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IN THE NEWS

First Review of PROOF

Jacqueline Brannon Giles

As I viewed (September 30, 2005) the movie *PROOF*, I tried to strip myself of a tendency to compare and contrast it with other movies about mathematicians. I wanted to study the movie as a single unit of entertainment. The dedication and compassion of a young female mathematician (Catherine) who cared enough about an ailing, yet renowned older mathematician, was touching and heart warming. It was the intergenerational connecting and caring that impressed me.

The focus of the young mathematician Catherine's birthday, possibly marking the beginning of her decline in capability, marked by the day of burial of her father was an example of node of continuity for in the daughter's struggle to aid her father, she was inspired to do, what I perceived, her best work. The death of the father spawned the birth of the daughter.

Catherine's intimate interaction and constant contact with her father, her mentor, her teacher, spurred the genius in her. Nevertheless, she deposited her work in a drawer only to be shared after her affection for the young man (Hal) was acted on. Once she felt free to emote and share with Hal, she was willing to share her treasured mathematical thoughts in her notebook. It suggested to me that her development as a female preceded her full development as a mathematician.

A schism occurred because of distrust among the characters, yet there was resolve at the end. The daughter sharing with her father's student to affirm and improve the mathematical work inspired by the father (Robert) who sincerely desired that his daughter would work and appreciate mathematics. I infer that the hope of the father was indeed actualized in the decision of the daughter to continue the legacy of writing and doing mathematics. This could easily be a visionary statement for the senior mathematicians in our professional community; ergo, Out of the decline and death of our great mathematicians should come the birth and rise of the next generation of mathematicians.

Second Review of *PROOF* by Scott W. Williams

This is a review about a film called *PROOF*, not the old 1992 film starring Russell Crowe and Hugo Weaving. This is about the 2005 9 stars out of 10 film *PROOF* starring Gwyneth Paltrow, Anthony Hopkins, Jake Gyllenhaal, and Hope Davis.

The 2005 film *PROOF* was a film adaptation of the 2001 play *PROOF*. The play met with enormous success on Broadway. Author David Auburn won both a Pulitzer prize and a Tony for his creation. [you can see a streaming video or hear the PBS interview with David Auburn after he won the Pulitzer at http://www.pbs.org/newshour/bb/media/jan-june01/auburn_04-20.html]

I recall Broadway frequenting mathematician and non-mathematician friends would return from Manhattan raving about the play "I must just see," but I didn't. After its three year run on Broadway, *PROOF* was taken on the road. When it showed in my city many colleagues, and a bus load of math majors and grad students went to see it, but I didn't. Several weeks prior to the opening of the film in Buffalo, I saw a review (above) written by NAM board member Jackie Giles. I also saw a review by Roger Ebert, who said, "Finally a film which conveys what the life of a mathematician must feel like." [<http://tvplex.go.com/buenavista/ebertandroeper/today.html>] It was the Ebert review which finally caused me to accompany daughters to see *PROOF* when it opened in Buffalo on October 14, 2005.

In my mind, *PROOF* had competition for the best **ME** (=Mathematical Experience):

1. The great 7 stars out of 10 1997 film *CONTACT* {Jodie Foster, James Woods, John Hurt and Matthew McConaughey} where Mathematical Astronomer Jodie exhibits the extreme **ME** persistence, we must have to do research.
2. Although there are no crazy mathematicians in 1997's 6 stars out of 10 film *GOOD WILL HUNTING* [Matt Damon, Ben Affleck, Robin Williams and Minnie Driver]. The film was a fantasy exhibiting zero **ME**.
3. There was the -2 stars out of 10 awful 1998 film π (Pi) where the only **ME** shown was internal to insanity.
4. The absolutely wonderful 10 stars out of 10 Academy Award winning 2002 film *A BEAUTIFUL MIND* [Russell Crowe, Ed Harris, Jennifer Connelly] where often you could not tell where **ME** stopped and insanity started, or the converse.

These were the yard sticks to which I measured *PROOF*. On acting, it was easily better than three of the other four. The insanity level was low, the persistence level was high, and the joy of discovery was off the roof. Though *A BEAUTIFUL MIND* was the better film, *Proof* had considerably more **ME**. As two its appeal to non-mathematicians, my social work daughter and city planner daughter loved the film.

Enough with the preliminaries, let's do the review: Appreciation of *PROOF* requires little mathematical knowledge, but, as all mathematicians know but many forget, mathematics must be conducted in the real world where political and social upheavals affect one's work. In this one, it is a daughter, Gwyneth Paltrow (who delivers a stunningly powerful performance), whose choice in life is halted by caring for her once mathematical superstar father, Anthony Hopkins over five years while he was dying, and of course insane. Then there is Paltrow's estranged sister, Hope Davis, who also puts in an incredibly fine performance representing the struggle between creativity and the stability life seems to require.

