, spoke on the "Largeness of the set of finite sums of sequences in N". Dr. Beverly Anderson, Vice President for Academic Affairs at The University of the District of Columbia, of Howard University delivered the J. Ernest Wilkins Jr. Lecture. She spoke of the life and legacy of Professor James E. Joseph. Professor Joseph taught at Howard University and had a distinguish career at the frontier of mathematics in spite of having no Ph.D. He published over 44 papers on Topology and was the first invited speaker in NAM's Claytor lecture series.

There were three panel discussions; (1) "How to Successfully Negotiate Graduate Study in the Mathematical Sciences"; (2) "How to Successfully Negotiate Graduate School, Graduate Student's View"; and (3) "Research and Professional Careers in the Mathematical Sciences". Dr. Duane Cooper of Morehouse College gave a heartfelt memorial to a mentor from his graduate school years, the late Dr. Leon Henkin, Professor Emeritus at the University of California, Berkeley, who passed on November 1, 2006.

Undergraduate students established new friends, and met graduate faculty and representatives from industries. Some of the graduate programs that were represented were Miami University, Oxford Ohio; Morgan State University; Howard University; Carnegie Mellon; Delaware State University; and the University of Maryland; North Carolina State University; and the State University of New York, Buffalo. Industry representation included the National Security Agency and National Institute of Standards and Technology.

Early nurturing through research and the exposure to role models and practitioners of research have led many people, especially those Americans who are underrepresented in the mathematical sciences, to pursue graduate study leading to earning the doctorate degree and research careers. The National Association of Mathematicians believes it to be very important to hold an annual mathematics undergraduate research conference, to engage in concrete efforts on an annual basis in order to directly influence the number of underrepresented Americans who pursue graduate study, leading to a doctoral degree in mathematics; to get doctoral granting graduate institutions to make a commitment to provide a supportive environment to assist these students in succeeding; and to permit these perspective graduate students to interact with current graduate students studying mathematics. The next NAM MATHFest will be held in region A.

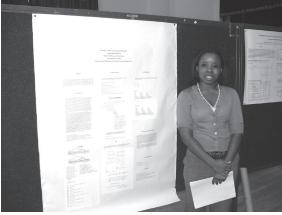
# Mathematical Modeling and the Challenge of Infectious Diseases

# **HBCU Participation at the DIMACS South African Workshop**

by Dr. Asamoah Nkwanta, Morgan State University

The Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), in collaboration with the South African Centre of Excellence for Epidemiological Modeling and Analysis (SACEMA), the African Institute for Mathematical Sciences (AIMS), and the University of the Witswatersrand (Wits), Johannesburg, held a 3-day Workshop on mathematical modeling and infectious diseases in Africa. The workshop was held at the School of Computational and Applied Mathematics at the University of the Witswatersrand in Johannesburg, South Africa on September 26-28, 2006.

Dominic Clemence of North Carolina State A&T State University, Ronald Mickens of Clark Atlanta University, Abdul-Aziz Yakubu of Howard University, and Asamoah Nkwanta of Morgan State University organized the HBCU participation in collaboration with the workshop organizing committee. The organizing committee consisted of Fred Roberts of DIMACS, Wayne Getz of the University of California at Berkeley, Abba Gumel of the University of Manitoba, John Hargrove of SACEMA, Edward Lungu of the University of Botswana, and Dominic Clemence.

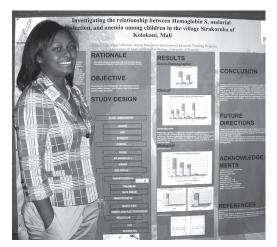


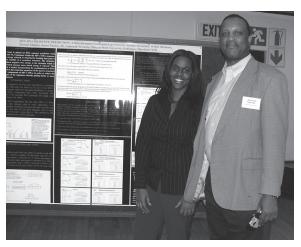


Evelyn Thomas

Abba Gumel

The workshop brought together scientists from the United States and various African countries, as well as junior researchers and graduate students. The purpose of the workshop was to expose the US scientist, researchers, and students to the special challenges of modeling the spread of infectious diseases in Africa and the opportunity to collaborate with the African scientist, researchers, and students in developing and applying tools of mathematical modeling to the tremendous health problems caused by such diseases as HIV/AIDS, malaria, and tuberculosis. The workshop provided an agenda for future collaborations between US, and African researchers working in the area of mathematical modeling and epidemiology. HBCU participation at the workshop consisted of Abdul-Aziz Yakubu and Asamoah Nkwanta who both presented research papers at the workshop. Ayanna Alexander of Morgan State University, and Bassidy Dembele, Nicole Ramsey, and Evelyn Thomas of Howard University presented student research posters. Mingxiang Chen of North Carolina State A&T attended the workshop. More detailed workshop information can be found at the website: http://dimacs.rutgers.edu/Workshops/Diseases/.





