# National Association of Mathematicians



# Newsletter

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# Strength in Numbers



### CAARMS 16

The Conference for African-American Researchers in the Mathematical Sciences (CAARMS) was held in Baltimore, Maryland from June 15-18, 2010. The program included invited speakers, tutorials, and a graduate student poster session.

Top Row: Scott Williams (University at Buffalo, SUNY), Robert Bell (AT&T), James Gear (Midwest Employers Casualty), Solomon Abiola (Student at Princeton University), Donald Outing (United States Military Academy), Angela Grant (Northwestern University)

Bottom Row: Abdul-Aziz Yakubu (Howard University), Gelonia Dent (American Museum of Natural History), Earl Barnes (Morgan State University), CAARMS Organizer William Massey (Princeton University)

### The National Association of Mathematicians (NAM)

publishes the NAM Newsletter four times per year.

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#### **Newsletter Website**

http://faculty.evansville.edu/tw65/NAM.htm

This website has a list of open job and summer positions. It also features past editions of the *Newsletter* and editions from 41.1 are in color. *Join us on Facebook!* 

## From the Editor

Meeting Dr. Audrey Manley, former president of Spelman College, was the highlight of my summer. Being under the plight of the tenure-track process can be a daunting — as well as a surprisingly rewarding one. At the STEM Women of Color Conclave, Dr. Manley sternly whispered to a small group of us: "Hold your head up high! You are Spelman women. Do not complain. You have the resources to do what you need to do. So do it!" I am fortunate that I encounter forces of inspiration that help guide me along the way.

Her words resonated clearly the moment I learned of the passing of Dr. David Blackwell. As I read the words about his death on my computer screen, I cried. These were not tears of sadness; I appreciate greatly the many blessings he bestowed on our community. I then realized that it was up to me to continue his work. His work of mathematics. His work of involvement. His work of mentoring. His work of encouraging others to succeed. I must — and will! — do it.

In this edition, we focus on our strength in numbers. We appreciate the many contributions of Dr. David Blackwell, who, when aged 22 years, became the seventh African-American to earn a doctorate in mathematics. With his **Letters to the editor** should be addressed to Dr. Talitha M. Washington, University of Evansville, Department of Mathematics, 1800 Lincoln Avenue, Evansville, Indiana 47722 or by email to nam\_newsletter@yahoo.com. Email is preferred.

**Subscription and membership** questions should be directed to Dr. Roselyn E. Williams, Secretary-Treasurer, National Association of Mathematicians, P.O. Box 5766, Tallahassee, Florida 32314-5766; (850) 412-5236; email: Roselyn.Williams@famu.edu

NAM's Official Webpage http://www.nam-math.org

**NAM's History and Goals:** The National Association of Mathematicians, Inc., known as NAM was founded in 1969. NAM, a nonprofit professional organization, has always had as its main objectives, the promotion of excellence in the mathematical sciences and the promotion and mathematical development of under-represented minority mathematicians and mathematics students. It also aims to address the issue of the serious shortage of minorities in the workforce of mathematical scientists.

friendly smile, he created a foundation of mathematical and collegial strength. Through his accomplishments, he showed us that we too can attain any level of success within mathematics and maintain an active spirit of mentoring. CAARMS 16 pro-



Talitha Washington and Audrey Manley

vided a vibrant place where researchers and graduate students could meet and share both their work and accolades. One attendee, Angela Grant, will certainly be missed, but her energetic smile and radiant spirit will not be forgotten. Some of us understand the perils of starting undergraduate research programs; and many, including myself, understand the frustrations of obtaining tenure. But fortunately, opportunities such as MathFest and the International Conference on Ethnomathematics bring us together so that we may support, sustain, and assist one another. It is in our numbers that we find a renewed strength.

Enjoy!

### Eminent Statistician David Blackwell Has Died at 91

Robert Sanders

David Harold Blackwell, an eminent statistician at the University of California, Berkeley, who was the first black admitted to the National Academy of Sciences, died Thursday, July 8, of natural causes at Alta Bates Medical Center in Berkeley. He was 91.

Blackwell joined the UC Berkeley faculty in 1954 and was the first tenured black professor in Berkeley's history. He later chaired the Department of Statistics, one of the world's top centers for mathematical statistics, and in 1955, he served as president of the Institute of Mathematical Statistics, an international professional and scholarly society.

A mathematician as well as a statistician, Blackwell contributed to many fields, including probability theory, game theory and information theory. In an interview for the book "Mathematical People: Profiles and Interviews" (1985), he referred to himself as "sort of a dilettante," and said that he chose problems because he was interested in understanding them, regardless of the field.

"He had this great talent for making things appear simple. He liked elegance and simplicity. That is the ultimate best thing in mathematics, if you have an insight that something seemingly complicated is really simple, but simple after the fact," said Blackwell's colleague Peter Bickel, a UC Berkeley professor of statistics who has known him since 1960. "Blackwell was a wonderful man and, given the trials and tribulations of his life, a very optimistic person."

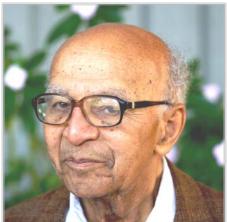
According to Bickel, Blackwell was known for his independent invention of dynamic programming, which is used today in finance and in various areas of science, including genome analysis. He also is known for the renewal theorem, used today in areas of engineering, and for independently developing the Rao-Blackwell Theorem, a fundamental concept in modern statistics.

"He went from one area to another, and he'd write a fundamental paper in each," said Thomas Ferguson, professor emeritus of statistics at UCLA and coauthor with James MacQueen of a 1996 collection of papers in Blackwell's honor. "He would come into a field that had been well-studied and find something really new that was remarkable; that was his forte."

### Teaching

"He never introduced himself as a professor, he always called himself a teacher," said his son, Hugo Blackwell of Berkeley.

David Blackwell, in explaining why he liked to teach mathematics, once said that "in transmitting it, you appreciate its beauty all over again." The American Mathematical Society and the Mathematical Association of America filmed Blackwell and a small group of other mathematicians giving lectures on various topics accessible to undergraduate students and distributed the films to colleges across the country. The film about Blackwell was titled "Guessing at Random."



David Blackwell Photo courtesy of UC Berkeley

During his career, he also participated in United Nations conferences on educational development in Africa, and was selected by the Mathematical Association of America to visit 30 colleges and give 120 lectures throughout the southern U.S. from 1959-60 to enhance mathematical education in undergraduate colleges, many of them historically black.

According to Blackwell's colleague David Brillinger, a UC Berkeley professor of statistics, Blackwell was a major reason Brillinger joined the department in 1970. "Blackwell made a difference by being a member of many communities; a tremendous role model for the black community, but also interested in the anti-war movement and an advocate for fairness," he said.

In the early '70s, for example, Blackwell brought students to campus in a program for disadvantaged students. As a teacher, he "stripped things to their elements, often saying, 'Look for the simplest solution,'" Brillinger added. "He did much of his teaching by talking about picking balls from boxes."