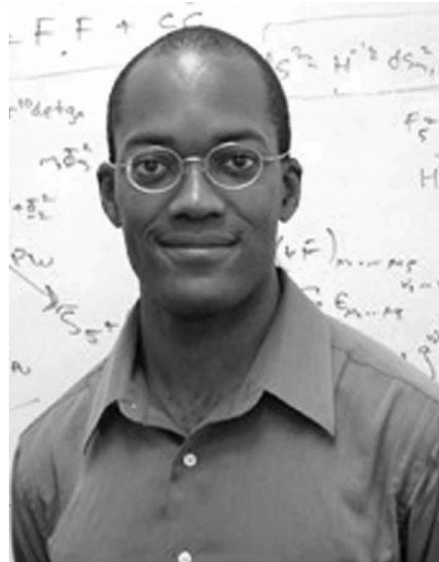
After Anthony Hopkins' death, ungifted mathematician Jake Gyllenhaal is searching the great one's notebooks for unpublished gems to steal when he discovers in his desk drawer a brilliant manuscript solving an important unsolved problem. It uses extremely modern techniques unlikely to be learned by the father. It also exhibits creativity the great one has not exhibited for 30 years. So who did the work? Was it Hopkins or the non-degree daughter Paltrow, as she claims? The **ME** exhibited tells us the answer. By introducing elements of mystery and uncertainty, it adds a sense of urgency to a subject, intellectual property, normally reserved for dry seminars.

The Most Highly Cited Black Mathematicians

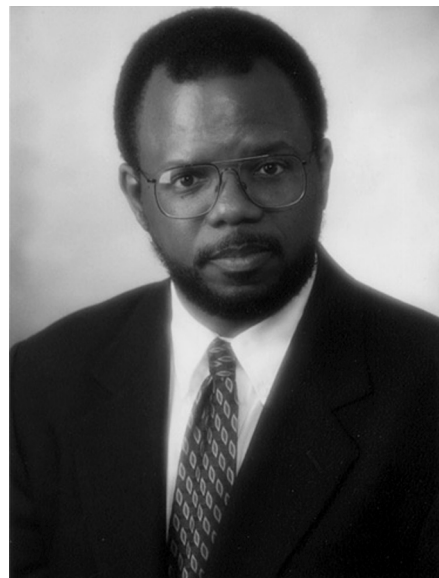
When a Dean, faced with a tenure decision, does not understand the candidate's field nor knows whom to query exterior to the candidates department, the Dean may investigate a citation index, on the questionable presumption that the value of the candidate's input increases with the number of times cited. Incorrect assumption or not, the unbiased data presented by citation indices may have value.

Recently, JBHE [*The Journal of Blacks in Higher Education*] conducted a citation analysis of a group of 96 black scholars who teach mathematics at American colleges and universities. They proclaimed the three black mathematicians having the most academic citations in academic journals during the calendar year 2004. They are Mathematical Physicist Clifford Johnson, Applied Probabilist William Massey, and Mathematical Biologist Emery Brown:

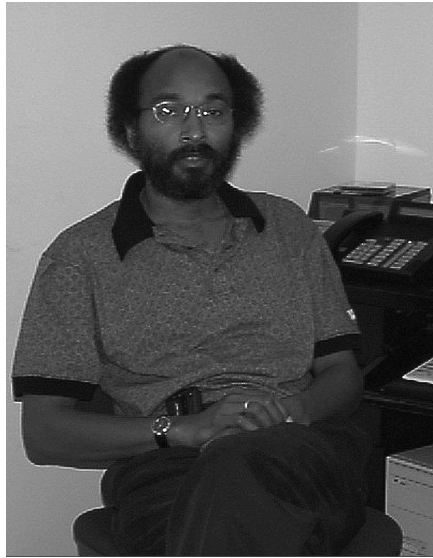
Clifford V. Johnson, Ph.D., mathematical physicist and professor of physics at the University of Southern California, was the most highly cited black mathematician in 2004. Dr. Johnson, who was cited 65 times in academic journals in 2004, works mainly with string theory, quantum gravity, gauge theory, and M-theory. He used mathematical tools to study objects such as black holes. Johnson was Born in London and raised for ten years on the Caribbean island of Montserrat. He is a graduate of Imperial College (BSc 1989), London University, and holds a Ph.D. (1992) from Southampton University. Johnson has held Postdocs from 1992 to 1996 at the Institute for Advanced Study, Princeton University and the Institute For Theoretical Physics in Santa Barbara. From 1996 until 1999, he was an Assistant Professor at the University of Kentucky and the University of Durham (UK). Since 2003 Johnson has been at the University of Southern California.