**Nicole Ramsey** 

Ayanna Alexander and Asamoah Nkwanta

A follow-up workshop and short course is now being organized for June 2007. The short course will be held at AIMS in Cape Town, South Africa, on June 11-22, 2007. The aim of the course is to train the US and African graduate students in mathematical epidemiology and the control of emerging and re-emerging diseases. The 3-day workshop, June 25-27, will be a culmination of the short course, enabling the students to interact with US and African researchers who are currently actively involved in the modeling of diseases in Africa. HBCU participation will also be part of the follow-up workshop and short course. The follow-up workshop information can be found at http://dimacs.rutgers.edu/Workshops/CapstoneAfrica/. Applications and information for the two-week short course can be found at http://dimacs.rutgers.edu/Workshops/ShortcourseAfrica/.

# **Job Openings**

Recall that for several years, NAM has had a web site with listings of open positions. This process is open to advertisers in the Newsletter. Advertisements too late for the publication date appear there. The remainder of the advertisements appear there six or more weeks before they appear in print in the Newsletter. See the editor's web site within MAD: http://www.math.buffalo.edu/mad/NAM/

# **University of North Carolina at Greensboro**

Applications are invited for two tenure-track assistant/associate professorships in computational mathematics, beginning Fall 2007. Preference will be given to applicants specializing in computational number theory /computational algebra/ computational combinatorics/ modeling. Applicants must have or anticipate a Ph.D. in mathematics by August 2007. Duties include teaching, research, and university service. The department offers BS, BA, MA degrees in mathematics, and anticipates beginning a Ph.D. program in computational mathematics in fall, 2008.

The application should include an AMS cover sheet, curriculum vitae, description of current research, statement of teaching philosophy, and three letters of recommendation, including one letter addressing the candidate's teaching abilities. Send to: Chair, Mathematics Search Committee, Department of Mathematics and Statistics, University of North Carolina at Greensboro, Greensboro NC 27402.

Applications received by January 15, 2007 will be guaranteed full consideration. EEO/AA We cannot process email applications.

#### **Mathematical Association of America**

The Mathematical Association of America (MAA) is seeking applicants for the position of Associate Secretary. The Associate Secretary oversees the scientific programs of the MAA's two national meetings, the Joint Mathematics Meeting, held together with the American Mathematical Society (AMS), and the MAA summer meeting, MathFest.

The Associate Secretary is elected by the Board of Governors for a five-year, renewable term and serves as a member of the Board. The new Associate Secretary will spend at least one year as Associate Secretary Elect before taking office as Associate Secretary in February 2009. Compensation and expenses are negotiable and dependent on the requirements and practices of both the MAA and one's home institution. The position is part-time but requires a commitment of time distributed through the year.

For a more detailed description of the position see www.maa.org and the announcement in the November issue of Focus, the newsletter of the MAA.

Send resume and letter describing interest in the position and relevant experiences to: Associate Secretary Search Committee; Mathematical Association of America; 1529 18<sup>th</sup> Street Washington, DC 20036; email: ceuving@maa.org; fax: 202-387-5948

Applications from individuals from underrepresented groups are encouraged. Additional information about the MAA may be found on MAA's website: www.maa.org. AA/EOE

### **American University**

Tenure-track Assistant Professor in Mathematics, American University, beginning Fall 2007. PhD required. American University is an AA/EEO employer, committed to a diverse faculty, staff, and student body. Minority and women candidates are encouraged to apply. For position information and application instructions, see math.american.edu/positions, or contact the Department of Mathematics and Statistics at (202) 885-3120.

# **Carnegie Mellon University**

The Department of Mathematical Sciences at Carnegie Mellon University expects to make a tenure-track appointment at the Assistant or non-tenured Associate Professor level beginning September 2007.