### Early Years

Blackwell was born in Centralia, a small town in southern Illinois, on April 24, 1919, as the oldest child of Grover Blackwell, a railway worker, and Mabel Blackwell, who raised the family's four children. Expecting to become an elementary school teacher, David Blackwell entered the University of Illinois at Urbana-Champaign in 1935 at the age of 16, at a time when there were no black professors. After graduating with a B.A. in mathematics in 1938, he set his sights higher and continued at the University of Illinois to earn his M.A. in mathematics in 1939 and eventually his Ph.D. in mathematics in 1941, at the age of 22.



After graduating, Blackwell was appointed to a oneyear postdoctoral fellowship at the Institute for Advanced Study in Princeton, N.J., one of the top research institutes in the nation that included Albert Einstein and John von Neumann among its fellows.

He subsequently applied to 104 black colleges, assuming, he once said, that the doors were closed to blacks at non-black institutions. After a one-year stint as a statistician in the U.S. Office of Price Administration, originally set up to control prices and rents during World War II, he took an instructorship at Southern University in Baton Rouge, La., and at Clark College in Atlanta, Ga., before joining the faculty of Howard University in 1944. By 1947, he had become a full professor and head of the mathematics department, a position he held until 1954.

While at Howard, Blackwell became interested in statistics after hearing a lecture by Abe Girshick, and the two collaborated for many years. Blackwell developed an interest in the theory of games during three summers, between 1948 and 1950, at RAND Corporation. There, he studied games of timing, as when two duelists approach one other with a loaded pistol, a type of problem that resonated with researchers during the Cold War. He became a leading expert in the area. He coauthored with Girshick the book "Theory of Games and Statistical Decisions," in 1954.

Even before Blackwell moved to Howard, Jerzy Neyman, the leading statistician at the time at UC Berkeley, had courted Blackwell to come to the campus, but had run into objections about his race. After World War II, however, the atmosphere throughout the country had im-



David Blackwell and Richard Tapia

### Editor's Note

The sixth biannual Blackwell-Tapia conference will be on November 5-6 at the Mathematical Biosciences Institute, The Ohio State University, Columbus, Ohio. proved, and Neyman was able to convince the mathematics department to hire Blackwell. Blackwell arrived in 1954 as a visiting professor and joined the statistics department as a full professor when the department split off from the mathematics department in 1955. He succeeded Neyman as chair between 1957 and 1961 and served as assistant dean of the College of Letters and Science from 1964 to 1968.

### Totally Dedicated

Although Blackwell retired in 1988, he continued to visit the department until recently, talking with colleagues about statistical ideas, according to his son Hugo.

"He was totally dedicated to his field, and always thought that it's not what you have, but what you think, that is important," he said.

Brillinger added that David Blackwell loved track and field and often went to the national championships even when they were the other side of the country.

In addition to his membership in the National Academy of Sciences, Blackwell also was a fellow of the American Academy of Arts and Sciences, the American Association for the Advancement of Science, the Institute of Mathematical Statistics, the American Mathematical Society and the American Philosophical Society and was an honorary fellow of the Royal Statistical Society.

He also served as president of the international Bernoulli Society for Mathematical Statistics and Probability, and as vice president of the American Statistical Association, the International Statistical Institute, and the American Mathematical Society. In 1979, Blackwell won the John von Neumann Theory Prize from the Operations Research Society of America and the Institute of Management Sciences.

Blackwell mentored 65 Ph.D. students, wrote two books and published more than 80 papers during his career. He held 12 honorary degrees, including from Harvard, Yale, Carnegie Mellon and Howard universities and from the National University of Lesotho.

Blackwell is survived by four of his eight children: Hugo of Berkeley; Ann Blackwell and Vera Gleason of Oakland; and Sarah Hunt of Houston, Texas. He was preceded in death by his wife, Ann Madison Blackwell, who died in 2006 after 62 years of marriage; and children Julia Madison Blackwell, David Harold Blackwell Jr., Grover Johnson Blackwell and Ruth Blackwell Herch.

A memorial service is scheduled for Friday, October 15, 4 to 7 p.m. in the International House Auditorium, Berkeley, California.

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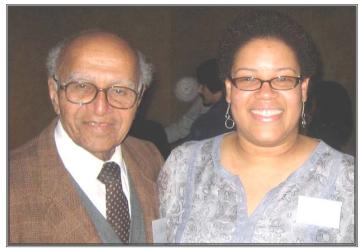


### A Dynamic One: Angela Grant

Monica Jackson

Our community has lost a lovely young mathematician named Dr. Angela Elyse Grant. She was born and raised in Cincinnati, OH. Angela began her mathematics journey at Florida A&M University in the Department of Mathematics. I first met Angela at CAARMS5 in Ann Arbor, MI. At the time she was unhappy in her current graduate program. Meanwhile, a cohort of University of Maryland College Park (UMCP) students were attending CAARMS as well and she immediately felt connected with us. She applied to UMCP the day after CAARMS5 ended and was immediately accepted into the pure mathematics program to begin her graduate career less than eight weeks later. She successfully completed the Ph.D. program in 2005 under the direction of Dr. Brian Hunt. Her dissertation was titled "Finding Optimal Orbits of Chaotic System." After graduation, she began a post-doctoral position and later became an Undergraduate Advisor in the Mathematics Department at Northwestern University.

Angela was an active member of the mathematics community. She was a regular attendee at various conferences, including CAARMS, NAM Mathfest, and the Joint Mathematics Meetings. It was through these conferences that she formed strong bonds with many in the mathematics community, whom she often referred to as her "math family". She also had a passion for working with and educating students, which was greatly appreciated by all who interacted with her. Angela's caring nature and inherent ability to motivate and help the students made her a natural in her advisory role at Northwestern. Sadly, her battle with breast cancer began shortly be-



David Blackwell and Angela Grant

fore her graduation from UMCP; however, those who personally know Angela can recall her infectious "giggles" and laughs. Her smile and positive spirit got her through this rough stage in her life. She fought hard and her cancer was in remission for several years before her cancer returned in 2007. On September 20, 2010, Dr. Grant lost her battle with breast cancer. The mathematics community was fortunate to have such a talented mathematician. Her legacy will forever live on through her family, friends, colleagues, and countless lives she touched in such a short amount of time.

Monica Jackson is an Assistant Professor of Mathematics at American University. Her email is <u>monica@american.edu</u>.

### International Conference on Ethnomathematics

Pat Kenschaft



Pat Kenschaft

For the first time the International Conference on Ethnomathematics (ICEM-4) met in the United States on July 25-30, 2010. Ethnomathematics considers the interface of culture and mathematics, exploring mathematics in indigenous cultures, but also in neglected subcultures of the worldwide "western" culture, such as street children. Ethnomathematicians are concerned

with improving math education for all people through connecting them with their mathematical roots and improving intercultural understanding.

More than 80 people from 20 countries and 20 states of the U.S. gathered at Towson University, Maryland, at ICEM-4 to listen to talks about research and to talk with other fascinating people. Most of the themes were familiar to NAM members. There was much discussion of how people communicate across cultural lines and the legitimacy of people investigating and writing about people of other cultures. The importance of respecting all cultures and promoting intercultural understanding was emphasized both to enrich human life and to promote world peace. The ethics of copying ideas and art that is considered sacred was contemplated, and the possibilities of violating a taboo. How much should the art be changed for it to be okay to promulgate?