William A. Massey, PhD., is the Edwin S. Wilsey Professor of Operations Research and Financial Engineering at Princeton University. A native of Jefferson City, Missouri, Massey was raised and attended public schools in greater St. Louis. He is a graduate of Princeton University (A.B. Mathematics 1977) and holds a Ph.D. in mathematics from Stanford University (1981). For more than 20 years he was a top engineer at Bell Laboratories before coming to Princeton in 2001, and helped with their CREF program. Dr. Massey, whose knowledge of Theoretical Mathematics is extensive has published more than 50 academic papers on applied probability analysis. He was cited 59 times in academic journals in 2004. Dr. Massey is also greatly interested in the graduate education and research accomplishments of African American students in the mathematical sciences. He co-founded and has organized the CAARMS for ten years. He has served on the board of NAM, and currently directs NAM's new Ph.D. presentations at the Joint Mathematics Meetings.



Emery N. Brown, MD, Ph.D., a mathematical biologist, is Director, Neuroscience Statistics Research Laboratory, Department of Anesthesia and Critical Care Massachusetts General Hospital. Professor of Computational Neuroscience and Health Sciences and Technology, Department of Brain and Cognitive Sciences Harvard/MIT Division of Health Sciences and Technology Massachusetts Institute of Technology. Associate Professor of Anaesthesia Harvard/MIT Division of Health Sciences and



Technology Harvard Medical School. His research is in the area of neural information coding, which uses mathematical techniques to decipher how neurons receive and transmit information. Dr. Brown is widely published in academic journals. In academic journals, he was cited 45 times by his peers in 2004. Brown is a 1978 magna cum laude Applied Mathematics graduate of Harvard College. He has an MD (1982) from Harvard Medical School. He also holds an MS (1985) and Ph.D. in Statistics (1988) from Harvard.

As I was recently told, "It is very hard to write a math paper that has been referred to more than 100 times. Very few have done so. In fact 50 citations is quite good. 30 is not bad at all." So should you wish to compare the above citations with the number of all time citations for "the greatest Black mathematician" David Blackwell, then his book "Theory of games and statistical decisions" has 400 citations alone. His paper "Comparison of experiments" (1951)

has over 100 citations, and "An analog of the minimax theorem for vector payoffs" has more than a 100. Finally, David Blackwell's Ann. Math. Statistics papers have more than 800 citations alone.

Read the article in *The Journal of Blacks in Higher Education* http://www.jbhe.com/latest/092205_blackmathematicians.html

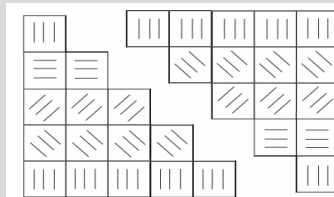
more on Johnson at http://www.math.buffalo.edu/mad/PEEPS/johnson_cliffordv.html

more on Massey at http://www.math.buffalo.edu/mad/PEEPS/massey_william.html

more on Brown at http://www.math.buffalo.edu/mad/PEEPS2/brown_emeryneal.html

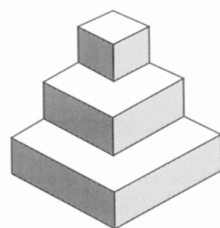
Some Visual Proofs

In calculus 2 at the beginning of the chapter on infinite series, we introduce finite induction. Three applications I usually present are (1) the number of subsets of a set, (2) the formula for the sum of the first n integers, and (3) the formula for the sum of the squares of the first n integers. As it distracts from teaching finite induction, I never present visual proofs of the three. Below I demonstrate visual proofs of the second two. For details as well as a visual proof of the formula for the sum of the first n factorials of order two, see Giorgio Goldoni's article *A Visual Proof for the Sum...* in the *Mathematical Intelligencer* Vol 24, no 4, Fall 2002.



$$\text{For } 1 + 2 + 3 + \dots + n = \frac{n(n+1)}{2}$$

Put the two triangles on the left together to form a rectangle of width $n(n+1)$.



$$\text{For } 1^2 + 2^2 + 3^2 + \dots + n^2 = \frac{n(n+1)(2n+1)}{6}$$

Put together six copies of the figure on the left to make a parallelepiped of width $n(n+1)(2n+1)$

Summer Undergraduate Mathematical Sciences Research Institute

The Summer Undergraduate Mathematical Sciences Research Institute (SUMSRI) was held at Miami University in Ohio in June and July, 2005. Fifteen students attended the Institute for seven weeks. Of these students, eight were African American, two were Latino and ten were women. During the first three weeks, the participants studied abstract algebra, real analysis, and mathematical writing. They also took a workshop on preparation for the GRE and attended research seminars where they were introduced to challenging mathematical and statistical concepts needed to conduct research on problems provided by their research seminar directors.