Applicants should be able to teach in the inter-disciplinary Ph.D. program in Algorithms, Combinatorics and Optimization and contribute to the department's research program in this area. Applicants should send a vita, list of publications, a statement describing current and planned research, and arrange to have at least three letters of recommendation sent to:

ACO Appointment; Department of Mathematical Sciences; Carnegie Mellon University; Pittsburgh, PA 15213.

The deadline is January 15, 2007. Carnegie Mellon is an Affirmative Action/Equal Opportunity Employer and

# **Georgia College and State University**

The Department of Mathematics at Georgia College & State University invites applications for a tenure-track position in mathematics and a tenure track position in mathematics education, at the rank of Assistant Professor. A terminal degree is required for each position. Excellence in teaching, scholarly activity, and service are requirements for promotion and tenure. Employment will begin August 1, 2007. GCSU is Georgia's Public Liberal Arts University, with a strong commitment to student-centered education in a residential setting. For more information about these positions and application instructions, see http://www.gcsu.edu/facultyjobs. Review of applications will begin November 27, 2006. GCSU is an Equal Opportunity/Affirmative Action institution.

# The College of Wooster

The Department of Mathematics and Computer Science at The College of Wooster invites applications for a tenure track position as Assistant Professor of Mathematics, beginning August 2007. A Ph.D. in mathematics is required. Teaching duties include elementary and advanced courses in mathematics and directing student independent study projects. Participation in the College's interdisciplinary program is expected. Visit www. wooster.edu/math for a more complete job description and specific instructions on how to apply.

Wooster seeks to ensure diversity by its policy of employing persons without regard to age, sex, color, race, creed, religion, national origin, disability, veteran status, sexual orientation, or political affiliation. The College of Wooster is an Equal Opportunity/Affirmative Action Employer.

#### **Wake Forest University**

Applications are invited for a tenure track position in computational mathematics at the assistant professor level beginning August 2007. Duties include teaching at the undergraduate and graduate levels and continuing research. A Ph.D. in mathematics or a related area is required. Research areas such as numerical analysis, numerical linear algebra, numerical optimization, numerical solution of differential equations, and other areas in computational mathematics will receive first consideration. The department has 18 members and offers both a B.A. and B.S. in mathematics, with an optional concentration in statistics, and a B.S. in each of mathematical business and mathematical economics. The department has a graduate program offering an M.A. in mathematics. Applicants are encouraged to submit an AMS cover sheet, complete curriculum vitae, research statement, teaching statement and at least 3 letters of recommendation using the service provided by the AMS at http://www.mathjobs.org. Hard copy can be sent to: Stephen Robinson, Department of Mathematics, Wake Forest University, P.O. Box 7388, Winston-Salem, NC 27109-7388. AA/EO employer.

### University of Missouri-St. Louis

Tenure track positions in mathematics/statistics, Fall 2007. Candidates with a PhD in mathematics, statistics or closely related area who have strong research and teaching potential will be considered. For details visit http://www.math.umsl.edu. Applications should be made through www.mathjobs.org. Review of applications will begin January 2 and will continue until the positions are filled.

### **Case Western Reserve University**

Department of Mathematics, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, Ohio. Tenure-track and temporary positions. Open rank, however appointment at the rank of assistant professor is strongly preferred. Tenure track in area of numerical analysis/scientific computing to enhance Department program. For more information, see http://www.case.edu/artsci/math/employment.htm. The successful tenure-track candidate will hold the Ph.D. or equivalent and have, relative to career stage, a distinguished record of publication, research, service, and teaching. Compensation commensurate with qualifications. Applications will be considered on receipt; applications will be accepted until position is filled. Electronic applications to: James Alexander, math-faculty-position@cwru.edu, consisting of a letter of application, AMS cover sheet, CV, and have three letters of reference sent. Case is a recipient of an NSF ADVANCE institutional transformation grant to increase the participation of women in science and engineering. Case Western Reserve University is committed to diversity and is an affirmative action, equal opportunity employer. Applications from women or minorities are especially encouraged.

# **Bellarmine University**

Tenure-track Assistant Professor position available, starting August 2007. The position requires the ability to teach upper-level probability & statistics, to otherwise enhance our program in actuarial science, and to teach service courses in mathematics. Ph.D. required or anticipated by fall 2007. Experience at teaching with technology is highly desired.

The department offers both a mathematics major and an actuarial science major, plus preparation for secondary teaching. We have our own computer teaching laboratories.