The problems posed by nuances of language were discussed, both within languages and across language "barriers." Plenary speaker Kay Owens said, for example, there are at least six words for "little" in one of the 800 languages of Papua New Guinea. Even within the same dialect of a language, variations can occur from village to



village. Furthermore, the context of the use of words may be significant in understanding a word.

I heard talks about stone masonry in Portugal, the complex mental math of bus conductors collecting money without machinery or written records in India, weaving in Malaysia, and games in South Africa. Most amazing, perhaps, was the mental trigonometry and other mathematics of the navigators of the canoes a thousand years ago that traversed the Pacific Ocean from Asia to North America – with no written language! Respect for oral languages was apparent. Not all of the research was of indigenous cultures. Papers have been written about the ethnomathematics of current street children, who run now in every large city of the world.

Plenary speaker Ron Eglash, Professor of Science and Technology Studies at Rensselaer Polytechnic Institute, showed fractal simulations for African villages, textiles, sculptures, and other artifacts. One of his striking examples showed how the scaling rows of straw in an African windscreen matched the scaling of wind speed with height in the Wind Engineering Handbook. He also demonstrated some of his free software (www.csdt.rpi.edu), which uses simulations of cultural artifacts such as seen in fractals in African design, iteration in Native American beadwork, and least common multiples in Latino drumming. He said that integrating minority culture into math education entices minority youngsters into our discipline.

Another ICEM-4 participant, Bob Riggs, an instructor in physics at the University of Missouri in Kansas City, Missouri, has been investigating the effectiveness of Eglash's software to help foster math identity with urban African American children. The preliminary results look positive. Bob has an ABD in math/physics education and is currently writing his dissertation on using ethnomathematics to improve the math identity of urban kids. He previously taught high school math to "at-risk kids" for ten years.

There were two speakers from Africa. One was a graduate student from Ghana, now doing his dissertation proposal at the University of New Brunswick, Canada, in mathematics education. He plans to investigate the traditional "kente" weaving of Ghana, which is primarily done by men. Another speaker talked about the weaving of the Aztecs, which was largely done by women, who lost much status when the Spanish came; before that they had much status from their weaving and from managing family economics.

The other African participant at ICEM-4, Mogege Mosimege is now a Vice Rector, (Academic) of a university campus with 8000 students in the Northwestern state of South Africa. He told us that South Africa has 11 official languages; he speaks six of them "reasonably well" and another four less well. The South African parliament asked scholars to investigate Indigenous Knowledge Sys-

tems (IKS), not just in mathematics, but also in medicine, agriculture, engineering, architecture, and governance. He took off eight years of his academic career to do so.

He talked about his work and others', and the challenges they faced figuring out the various acceptable ways of approaching elders to study their culture. He told of asking people who had never been to school how they learned to count and who taught them to work with beads. "My grandmother." He told of being corrected in his misunderstanding of games by an elderly man because a cow has four legs, not three, so the game is over when there are only three left, not two. He recommended the 2005 book by Paul Linden, "Researching Mathematics Education in South Africa: Perspectives, Practices, and Possibilities," published by the HSRC Press in Cape Town.

One of the field trips was to the museum for Benjamin Banneker, the African American mathematician who lived from 1731 to 1805. His cabin burned down during his funeral, and there is a replica in its place. Fortunately, he had wisely given his nephew a list of his most important possessions that should be taken immediately after his death to a nearby white friend when he died, and the nephew piled them in a wheelbarrow and took them there within hours after his death, so his journals were saved and on display. His almanac was a best seller for six years after Benjamin Franklin died, but he is best known for his surveying of the District of Columbia that was crucial in the design of our nation's capital.

Almost a quarter of the United States participants at ICEM-4 were African American, most of them fairly young. Gloria Gilmer, the first president of the North American Study Group on Ethnomathematics, was there and spoke about the remarkable work of Clarence Stephens first at nearby Morgan State University and then at SUNY Potsdam. Stephens inspired many black students to earn a doctorate in mathematics.

The first three conferences of the International Study Group on Ethnomathematics were held in Spain, Brazil, and New Zealand. Tentative plans are to hold the fifth in Mozambique in 2014. Interested people can learn more about the North American Study Group on Ethnomathematics (NASGEm) at http://nasgem.rpi.edu/. To join NAS-GEm, send annual dues of \$20.00 to Dr. Tom Gilsdorf, Mathematics Department, University of North Dakota, 101 Cornell Street, Mail Stop 8376, Grand Forks, ND 58202-8376. They handed out their most recent newsletter at ICEM-4 and it is a fascinating 20 pages.

Pat Kenschaft is a life member of NAM and can be reached at kenschaft@pegasus.montclair.edu. She is the author of "Change is Possible: Stories of Women and Minorities in Mathematics". It is published by the American Mathematics Society and is available from their website, at

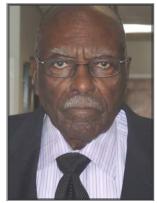
http://www.ams.org/notices/200502/fea-kenschaft.pdf

### The L. L. Clarkson Mathematical Research Experience: *A Summer Program for Undergraduates*

Willie E. Taylor

In 2006, I began applying for Research Experiences for Undergraduates (REU) programs through the Mathematical Association of America (MAA). Unfortunately, I was turned down in 2006, 2007, and 2008 by MAA. With my determination, I decided to help my department create its own REU. I learned that even though I had three funded REU's in the late 80's and early 90's, it can still be difficult to secure a grant from the MAA as well as the National Science Foundation (NSF).

I created a HAMP group which stands for "High Achievement in Mathematics is Possible". The HAMP group is dedicated to improving mathematics skills of high school students, college students, and high school mathematics teachers. This met an identified need, and, in spite of the difficulties of obtaining funds, I developed and founded HAMP along with three other charter members; Robert M. Nehs, Roderick B. Holmes, and Joan R. Evans. Each charter member is a full-time professor in the Texas Southern University Mathematics Department in Houston, Texas.



Dr. Llayron L. Clarkson, Professor Emeritus of Mathematics of Texas Southern University, donated money to our department each year. In the spring of 2009, I asked him to fund the "L. L. Clarkson Mathematical Research Experience." I specifically asked him to fund four students for a total of \$6,000. At that time, he agreed to donate a total of \$2500. Dr. Della Bell, chairman of the

Dr. Llayron L. Clarkson mathematics department, said that

we could use some of the funds Dr. Clarkson had previously donated to the department. In the end, we were able to fund four students in the amount of \$1200 each.

We met the four students for six weeks during the summer of 2009. From the end of May through the first week of July, the students participated in the experience. The experience included a class in Beginning Real Analysis, taught by Dr. Robert M. Nehs. It was targeted to enable the students to understand a research article on "Periodic Solutions to Difference Equations". Another component was a course giving an introduction to the Oscillation Theory of Differential and Difference Equations, taught by me.