Each group wrote a paper and presented their results to the Institute and the Miami Mathematics and Statistics faculty at the end of the seven weeks. One group, led by Dr. Edary Goins of Purdue University, studied the mathematics involved in elliptic curves and wrote a paper titled "In Search of an 8: Rank Computations on a Family of Quartic Curves". Another group studied abstract algebra with Dr. Reza Akhtar of Miami University. They looked at colorings of graphs generated by divisors of zero within rings and wrote two papers "Line Graphs of Zero Divisor Graphs" and "The Structure of Zero-Divisor Graphs". The group studying multivariate statistics, led by Dr. Vasant Waikar of Miami University, also wrote two papers "A Multivariate Statistical Analysis of Female Empowerment" and "A Multivariate Statistical Analysis of Substance Abuse in the United States".

The students have the opportunity to present their results at a national mathematics or statistics meetings in the coming year. These trips are fully funded by SUMSRI. Past students have presented posters or given presentations in San Diego, San Francisco, Toronto, Baltimore, Washington DC, Phoenix, and New Orleans. The program includes a series of colloquium talks given by mathematical scientist from a variety of fields. The following invited colloquium talks were given:

- Ken Ono from the University of Wisconsin, "The Number Theory of Partitions"
- Stephanie Edwards from Dayton University, "Some Old and New Polynomial Problems"
- Ben Pierce from Battelle, Inc., "Using Statistics and Mathematics at Battelle"
- Edary Goins from Purdue University, "Prime Numbers, L-Series, and Representations of Galois Groups"
- Dennis Davenport from Miami University, "Ramsey Theory and Ramsey Numbers"
- Leon Woodson from Morgan State University, "Gauss Theorem on the Euclidean Construction of Regular Polygons"
- Emily Murphree from Miami University, "Lions, Tigers and Bears: A Model for Estimating Size of Animal Population"
- Scott Williams from SUNY-Buffalo, "My Favorite Functions; or Continuous from What to What??"
- Lou Shapiro from Howard University, "Generating Functions and the Catalan Numbers"
- Shea Burns from North Carolina A & T, "Time Series Analysis"
- Tao Jiang from Miami University, "A Brief Introduction to Ramsey Theory"
- Nitis Mukhopadhyay from the University of Connecticut, "Binominal Sampling with Applications"

The students had access to Miami University's state-of-the-art recreation center. The center includes an Olympic sized swimming pool, an Olympic diving pool, an indoor climbing wall, an indoor jogging track, weight training area, and racquetball and basketball courts. SUMSRI also planned several outings for the weekends. Trips included Kings Island Amusement Park, Cincinnati Underground Railroad Museum, Cincinnati Zoo and whitewater canoeing and visits to the nearby state park.

SUMSRI seeks talented mathematics and statistics students who have completed at least two years of college level mathematics with distinction, including the complete calculus series and at least one proof based course. SUMSRI will begin taking applications for the summer of 2006 in January. SUMSRI pays for the students travel, room, board, and supplies. Each student is also given a \$2,700 stipend. The program also provides funds for each student to attend a national mathematical science meeting to present their results. The application deadline is March 1, 2006. To find out more about SUMSRI, please consult the website <http://www.units.muohio.edu/sumsri/>, or contact one of the co-directors, Dennis Davenport at 513.529.3555 or Vasant Waikar at 513.529.3536.

EDGE Program

The Enhancing Diversity in Graduate Education (EDGE) Program is a post baccalaureate summer enrichment program designed to strengthen the ability of women and minority students to successfully complete graduate programs in the mathematical sciences. This Summer, EDGE's summer session will be hosted by The New College of Florida in Sarasota, Florida from June 12th until July 7th, 2006.

Applicants to the program should be women who either (i) have been accepted to a graduate program in the mathematical sciences or (ii) have just completed their first year of graduate school in the mathematical sciences. All applicants should have completed standard junior—senior-level undergraduate courses in analysis and abstract algebra and have a desire to earn the doctorate degree. Women who have taken time away from formal education as well as women from minority groups who fit into one of the above two categories are especially encouraged to apply. A stipend of \$2,000, travel plus room and board will be awarded to participants. Applications are due March 1, 2006. See website for details: <http://www.edgeforwomen.org/>.