Bellarmine University is an independent Catholic liberal arts institution which emphasizes excellent teaching in both major and service courses. We are in a period of enrollment growth and Mathematics plays an active role across the university. Faculty has the opportunity to teach in the interdisciplinary core curriculum and in the honors program. For more information about Bellarmine and the Mathematics Department, consult <a href="http://www.bellarmine.edu/cas/mathematics/index.asp">http://www.bellarmine.edu/cas/mathematics/index.asp</a> .

Bellarmine University (2001 Newburg Road, Louisville, KY 40205) is located in a residential area within Louisville, KY, a major metropolis with a thriving arts scene and a nationally recognized park system.

Send a letter of application, vita, statement on teaching, copies of transcripts, and three letters of recommendation to: William Fenton, chair. Please indicate whether you plan to attend the Joint Meetings. Consideration will begin in early December and continue until the position is filled. A department representative will attend the Joint Meetings.

Women and minorities are encouraged to apply. Bellarmine is an Equal Employment/Affirmative Action Employer.

### **University of Arkansas**

University of Arkansas Department of Mathematical Sciences invites applications for a tenure-tracked Assistant or Associate Professor in Mathematics Education. The position requires: (1) mathematics Ph.D. with experience in K-12 education or mathematics education Ph.D. with equivalent of Master's degree in mathematics; (2) demonstrated potential for productive research and teaching a wide range of undergraduate mathematics courses including courses for K-12 teachers. In addition to effective teaching and productive research, responsibilities of the position include K-12 outreach activities, development of educational projects competitive for external funding, and collaboration with others in science and mathematics education in the University. Women and minorities are especially encouraged to apply. The University of Arkansas is an equal opportunity, affirmative action institution. For more information about the position, and how to apply, visit http://www.uark.edu/depts/mathinfo/MathEdFlyer2006.pdf . The selection process begins November 15, 2006; however, applications will continue to be accepted until the position is filled. For more information on the University and the Department go to http://www.uark.edu/ and http://www.uark.edu/depts/mathinfo/.

# Saint Mary's College

The Department of Mathematics at Saint Mary's College is accepting applications for a tenure-track position to begin in August, 2007. Requirements include a Ph.D. in mathematics and an interest in teaching K-12 mathematics education or a Ph.D. in mathematics education with graduate coursework in mathematics. Primary responsibilities are teaching undergraduate courses in mathematics and preparing pre-service teachers for their profession through mathematics education courses. In addition, duties include individual consultation with students, directing undergraduate projects in mathematics, appropriate scholarly and professional activities, and college service. Numerous opportunities exist for teaching, consulting, and research collaborations across campus as well as in the community. The successful candidate will be strongly committed to undergraduate teaching and able to contribute to the diversity and excellence of the academic community through their research, scholarly activity, and service.

Applications which are completed by December 4, 2006 will be given full consideration. However, applications will continue to be accepted until the position is filled. A complete application includes a curriculum vitae with the candidate's philosophy of teaching, post-secondary transcripts, and three letters of reference, at least two addressing teaching.

Saint Mary's College, with an enrollment of 1600 and ranked number one in the Midwest by U. S. News, is a four-year Catholic liberal arts college for women sponsored by the Sisters of the Holy Cross. Saint Mary's College is an **Equal Opportunity Employer**. The College has a strong institutional commitment to diversity and seeks applications from historically underrepresented racial and ethnic minority groups, those who have had multicultural experience, and those who can demonstrate a commitment to diversity.

Application materials should be sent to: Donald E. Miller, Chair; Department of Mathematics; Saint Mary's College; Notre Dame, IN 46556 dmiller@saintmarys.edu

# The University of New Mexico

Pending approval, the University of New Mexico invites applications for a probationary position leading to a tenure decision at the Assistant Professor level in Analysis beginning Fall 2007. Preference will be given to outstanding candidates in harmonic analysis, partial differential equations (PDE's), and probability. Minimal qualifications include a Ph.D. in mathematics or related area. You may obtain additional information and apply on-line at http://math.unm.edu/employment/facMathForm.htm or applicants can send a C.V. and have three letters of recommendation sent to: Search Committee, Analysis, Dept. of Math & Stat, MSC03 2150, 1 University of New Mexico, Albuquerque, NM 87131-0001. We shall begin reviewing applications on December 11, 2006. **EE/AA** 

# Westfield State College

Assistant/Associate Professor of Mathematics - Tenure Track- two positions:

Westfield State College, a selective public institution, offers undergraduate and graduate programs to over 5,000 students. The most residential of the nine Massachusetts state colleges, Westfield State takes pride in its warm atmosphere, small class sizes, and attractive campus. Westfield State College is committed to building a culturally diverse faculty and staff, dedicated to teaching and working in a multi-cultural environment. The College strongly encourages applications from women, minorities, and individuals with disabilities.