Dr. Nehs and I also worked on identifying research projects for each student. Another part of the experience included participation in the CAARMS conference during the summer of 2009 at Rice University. At the end of the experience, we celebrated the students' accomplishments by holding a ceremony where the students gave a PowerPoint presentation on their research project as they enjoyed a tasty lunch. At the end of this ceremony, the students expressed their appreciation to Dr. Nehs and me for introducing them to mathematical research. The students realized that they were privileged to be able to have direct contact with researchers early on in their career. It also gave them awareness of what mathematical research entailed, and whether they wanted to choose a career as a research mathematician and/or college professor.

During the spring of 2010, Texas Southern University decided that it wanted an undergraduate research program for the summer and asked professors to submit proposals for student projects. Dr. Nehs and I submitted a proposal and it was funded by the university. However, there was a maximum participation of two students per department. Each student received, under the university program, a stipend of \$2500, and we also used funds from the Clarkson donations to fund an additional student. This program entitled "The L. L. Clarkson Mathematical Research Experience II" started June 1 and ended on August 6.

A positive aspect of the current research experience is the fact that one of the participants, Andre White, made a poster presentation at the Louis Stokes Alliance for Minority Participation (LSAMP) Poster on Capitol Hill conference, held in the Rayburn House Office Building, in Washington, D. C. We hope to continue this program and increase the number of student participants.

Creating opportunities for our students may be fraught with rejection but in the end, the success of each of our students makes the journey worthwhile.

Willie Taylor is a Professor of Mathematics at Texas Southern University. His email is taylor\_we@tsu.edu

### Editor's Note

Dr. Llayron L. Clarkson earned B.S. and M.S. degrees from Texas Southern University and a Ph.D. in mathematics from the University of Texas. At Texas Southern, he served in many capacities including Dean of the College of Arts and Sciences, Vice President of Academic Affairs, Executive Vice President, Director of Campuswide Academic and Information Systems, and Director of Institutional Research. He retired in 1994. Dr. Clarkson is CEO of Clarkson Aerospace Corporation.



### **Research Experiences for Undergraduate Faculty**

#### Roselyn Williams

The American Institute of Mathematics has sponsored one-week workshops that brought together current research mathematicians with faculty at undergraduate institutions who were interested in involving their students in areas of active research. Research mathematicians presented open questions in their fields as well as ideas for research projects to the participating undergraduate faculty. The goals of the workshops were to promote undergraduate research in undergraduate institutions, and to forge lasting research collaborations among the faculty at research institutions and undergraduate institutions. Participants received training on the use of Sage (an open-source mathematical software). Funding for these workshops was provided by the NSF and AIM.

During the summer of 2008, AIM hosted the "Research Experience in Linear Algebra and Number Theory" where there were twenty participating faculty. Problems in linear algebra were introduced by Bryan Shader (University of Wyoming) and Leslie Hogben (Iowa State University and AIM's Associate Director for Program Diversity). Problems in number theory were introduced by Estelle Basor (AIM's Deputy Director) and David Farmer (Director of Programming at AIM). The participants came from fifteen different institutions. The workshop was organized by Yewande Olubummo (Spelman College), Joe Omojola (Southern University of New Orleans) and Roselyn Williams (Florida A&M University).

During the summer of 2009, AIM held a second workshop, "Research Experiences in the Mathematical Sciences for Undergraduate Faculty". Problems in graph theory and linear algebra were introduced by Nathaniel Dean (Texas State University) and Leslie Hogben, respectively. Problems in representation theory and algebra were introduced by Phillip Kutzko (University of Iowa) and Kent Morrison ( California Polytechnic State University), respectively. A follow-up gathering was held at the Joint Mathematics



Nathaniel Dean's Research Group, AIM 2009 From left to right: Ali Abdinur (Shaw University), Talitha Washington (University of Evansville), Leon Woodson (Morgan State University), James Nelson, Jr. (Shaw University), Rachelle De-Coste (Wheaton College), Lakeshia Legette (Johnson C. Smith University), and Nathaniel Dean (Texas State University).

Meetings in San Francisco to discuss activities undertaken by the participants since the workshops and to explore new directions of research. The 2009 workshop was organized by Leslie Hogben and Roselyn Williams.

These workshops have been immensely successful in engaging faculty in research collaborations and students in the research projects. A third workshop will be held at AIM July 18-22, 2011. The workshop plans include four presenters and 24 faculty participants. The organizers are Leslie Hogben, Jillian McCleod, and Roselyn Williams. For further information on the 2011 workshop or to apply, visit the AIM upcoming workshop website at

http://www.aimath.org/research/upcoming.html or contact Leslie Hogben at hogben@aimath.org.

Roselyn Williams is a life member and treasurer of NAM. She is an Associate Professor at Florida Agricultural and Mechanical University. Her email address is roselyn.williams@famu.edu.



AIM 2009 Participants

### My Tenure-track Journey

#### Edray Goins

Putting together tenure materials can be a tough, emotional task. I would continually think back to all of the things I could have done differently in order to better prepare my tenure case: "I could have written more papers. I could have submitted those papers to less prestigious journals to have a better chance of acceptance. I could have applied for more grants. I could have secured more grants. I could have...." You name it, and I thought that I could have done it.

Thinking back to 10 years before, when I was a graduate student at Stanford University, I can recall an incident that occurred when I was president of the Black Graduate Students Association. Word came to me about an African-American professor in Engineering who did not receive tenure. My friends and I were outraged — how could the Ivory Tower refuse to let this brilliant brother enter? If the he could be refused, so could I. Panic and worry took over my thoughts.

I spent 5 years working towards obtaining a doctorate and another 5 years in this tenure-track position. So what if I didn't get tenure? Would any university hire someone who had failed at getting tenure? I traveled back in my mind to three months before, when I was putting together my tenure documents. An close office mate once saw I was nervous about the tenure process. "Edray," he said, "I can't say I know anything about your research or anything about the letters of recommendation that will reflect your scholarship. But I will tell you this. Your case will be voted on by several layers of people. First the Department, then the University Senate, and finally the Board of Trustees. The Senate will have lots and lots of cases to review, so most likely they'll just follow the recommendations of the Department. The Trustees will have even more cases to review, so they'll probably just follow the Senate. That means it all comes down to the departmental vote. People here in the department like you. The students here like you. We want you to be here. That's got to count for something."

As I sat in my office pondering my dilemma, my mind wandered to a conversation that I had a couple of years ago with a mentor of mine at the Blackwell Tapia conference. "But this is what you need to keep in mind," he began, recounting from his own experience. "Tenure is not the end of your academic life. Tenure is a two-way street: we spend too much time thinking about whether they will give tenure to us. But we never ask 'why do we want tenure?' You're good enough that you can go wherever you want. You should consider yourself a 'free agent', and the team that wants you the most will step up."

Those words brought me consolation and a renewed confidence. Being a hardcore Californian, I did not always

like living in the Midwest; not receiving tenure would be a great way of finding a happier place to live. I

quickly re-

called that I



David Blackwell and Edray Goins, Blackwell Tapia Conference 2000

knew lots of people at other universities; surely I could get a job somewhere. I could even leave academia altogether and have a rewarding career in industry. Maybe, just maybe, my situation wasn't as hopeless as I had once feared.

Frequently, I would meet with a mentor at my institution. We would go to lunch and discuss everything from classes to research to the tenure process. On more than one occasion, he shared his reasons why he thought my case would be difficult. However, my thoughts of the positive aspects of not receiving tenure began to take over my psyche.

I knew where I came from. I understood what I was doing. I defined pointedly where I wanted to go. I enjoy with sincerity the colleagues in my department, and I take great pleasure in inspiring our students. I could always have more papers, more grants, more talks, more.... Realistically, I needed to let someone else cast the vote. I would let go and give them the authority to decide my fate. Finally, I admitted to myself that I did not want to leave; even Midwestern hospitality began to be enjoyable.

My fear of tenure made sense. I could understand it; I could grasp it. If I didn't receive it, I would be okay. I'm good enough to go somewhere else. I have the degree to prove it. I have the work to validate it.

As I sat in my colleague's office, he paused for a moment and looked at me. "Maybe your case wasn't the easiest to pass through, but you made it nonetheless." He stood up to shake my hand and said, "Congratulations on getting tenure."

My face finally felt a smile form, as I understood that the next journey of my career is just beginning. My only hope is that I continue to carry the standard of excellence set by those who came before me.

Edray Goins is an Associate Professor at Purdue University. His email is egoins@math.purdue.edu.



### Gaston M. N'Guerekata Honored for Scholarship

Dr. Gaston M. N'Guerekata, Professor of Mathematics at Morgan State University received the "University's Outstanding Award for Research and Scholarly Achievements" on August 10, 2010. Gaston N'Guerekata published over 130 publications including 2 undergraduate textbooks and 4 graduate/research books.

In 2009, he received the National Association for Equal Opportunity in Higher Education (NAFEO) Noble Award for his contribution to Morgan State University.



Dr. David Wilson, President, Dr. Gaston N'Guerekata, and Dr. Joan Robinson, Provost and Vice President for Academic Affairs, Morgan State University

CAARMS 16



Attendees

### NAM Calendar

**SACNAS National Conference** will be held **September 30-October 3** in Anaheim, California. This year's theme is "Science, Technology & Diversity for a Sustainable Future". See: http://www.sacnas.org/

The 4th Annual **Field of Dreams Conference**, hosted by the National Alliance for Doctoral Studies in the Mathematical Sciences, will be held **October 8-10** at the University of Iowa, Iowa City, Iowa. Undergraduate participants will attend seminars and get advice on graduate school. See: http://www.mathalliance.org/conference.asp

The **Blackwell-Tapia Conference** will take place on **November 5-6** at the Mathematical Biosciences Institute, The Ohio State University, Columbus, Ohio. The conference will include a mix of activities including scientific talks, poster presentations, and ample opportunities for discussion and interaction. See:

http://mbi.osu.edu/2010/ctwdescription.html

Conferences & Workshops

The National Association of Mathematicians' Undergraduate MATHFest XX will be in Miami, FL at Miami Dade College on November 18-20\*. Interested juniors/ seniors and faculty should contact Leon Woodson at leon.woodson@morgan.edu for more information.

\*Note the date change

The **Joint Mathematics Meeting** will be held in New Orleans, Louisiana on **January 6-9**, 2011. **NAM invited speakers** are Dr. Robert Bozeman of Morehouse College and Dr. Edray Goins of Purdue University. NAM will also hold its **annual meeting** for NAM members. Dr. Robert Bell of AT&T will give an MAA invited address on "Lessons from the Netflix Prize".

**Tapia Celebration of Diversity in Computing** will be held **April 3-5**, 2011 in San Francisco, California. The program includes invited speakers, a student poster competition, and networking opportunities. See: http://tapiaconference.org/2011/

NAM At MathFest



Bill Hawkins (MAA Director of SUMMA), Asamoah Nkwanta (Morgan State University), Janet Barber, Sylvia Bozeman (Spelman College), and Robert Bozeman (Morehouse College). Nkwanta presented the NAM David Blackwell Lecture.

A

### Job Openings

### Alliance for Building Faculty Diversity in the Mathematical Sciences

Postdoctoral Fellowships

Assistant Professor

The Alliance for Building Faculty Diversity in the Mathematical Sciences offers four NSF funded Postdoctoral Fellowships beginning Fall 2011 targeted at new or recent minority Ph.D.s. The alliance is comprised of NSF Mathematical Sciences Institutes and seven universities with a good record of mentoring underrepresented mathematics graduate students (Arizona State Univ., Howard Univ., Iowa State Univ., North Carolina State Univ., Univ. of Arizona, Univ. of Iowa and Univ. of Nebraska). Successful applicants will show strong research potential and be interested in continuing in a career at a research university. The post-doctoral fellowships are for three years. A typical 3-year postdoctoral fellow will spend 2 years at one of the alliance universities and up to a year at a national institute if there is a suitable program. Each postdoc will be matched with a research mentor at the host university. The Fellowship salary will be \$60,000 per year plus benefits. For more information see http://www.math.ncsu.edu/alliance.

Eligibility. Applicants must be US Citizens or Permanent Residents who have obtained a Ph.D. in mathematics within the last 5 years. Particular attention will be given to US under-represented minority (US URM) candidates. To submit your application materials, go to http://www.mathjobs.org/jobs/alliance. Include a vita, at least three letters of recommendation, a description of current and planned research and a short statement to address how your plans fit with the priorities of this program. Applicants are encouraged to consult the Alliance website http://www.math.ncsu.edu/alliance and provide a list of potential mentors and preferred institutions.

Write to alliance@math.ncsu.edu for questions concerning this position.

Applications received by **December 15, 2010** will be given priority.

### Loyola Marymount University

The Mathematics Department of Loyola Marymount University will have one or two tenure-track openings at the assistant professor level for the academic year 2011-2012. Responsibilities include teaching, advising, maintaining an active program of scholarship, and engaging in university service. Applicants are expected to have completed a Ph.D. in mathematics, statistics, mathematics education, or a related field by Fall 2011. Individuals in any area of mathematics may apply; the department is especially interested in applicants in the areas of mathematics education or K-12 teacher preparation, applied mathematics, and probability/statistics. Exceptional candidates with experience in one of these fields may be considered for a position at the Associate or Full Professor level. We have a strong commitment to cultural/ethnic diversity and applicants who have experience/interest in this area are asked to highlight it in their application.

The Mathematics Department, housed within the College of Science and Engineering, has 18 full-time faculty members, approximately 45 mathematics majors, 25 minors, and a few MAT students. A degree in biomathematics is being developed. Faculty from many areas of mathematics work in an atmosphere of mutual respect and collegiality. The normal teaching load is 3 courses each semester (9 hours/week) with the possibility of a reduced teaching load in the first two years. Additional information is available at

http://cse.lmu.edu/departments/math.htm. Benefits include housing assistance and domestic partner health coverage.

Loyola Marymount, a comprehensive university in the mainstream of American Catholic higher education, seeks professionally outstanding applicants who value its mission and share its commitment to academic excellence, the education of the whole person, and the building of a just society. LMU is an equal opportunity institution actively working to promote an intercultural learning community. Women and minorities are encouraged to apply. (Visit www.lmu.edu for more information.)