Two tenure-track Assistant or Associate Professor positions to begin September 2007. Applicants must have an earned Ph.D. in Mathematics, Statistics or Mathematics Education by August 2007. The position is open to all areas of specialization in mathematics and mathematics education. Candidates are expected to demonstrate broad potential for excellence in teaching, scholarship, and service.

Our department supports active major and minor programs, teacher education programs, a vibrant math club, undergraduate research, and internship programs. Departmental research and scholarship span many areas of mathematics, mathematics education, and teacher education. Our faculty members provide campus-wide leadership and scholarship in the use of cooperative learning, teaching with technology, guided discovery learning, and other areas of teaching innovation.

An online application is required-Applicants interested in an Assistant Professor position should complete an application and apply it to both positions in order to be considered in both pools. Review more detailed job descriptions, minimum qualifications, and apply by following the links below:

Assistant or Associate Professor: http://jobs.wsc.ma.edu/applicants/Central?quickFind=50539 Assistant Professor: http://jobs.wsc.ma.edu/applicants/Central?quickFind=50561 Applications received by January 15, 2007 will receive full consideration. Positions open until filled. If you need assistance, please call: 413-572-8158.

An Affirmative Action/Equal Opportunity Employer

# **Purdue University, STATISTICS**

The Department of Statistics at Purdue University invites applications for tenure-track positions beginning August 2007. A number of positions are available at the Assistant Professor level; senior positions will be considered for highly qualified applicants. Applications from outstanding candidates in all areas of statistics will be considered. Of particular interest to the Department are candidates with a research record in the areas of high dimensional data. Also, the area of bioinformatics and the area of spatial statistics are part of a College of Science-wide hiring effort, COALESCE, and applicants in these areas should address the multidisciplinary contributions of their work in their research statements.

The Department of Statistics offers a stimulating and nurturing academic environment. More than thirty tenured and tenure-track faculty members direct research programs in a broad range of areas. Further information about the department is available at: http://www.stat.purdue.edu. Information about the College of Science multidisciplinary hiring effort and its targeted areas can be found at: http://www.science.purdue.edu/COALESCE.

All applicants should hold a PhD in Statistics, or a related field, be committed to excellence in teaching, and have demonstrated strong potential for excellence in research. Salary and benefits are highly competitive. Please visit: https://applications.science.purdue.edu/statistics/ to apply online or to see where hard copy application documents can be sent. Applicants matching one search may be considered in other relevant searches when appropriate. Review of applications will begin on December 1, 2006, and will continue until the positions are filled. Purdue University is an **Equal Opportunity/Equal Access/Affirmative Action employer** and is committed to building a diverse faculty of excellence.

# **Monmouth University**

Full time lecturer position (non-tenure track) to teach entry level and remedial mathematics courses, 4 courses per semester. Appointment renewable up to 5 years. The position requires at least a Master's degree in mathematics, applied mathematics, statistics, or mathematics education. Candidates with a Master's also need K-12 level teaching experience for at least ten years. Send cover letter, CV, teaching statement, transcripts, and three letters of reference to: Lecturer Search Committee, c/o Doreen Brown, Department of Mathematics, Monmouth University, West Long Branch, NJ 07764. Applications must be postmarked on or before February 5, 2007 to receive full consideration. Monmouth University is an Affirmative Action/Equal Opportunity Employer.

# **University of Maryland at College Park**

#### Chair of the Mathematics Department

The College of Computer, Mathematical and Physical Sciences at the University of Maryland is conducting a national search for the next Chair of its Mathematics Department. The Chair will be expected to lead one of the best research and teaching departments in the country to even greater strengths and reputation, while maintaining a personal research program commensurate with the status of a leading mathematician. The search seeks to identify a candidate who will offer leadership, innovation and imagination in working with faculty, students and staff to raise the department's education programs and its research profile. In their letter of application candidates should address their qualifications for this responsibility, and their sense of the direction and opportunities appropriate for a department of this caliber.

The Mathematics Department is currently ranked 8<sup>th</sup> among public universities, and its faculty include a Fields medalist, a Wolf Prize winner, a Japan Prize winner, and numerous Sloan Fellows. With 66 professorial faculty, 24 non-tenured lecturers, 232 graduate students, 324 undergraduate majors and a staff of 12, it offers undergraduate degrees and graduate programs in Mathematics and Statistics, and a professional masters program in the Mathematics of Advanced Industrial Technology. It also jointly administers an interdisciplinary graduate program in Applied Mathematics and Scientific Computation. The faculty conduct research across a broad spectrum of the mathematical sciences, including, but not limited to: Algebraic Geometry and Number Theory, Applied and Computational Harmonic Analysis, Chaos and Computational Dynamics, Dynamical Systems, Geometry and Topology, Logic, Numerical Analysis and Computation, Partial Differential Equations and Ap-

plications, Probability and Statistics (including Applied Statistics), and Representation Theory.

For best consideration, apply by January 1, 2007 by sending a letter of application, a curriculum vitae and the names of at least five references to:

Mathematics Chair Search Committee; c/o Ms. Chris Fuller 3400 A.V. Williams Building; CMPS Dean's office University of Maryland; College Park, MD 20742

The combination of referees should be able to address your leadership ability, your approach to undergraduate and graduate education, and your research accomplishments.

The University of Maryland is **an AA/EEO** employer and is actively seeking applications from women and minority candidates.

### **Wright State University**

#### Department Chair - Mathematics and Statistics

Wright State University invites applications for the position of Chair, Department of Mathematics and Statistics. Housed in the College of Science and Mathematics, the department has thirty professorial rank faculty lines (tenure and tenure track) and ten full time lecturers and instructors. It offers undergraduate and masters degree programs. A statistical consulting center is housed within the department. The department has strong outreach activities with the region's K-12 schools and operates a program to assist minority students at Wright State. Faculty research is emphasized and specialties include analysis, applied mathematics, discrete mathematics, mathematics education, probability, and statistics. More information is available at http://www.math. wright.edu/.

Candidates must have a Doctorate in Mathematics, Statistics, or a related area and a record that warrants appointment as a full professor. This record must include excellence in both research and teaching, and leadership experience in program development and administration. Preferred qualities include the ability to provide leadership in a cooperative, supportive collegial environment, experience with undergraduate and graduate programs, sensitivity to students, good interpersonal skills, and effective communication with scientific, industrial, and urban educational communities.

Review of applications will begin on January 2, 2007 and continue until the position is filled. Nominations are welcome. Applicants should submit a complete vita, a brief statement of academic leadership philosophy, and names, email-addresses, and telephone numbers of five references. Applications may be submitted either electronically (documents in PDF or MS Word format) at chairapp@math.wright.edu, or mailed to M&S Chair Search Committee, 134 Oelman Hall, College of Science & Mathematics, Wright State University, Dayton OH 45435. WSU is **AA/EOE**.

# Frederick Community College

The Department of Mathematics at Frederick Community College in Frederick, Maryland invites applications for a full-time, ten-month faculty position at the assistant professor rank (#352466), to begin August 1, 2007. Candidates must have an M.A., M.S., or Ph.D. in Mathematics or related field. Strong applications will show evidence of excellence in teaching, experience with appropriate use if instructional technology, and dedication to active student learning. The typical teaching load of 15 credit hours per semester includes both developmental and freshman/sophomore level courses. Other responsibilities include departmental and college service and an active interest in professional development. For a complete position announcement and directions to apply, visit us online http://www.frederick.edu/jobs.

Applications accepted exclusively online through January 2, 2007. For assistance with our online application call 301-846-2672. FCC, an equal opportunity employer, values campus diversity in students and staff and encourages members from historically under-represented groups to apply.

# **Stony Brook University, Center for Computational Science**

Six Positions—100 Teraflops

**Stony Brook University** seeks candidates with outstanding potential for six tenure-track or tenure positions in the area of large-scale computational science. The University is in the process of acquiring a large (100 Teraflops class) supercomputer to serve as the core hardware for a newly formed New York Center for Computational Science (NYCCS). NYCCS will provide a home for supercomputing at Stony Brook University and Brookhaven National Laboratory.