A complete application consists of a letter of interest, curriculum vitae, statement on teaching philosophy, a description of the applicant's current scholarship program, and three letters of recommendation at least one of which addresses the applicant's teaching. We will begin screening applications on **December 1, 2010**. Applicants who will be attending the 2011 Joint Mathematics Meetings in January should indicate this in their letter of interest. Apply online at www.mathjobs.org/jobs. Please address questions to Curtis Bennett, Chair at cbennett@lmu.edu or (310) 338-5112.



### Bryn Mawr College

The Department of Mathematics at Bryn Mawr College invites applications for a full-time, tenure-track **Assistant Professor** position to begin July 1, 2011. We are seeking an analyst for a tenure-track position. Candidates must have completed a doctorate in mathematics by the starting date and must show promise in research and a serious commitment to undergraduate and graduate teaching. It is expected that the new faculty member be able to teach core courses in the mathematics major, to supervise senior theses, and to contribute to the graduate analysis component in our graduate program. We welcome candidates with an applied focus.

Applications must be submitted online through Math-Jobs.Org at http://www.mathjobs.org/jobs and should include a cover letter, a curriculum vitae, a description of research, a statement of teaching philosophy, and three or more letters of reference, at least one of which discusses

#### Assistant Professor

the applicant's teaching. The review of applications will begin on **December 1, 2010** and continue until the position is filled.

Located in suburban Philadelphia, Bryn Mawr College is a highly selective liberal arts college for women who share an intense commitment to intellectual inquiry, an independent and purposeful vision of their lives, and a desire to make meaningful contributions to the world. Bryn Mawr comprises an undergraduate college with 1,300 students, as well as coeducational graduate programs in social work and in some humanities, sciences, and mathematics. The College promotes faculty excellence in both research and teaching, and has strong consortial relationships with Haverford College, Swarthmore College, and the University of Pennsylvania. Bryn Mawr College is an equalopportunity employer; minority candidates and women are especially encouraged to apply.

### Georgia Southern University

Georgia Southern University's Department of Mathematical Sciences invites applications for the position of **tenure-track Assistant Professor in Mathematics** and two **non-tenure track lecturer** positions. The full text advertisements, including information about the department, faculty, and the complete position announcement with all qualifications and application instructions, are available at http://math.georgiasouthern.edu/math/jobs. The application deadlines for each search are **October 11**, **2010**, and **November 8**, **2010**, respectively. Georgia

#### Assistant Professor and Lecturer Positions

Southern seeks to recruit individuals who are committed to excellence in teaching, scholarship, and professional service within the University and beyond and who are committed to working in diverse academic and professional communities. Finalists will be required to submit to a background investigation. Georgia is an open records state. Georgia Southern is an AA/EO institution. Individuals who need reasonable accommodations under the ADA to participate in the search process should contact the Associate Provost.

#### Assistant Professor

The Mathematics Department at Framingham State University invites applications for a tenure-track position at the rank of **Assistant Professor** beginning September 2011. Applicants should have a doctorate in mathematics, statistics, or mathematics education by September 1, 2011, or be able to provide evidence of imminent completion, and be able to demonstrate a strong commitment to excellence in teaching, continued scholarly and professional growth, and to working in an inclusive, diverse environment.

Framingham State University

Please submit a letter of application, a curriculum vita, a statement of teaching philosophy, a research statement, and a completed AMS Standard Cover Sheet online through http://framingham.interviewexchange.com. Please also send official graduate transcript(s) and three letters of recommendation, at least one of which addresses teaching ability, to Search Committee Chair, Dept. of Mathematics, Framingham State University, 100 State Street, Framingham, MA, 01701-9101.

FSU is an affirmative action/equal opportunity employer. Members of underrepresented groups and those committed to working in a diverse cultural environment are encouraged to apply.

All materials must be submitted/postmarked by **No-vember 19th, 2010**, in order for an application to be considered. This position is contingent upon funding for academic year 2011/2012.

### Northwestern University

Applications are invited for up to three **Ralph Boas Assistant Professorships**. These positions are three-year, non-tenure-track positions beginning September 2011, with a teaching load of four one-quarter courses per year. Applications are invited from qualified mathematicians in all fields.

Applications should be made electronically at www.mathjobs.org and should include (1) the American Mathematical Society Cover Sheet for Academic Employment, (2) a curriculum vitae, (3) a research statement, and

#### Ralph Boas Assistant Professor

(4) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Inquiries may be sent to: Northwestern University, Department of Mathematics, 2033 Sheridan Road, Evanston, Illinois 60208-2730 OR boas@math.northwestern.edu.

The review process starts **December 1, 2010**. Northwestern University is committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply. AA/EOE.

### Northwestern University

Applications are solicited for a one **Instructorship** of three years starting September 2011. This is a non-tenure track position with a teaching load of six quarter courses per year. We invite applications from qualified mathematicians in all fields and the primary criterion for selection is teaching excellence. Preference will be given to those candidates whose teaching and research interests are compatible with current faculty.

Applications should be made electronically at www.mathjobs.org and should include (1) the American Mathematical Society Cover Sheet for Academic Employment, (2) a curriculum vitae, (3) a research statement, (4) a

#### Instructorship

teaching statement, and (5) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Inquiries may be sent to: Northwestern University, Department of Mathematics, 2033 Sheridan Road, Evanston, Illinois 60208-2730 OR boas@math.northwestern.edu.

Applications are welcomed at any time, but the review process starts **December 1, 2010**. Northwestern University is an affirmative action, equal opportunity employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

### Northwestern University

The **Simons Postdoctoral Fellowship** is a three year non-tenure-track position beginning September 2011, with a teaching load of four quarter classes spread over the three years. Candidates must show promise of outstanding research potential and must have earned a Ph.D. during the academic year immediately preceding that in which the Fellowship begins.

Applications should be made electronically at www.mathjobs.org and should include (1) the American Mathematical Society Cover Sheet for Academic Employ-

### Northwestern University

Applications are invited for **Tenured and Tenuretrack positions** starting in September 2011. Priority will be given to exceptionally promising research mathematicians. We invite applications from qualified mathematicians in all fields.

Applications should be made electronically at www.mathjobs.org and should include (1) the American Mathematical Society Cover Sheet for Academic Employment, (2) a curriculum vitae, (3) a research statement, and

#### Simmons Postdoctoral Fellowship

ment, (2) a curriculum vitae, (3) a research statement, and (4) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Inquiries may be sent to: Northwestern, Department of Mathematics, 2033 Sheridan Road, Evanston, Illinois 60208-2730 OR spf@math.northwestern.edu.

The review process starts **December 1, 2010**. Northwestern University is committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply. AA/EOE.

#### Tenured and Tenure-track Positions

(4) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Inquiries may be sent to: Northwestern University, Department of Mathematics, 2033 Sheridan Road, Evanston, Illinois 60208-2730 OR tenure@math.northwestern.edu.

The review process starts **December 1, 2010**. Northwestern University is committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply. AA/EOE.



### The Ohio State University

The Department of Mathematics in the College of Arts and Sciences at The Ohio State University anticipates having Hans J. Zassenhaus and Arnold Ross Assistant Professorships available effective Autumn Quarter 2011. These term positions are renewable annually for up to a total of three years. The emphasis of Zassenhaus Assistant Professorships is teaching and research, while Ross Assistant Professorships focus on instruction. While teaching loads are subject to change, the current teaching load for a Zassenhaus Assistant Professor in the first year is 2-1-1 (two courses in the autumn quarter and one course each in winter and spring quarters). In the second and third years, the teaching load is 2-2-1. The teaching load for a Ross Assistant Professor is 3-2-2. Candidates are expected to have a Ph.D. in mathematics and to present evidence of excellence in teaching and research. Further information

#### Assistant Professorships

on the department can be found at http://www.math.ohio-state.edu.

All candidates should apply online at

http://www.mathjobs.org. If you cannot apply online, please contact facultysearch@math.ohio-state.edu or write to: Hiring Committee, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210. Applications will be considered on a continuing basis, but the annual review process begins **January 3**, **2011**.

To build a diverse workforce, Ohio State encourages applications from minorities, veterans, women, and individuals with disabilities. Flexible work options available. EEO/AA Employer. Ohio State is an NSF Advance institution.

### The Ohio State University

The Department of Mathematics in the College of Arts and Sciences at The Ohio State University anticipates having a **position** available in **Algebraic Geometry or Analysis**, rank open, effective Autumn Quarter 2011. Candidates are expected to have a Ph.D. in mathematics (or related areas) and to present evidence of excellence in teaching and research. Further information about the department can be found at http://www.math.ohio-state.edu.

Applications should be submitted online at http://www.mathjobs.org. If you cannot apply online,

#### Faculty, Algebraic Geometry or Analysis

please contact facultysearch@math.ohio-state.edu or write to: Hiring Committee, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210.

Applications will be considered on a continuing basis, but the annual review process begins **November 15, 2010**. To build a diverse workforce, Ohio State encourages applications from minorities, veterans, women, and individuals with disabilities. Flexible work options available. EEO/ AA Employer.

### The Ohio State University

The Department of Mathematics invites applications for a **tenure-track position** in **Mathematical Biology** in the College of Arts and Sciences. The search is open to all areas in Mathematical Biology. The appointee will be part of a growing faculty in the area of mathematical biology at Ohio State with opportunity to participate in the NSFfunded Mathematical Biosciences Institute. A PhD in an area such as mathematical sciences, biomathematics, biology, chemistry, computer science, physics, and engineering is required.

Applicants should submit their curriculum vita, statement of research and teaching interests, and three references online to: http://www.mathjobs.org. Questions concerning this position can be directed to:

Tenure-track Position in Mathematical Biology Combinatorics

Chair of the Mathematics Biology Search Committee Mathematical Biosciences Institute 1735 Neil Avenue Columbus, OH 43210 search@mbi.osu.edu

Review of applications begins **October 15, 2010** and will continue until a suitable candidate is hired. To build a diverse workforce Ohio State encourages applications from minorities, veterans, women and individuals with disabilities. Flexible work options are available. EEO/AA employer. Ohio State is an NSF ADVANCE Institution.



### The Ohio State University

The Department of Mathematics in the College of Arts and Sciences at The Ohio State University anticipates having a **position** available in **Applied Probability/Financial Mathematics**, rank open, effective Autumn Quarter 2011. Candidates are expected to have a Ph.D. in mathematics (or related areas) and to present evidence of excellence in teaching and research. Further information about the department can be found at http://www.meth.chio.state.edu

http://www.math.ohio-state.edu.

Applications should be submitted online at

### The Ohio State University

The Department of Mathematics in the College of Arts and Sciences at The Ohio State University anticipates having a **position** available in **Algebraic Geometry or Analysis**, rank open, effective Autumn Quarter 2011. Candidates are expected to have a Ph.D. in mathematics (or related areas) and to present evidence of excellence in teaching and research. Further information about the department can be found at http://www.math.ohio-state.edu.

Applications should be submitted online at http://www.mathjobs.org. If you cannot apply online,

### University of Virginia

The University of Virginia is seeking a distinguished mathematician to chair its Department of Mathematics and hold the title of Marvin Rosenblum Professor of Mathematics (as a tenured Full Professor). The individual is to lead a concerted effort to build on the Department's strengths and to fulfill its potential as a top center of mathematical research and teaching. The Chair has the responsibility to oversee all departmental activities related to the faculty, graduate and undergraduate students, and staff. He or she should have both a strong record of research in a central area of mathematics as well as a proven ability to provide academic leadership. The University of Virginia, founded and designed by Thomas Jefferson, is one of the nation's foremost public universities. The Department of Mathematics, situated in the College of Arts and Sciences, encompasses major research programs in core areas of mathematics, including algebra, analysis, geometry/ topology, and applied mathematics. It has 27 faculty members, as well as 3 Whyburn post-doctoral instructors, 54 graduate students, and approximately 345 undergraduate majors. The Department has an active visitors program. Additional information about the Department is available at www.math.virginia.edu.

To apply, please submit the following required documents electronically at www.MathJobs.org. A cover letter,

#### Faculty, Applied Probability/Financial Mathematics

http://www.mathjobs.org. If you cannot apply online, please contact facultysearch@math.ohio-state.edu or write to: Hiring Committee, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210.

Applications will be considered on a continuing basis, but the annual review process begins **November 15, 2010**. To build a diverse workforce, Ohio State encourages applications from minorities, veterans, women, and individuals with disabilities. Flexible work options available. EEO/

#### Faculty, Algebraic Geometry or Analysis

please contact facultysearch@math.ohio-state.edu or write to: Hiring Committee, Department of Mathematics, The Ohio State University, 231 W. 18th Avenue, Columbus, OH 43210.

Applications will be considered on a continuing basis, but the annual review process begins **November 15, 2010**. To build a diverse workforce, Ohio State encourages applications from minorities, veterans, women, and individuals with disabilities. Flexible work options available. EEO/ AA Employer.

#### Chair of Department of Mathematics

an AMS Standard Cover Sheet, a curriculum vitae which includes a publication list and a description of administrative experience, and four letters of recommendation are required. In addition, all candidates are required to complete a Candidate Profile through the University of Virginia's employment system, which is Jobs@UVA and is located at http://jobs.virginia.edu. To submit your candidate profile, please search for posting number 0606066 and follow the directions for applying to this posting. Your application process will not be complete until all required documents are available on MathJobs and you receive a confirmation number for your Candidate Profile from Jobs@UVA. Priority consideration will be given to applications received by February 1, 2011; however, this position remains open to applications until filled. For additional information, contact: Search Committee, Department of Mathematics, University of Virginia, PO Box 400137, Charlottesville, VA, 22904-4137 OR Math-Hiring@Virginia.EDU.

Women and members of underrepresented groups are encouraged to apply. The University of Virginia is an Affirmative Action/Equal Opportunity Employer and is strongly committed to building diversity within its community.