Promising scientists who can demonstrate expertise and interest in high-performance computing and/or its utilization are urged to apply. The University will conduct a broad search ranging from traditional computational areas such as those in the physical and life sciences to emerging areas such as those in the social sciences. A successful candidate will hold a faculty position in a Stony Brook department relevant to his/her interests and will be affiliated with the newly formed New York State Center for Computational Science. The review of materials will begin December 15, 2006 and continue until the six positions are filled.

For more information: Visit the New York State Center for Computational Science web site at www.stonybrook. edu/nyccs.

Required: Ph.D., outstanding research and teaching potential, plus experience in large-scale computational science.

To apply: Please send a resume, a statement of research and career goals, a statement of teaching goals, the proposed Stony Brook departmental affiliation, and the name, institutional address, and email address of three references. For online application visit: www.stonybrook.edu/cjo, posting number F-3191-06-11. Please request that references send letters to the NYCCS Search Committee address below.

Send written materials to: NYCCS Search Committee, Stony Brook University, Stony Brook, NY 11794-1401. Please reference the posting number F-3191-06-11.

Visit www.stonybrook.edu/cjo for complete job description and other employment opportunities. Stony Brook University is an **Affirmative Action**, **Equal Opportunity Educator and Employer**.

# **Southern Connecticut State University**

SCSU is a 4-year comprehensive public institution in New Haven, CT, that offers undergraduate and graduate programs to about 13,000 students. The Department of Mathematics invites applications for a tenure track position at the Assistant/Associate Professor rank beginning August 2007 to teach undergraduate /graduate courses in mathematics, pursue creative activities and participate in department/university service. Teaching load: 12 hours/semester. All areas of mathematics will be considered, although a specialty in algebra or applied mathematics is preferred. Qualifications include a Ph.D. in Mathematics, evidence of quality teaching and potential for scholarly growth. Applicants should submit a letter of application, curriculum vita, graduate and undergraduate transcripts (unofficial OK), statement of teaching philosophy, and three letters of reference, one of which should address teaching. Application materials are to be sent to: Dr. Therese Bennett, Mathematics Department, Southern Connecticut State University, 501 Crescent St., New Haven, CT 06515. Full consideration will be given to complete applications received by February 2, 2007. If you are planning to attend the Joint Meeting of the AMS/MAA in New Orleans, please contact us. SCSU is an AA/EOE. Women and minorities are strongly encouraged to apply.

#### **NAM Calendar**

You can find NAM's Online Conference Calendar and the most recent links to relevant conferences announcements at http://www.caam.rice.edu/~nated/orgs/nam/programs/conferences.html

Many of NAM's events are posted on the NAM headquarters website http://jewel.morgan.edu/~nam/

#### **NAM Board, Elections and Terms**

For Nominations to the NAM Board, Elections and Terms please contact NAM's Majority Institution member and election supervisor Dr. Earl Barnes School of Industrial Systems Engineering; Georgia Institute of Technology; Atlanta, GA 30332-0205 by August 1. Make certain the nominated individual agrees to run, and serve if elected. Send vita data such as Name, email address, School, position, and date of last degree.

All members of the Board shall be elected to a term of office for a period of two years and elections shall be staggered for continuity. Regular elections shall occur in the fall of each year and the persons elected shall be duly installed at the first Annual NAM meeting following the election. The term of each elected position is three (3) years. The editor will be an appointed position for a period of three years. The Editor shall be responsible for the production of the Newsletter and shall perform such other duties as the Board of Directors may specify. The Executive Secretary shall be selected to serve for a period of five (5) years and shall begin the term of office at the Spring Board Meeting. His/her selection must be the unanimous choice of the existing Board of Directors.

The election of the members of the Board of Directors shall be by official ballots and shall be supervised by the Board of Director's Committee on Legislation-Nomination when the election is by mail, all current members in good standing in NAM shall be provided a ballot and given reasonable time to return it.

The election cycle is shown below:

In 2005: President; Region A Representative; Government/Industry Representative.

In 2006: Vice President; Region B representative; Majority Institution Representative

In 2007: Secretary/Treasurer; Region C Representative; Community College Representative.

In 2008: President; Region A Representative; Government/Industry Representative.