### University of Pittsburgh

The Mathematics Department of the University of Pittsburgh invites applications for a **non-tenure stream position** to begin in the Fall Term 2011, pending budgetary approval. A Ph.D. in Mathematical Sciences or a closely related discipline is preferred and at least a Masters degree is required. The appointment is at the Assistant Instructor level or above, depending on the credentials of the applicant. We seek excellence in teaching.

Send a vita, three letters of recommendation, and a teaching portfolio including a statement of teaching philosophy, sample course syllabi and assignments, and

### University of Pittsburgh

The Department of Mathematics at the University of Pittsburgh invites applications for a **postdoctoral position in Analysis** to begin in the Fall Term 2011, pending budgetary approval. The appointment may be renewable annually to a maximum of three years. We seek excellence in research and teaching. The usual teaching load is two courses per semester. Salary and benefits are competitive.

Submit a vita, three letters of recommendation, a research statement and evidence of teaching accomplishments electronically through http://www.mathjobs.org. If

### University of Pittsburgh

The Mathematics Department of the University of Pittsburgh invites applications for a **tenure-track position** in the **general area of Applied Analysis** to begin in the Fall Term 2011, pending budgetary approval. The appointment is at the Assistant Professor level. A Ph.D. in Mathematical Sciences or a closely related discipline is required. We seek excellence in teaching and research so applicants should demonstrate substantial research accomplishment and dedication to teaching.

Submit a vita, three letters of recommendation, a research statement and evidence of teaching accomplish-

### University of Pittsburgh

The Mathematics Department of the University of Pittsburgh invites applications for a **tenure-track position** in **Differential Geometry** to begin in the Fall Term 2011, pending budgetary approval. The appointment is at the Assistant Professor level. A Ph.D. in Mathematical Sciences or a closely related discipline is required. We seek excellence in teaching and research so applicants should demonstrate substantial research accomplishment and dedication to teaching.

Submit a vita, three letters of recommendation, a research statement and evidence of teaching accomplishevaluations of teaching by students or supervisors, electronically through http://www.mathjobs.org. If the candidate is unable to submit electronically, materials may be sent to: NTS Search Committee, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260. Review of completed files will begin on **December 15, 2010** and continue until the position is filled. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups underrepresented in academia are especially encouraged to apply.

#### Postdoctoral Position in Analysis

the candidate is unable to submit electronically, materials may be sent to: Postdoctoral Search Committee in Analysis, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260. Review of completed files will begin on **January 10, 2011** and continue until the position is filled. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.

#### Tenure-track Position in Applied Analysis

ments electronically through http://www.mathjobs.org. If the candidate is unable to submit electronically, materials may be sent to: Search Committee in Applied Analysis, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260. Review of completed files will begin on **November 15, 2010** and continue until the position is filled. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.

#### Tenure-track Position in Differential Geometry

ments electronically through http://www.mathjobs.org. If the candidate is unable to submit electronically, materials may be sent to: Search Committee in Differential Geometry, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260. Review of completed files will begin on **November 15, 2010** and continue until the position is filled. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.



### University of Pittsburgh

The Mathematics Department of the University of Pittsburgh invites applications for a **tenure-track position** in **Probability and Stochastic PDEs** to begin in the Fall Term 2011, pending budgetary approval. Interest in Mathematical Finance is a plus. The appointment is at the Assistant or Associate Professor level, depending on the credentials of the applicant. A Ph.D. in Mathematical Sciences or a closely related discipline is required. We seek excellence in teaching and research so applicants should demonstrate substantial research accomplishment and dedication to teaching.

Submit a vita, three letters of recommendation, a re-

#### Tenure-track Position in Probability and Stochastic PDEs

search statement and evidence of teaching accomplishments electronically through http://www.mathjobs.org. If the candidate is unable to submit electronically, materials may be sent to: Search Committee in Stochastic PDEs, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260. Review of completed files will begin on November 15, 2010 and continue until the position is filled. The University of Pittsburgh is an Affirmative Action, Equal Opportunity Employer. Women and members of minority groups under-represented in academia are especially encouraged to apply.

### Post-doctoral Fellowship in Education

The Education Research Collaborative (ERC) at TERC, a not-for-profit research and development institution in Cambridge, Massachusetts, invites applications for a two-year residential research fellowship. The fellowship program is focused broadly on transformative research on teaching and learning that intentionally seeks to enhance formal and informal educational opportunities for children, youth and adults from historically non-dominant communities. We are particularly, but not exclusively, interested in work focused in the sciences, mathematics, or transdisciplinary studies (e.g., across the sciences, mathematics, humanities, and arts). We strongly encourage applications from recent Ph.D.s or Ed.D.s from communities historically underrepresented in the sciences and mathematics, and whose research links matters of cultural, linguistic and racial equity and justice with learning and teaching. A ma-

#### Residential Research Fellowship

jor component of this fellowship program is to foster a scholarly learning community, which includes a mentoring relationship with ERC senior staff, collaboration with ERC projects, and a monthly seminar focused on developing manuscripts for publication and grant-writing skills.

**Stipend and allowances:** Fellows will be chosen for residence during 2011-2013 and will receive an annual stipend of \$60,000, with significant additional funds to cover travel, participation in professional conferences, and research-related expenses.

**Eligibility:** Applicants must be within 3 years of receiving their Ph.D. or Ed.D. degree. The degree must be completed by July 2011.

Deadline: October 29, 2010

For more information: See www.terc.edu.

### **Undergrad Summer Math Research at MIT**

The MIT Dept of Mathematics is looking for highly motivated **undergraduate mathematics majors** to apply to the MIT Summer Research Program (MSRP). MSRP seeks to promote the value of graduate education; to improve the research enterprise through greater diversity; and to prepare and recruit the best and brightest for graduate Undergrad Summer Position

education at MIT. Travel, housing, and a weekly stipend are provided to participants. The program runs 10 weeks. Get more information and apply online at: http://web.mit.edu/odge/undergraduate/msrp/index.html or contact Mark Behrens at mbehrens@math.mit.edu.

Application deadline: February 5, 2011

#### SUMSRI

Summer Undergraduate Mathematical Sciences Research Institute (SUMSRI)

At Miami University (Ohio) Seeking talented undergraduate mathematics students June 6 - July 22, 2011 Undergrad Summer Position

Applications due by March 1, 2011

For more information see our website at:

http://www.units.muohio.edu/sumsri/

or contact: Bonita Porter, porterbm@muohio.edu



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NAM Newsletter



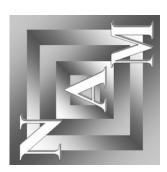
### NATIONAL ASSOCIATION OF MATHEMATICIANS MEMBERSHIP AND DONATION FORM

#### MEMBERSHIP IS FOR CALENDAR YEAR: JANUARY 1 to DECEMBER 31 of \_\_\_\_\_

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	INDIVIDUALS A	AND STUDENTS	
Please complete below if you rently hold. Circle the correct		ation within the past t	hree years. List all degrees you cur-
B.S. or B.A.: Area	Institu	tion	
M.S. or M.A.: Area	Institu	tion	
Ph.D. or Ed.D.: Area	Institu	tion	
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[ ] Committee Member (spec	cify interest): Interest		
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