# National Association of Mathematics Membership Form (For New Applications and Annual Membership Renewal)

Membership Calendar Year: January 1 - December 31

NameAddress						
Telephone:	Home (	) Office ()				
	Fax (	)	E-mail Address			
		Select Approip	riate Membership Type			
Student : \$15		Individual : \$25	Contributing: \$50	Sustaining: \$75		
		Instutional: \$100	Life : \$400			
		National Associa P.C Tallahassee	ams, Secretary-Treasurer ation of Mathematicians; D. Box 5766 e, Florida 32314-5766 E-mail: roselyn.williams@famu	ı.edu		
		•	ou did not send NAM this informati	on within the past three years.		
List all degre	es you curre	ently hold. Circle the correc	ct degree.			
B.S. or B.A.:						
Other:			1 (1)			
Comr	utional Repr mittee Memb	esentative (for NAM) pership (specify interest):		entative		
Ethnicity: African Amer	rican	Hispanic American	White Other			

# NAM'S Board of Directors

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ETV 219 Department of Mathematics Delaware State University Dover, DE, 19901 http://home.comcast.net/~dawnalott/

NationI Association of Mathematicians P.O.Box 5766 Tallahassee, FL 32307-5766 http://www.famu.edu/acad/colleges/ edu cas/mathteachers/faculty.html

108 Nabrit-Mapp-McBay Hall Department of Mathematics Morehouse College Atlanta, GA 30314 http://facstaff.morehouse.edu/%7Edcooper/

3046 Nash Place, S.E. Washington, DC 20020-3641 http://www.maa.org/summa/ archive/HAWKINSW.HTM

**EST Program** Prairie View A&M University Prairie View, TX 77446

School of Industrial Systems Engineering Georgia Institute of Technology Atlanta, GA 30332-0205 http://www.isye.gatech.edu/people/ faculty/Earl Barnes/

Mathematical and Computational Sciences Division, Gaithersburg, MD 20899-8910 http://math.nist.gov/mcsd/Staff/FHunt/index.html

13103 Balarama Drive Houston, TX 77099-2206 http://198.64.21.135/faculty/Giles/ Jacqueline\_Giles\_Personal\_Web\_

Department of Mathematics 244 Mathematics Building University at Buffalo Buffalo, NY 14260-2900 http://www.math.buffalo.edu/~sww

Department of Mathematics Morgan State University Baltimore, MD 21251-0001 http://jewel.morgan.edu/~woodson/

7768 Emile Street Baton Rouge, LA 70807

Dept. of Math & Computer Science Elizabet State University Elizabeth City, NC 27909 http://www.ecsu.edu/ECSU/AcadDept/ MathandCS/houston/Houston.html

(713) 313-7074 (O), (713) 313-1928 (fax), nd17@txstate.edu

(302) 857-7059 (O) dlott@desu.edu

(850) 412-5236 (O) (850) 599-8480 (fax) roselyn.williams@mail.famu.

(404) 681-2800 x2329 (O) (404) 589-1661(fax) dcooper@morehouse.edu

bhawkins@maa.org whawkins@udc.edu

(409) 857-4710 (O) (409) 857-2118(fax) MaryHawkins@pvamu.edu

(404) 894-2310 (O) èbarnes@isye.gatech.edu

(301) 975-3887 (301) 990-4127 (fax) fern.hunt@nist.gov

(281) 495-5422 (281) 495-5422 (fax) ibgilés@aol.com

(716) 836-8948 (H) (716) 645-6284 ext 156 (716) 645-5039 (fax) sww@buffalo.edu

(443) 885-3776 (O) (443) 885-8216 (fax) (410) 319-4323 woodson@morgan.edu

(504) 771-5180 (O) (504) 771-4762 (fax)

(252) 335-3361 (O) (252) 335-3651 (fax)

#### **Region A** Southeast/West

Alabama Georgia South Carolina Florida Virgin Islands Puerto Rico California Montana Any state not in B or C

#### Region B **Mid-Atlantic**

Delaware District of Columbia Kentucky Maryland New Jersey New York North Carolina Pennsylvania Virginia W. Virginia

#### **Region C: Midwest/Southwest**

Arkansas Louisiana Missouri Oklahoma Illinois Ohio Mississippi Tennessee 19

Texas

# **NAM Newsletter**

Scott Williams
Department of Mathematics
244 Mathematics Building
University at Buffalo
Buffalo, NY 14260-2900