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 NAM web site within MAD: <http://www.math.buffalo.edu/mad/NAM/>

Trinity College, Hartford, CT 06106

Description: We seek applications for the H. L. Dorwart Visiting Assistant Professorship. This three-year, non-renewable position offers a competitive salary and monetary support for research-related travel. The normal teaching load is five semester courses per year ('3/2'), one of which is a research seminar to be taught with a senior member of the faculty.

Eligibility: Applicants should have a Ph.D. in mathematics and a specialization in functional analysis or graph theory (functional analysis preferred). Anticipated fields in future years include continued fractions and special functions, geometric group theory, harmonic analysis, and microlocal analysis and spectral theory.

Deadline: There is no closing date for applications. However, we will begin to read applications in early December, and those completed by December 1, 2005 will be assured full consideration. Application information: Please send letter of application; c.v.; statement of teaching philosophy; and three letters of reference (at least one of which addresses teaching) to:

Search Committee, Dept. of Mathematics, Trinity College, 300 Summit St., Hartford, CT 06106. Members of the department will be at the San Antonio meetings in January, 2006 to participate in the Employment Center. Trinity is an Affirmative Action/Equal Employment Opportunity employer. Women and members of minority groups are encouraged to apply. Applicants with disabilities should request in writing any needed accommodations in order to participate more fully in the application process. Contact: david.robbs@trincoll.edu; www.trincoll.edu

Mathematical Association of America

The Mathematical Association of America (MAA) seeks a Director of Publications. Information on the position will appear in the November issue of FOCUS and on the MAA website, <http://www.maa.org/>

West Chester University

Tenure-track assistant/associate professor position in statistics at West Chester University beginning August 2006. Details available at: <http://math.wcupa.edu/StatPositionAdvert2005.pdf>. The University is an equal opportunity, affirmative action employer encouraging diversity.

Purdue University Faculty Positions in Statistics

The Department of Statistics at Purdue University invites applications for tenure-track positions beginning August 2006. 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 are candidates with a research record in the areas of financial statistics/probability, statistical computing or spatial statistics. The statistical computing and spatial statistics areas are part of a College of Science-wide hiring effort and applicants should address the multidisciplinary contributions of their work in their research statements.

The Department of Statistics offers a stimulating and nurturing academic environment. 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/COALESC>

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. Applicants are strongly encouraged to apply electronically by sending their curriculum vitae, research and teaching statements, and names and contact information of at least three references in PDF to facsearch@stat.purdue.edu.

Hard copy applications can be sent to: Faculty Search Chair, Department of Statistics, 150 N. University Street, Purdue University, West Lafayette, IN 47907-2067. Applicants for assistant professor positions are asked to have the three references send letters to the email address above or the hard copy mailing address. Applicants matching one search may be considered in other relevant searches when appropriate. Review of applications will begin on December 1, 2005, 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.

The University of Iowa

The Department of Mathematics at the University of Iowa invites applications for the following positions:

- i A tenure-track assistant professorship, starting in August 2006, in the area, broadly defined, of computational and mathematical biology. Selection will be based on evidence of outstanding research accomplishments or potential and excellent teaching.
- ii A tenure-track assistant professorship, starting in August 2006, in the areas, broadly defined, of algebraic geometry and geometric analysis. Selection will be based on

- evidence of outstanding research accomplishments or potential and excellent teaching.
- iii One or more three-year visiting assistant professorships starting in August 2006. These positions are open as to research area but preference will be given to applicants whose scholarly activity is of particular interest to current faculty members. Selection will be based on excellent research accomplishments or potential, and excellent teaching. These positions carry a reduced teaching load.
 - iv One or more visiting positions for all or part of the 2006-2007 academic year. Preference will be given to applicants whose scholarly activity is of particular interest to current faculty members. Selection will be based on research expertise and teaching ability. Assignment to rank will be commensurate with qualifications.

A Ph.D. or equivalent is required for these positions. Screening of applications will begin December 1, 2005. Applications will be accepted until the position is filled. To apply, send a letter of application, a completed AMS cover sheet, a complete vita, a research statement and a statement of teaching philosophy. Also have three letters of recommendation sent. Please indicate in your application the position or positions for which you are applying. Materials should be sent to: Professor David Manderscheid, Chair Department of Mathematics, The University of Iowa, Iowa City, Iowa 52242-1419

The University of Iowa is an Equal Opportunity/Affirmative Action Employer. Applications from women and minorities are strongly encouraged. For further information about the Department see www.math.uiowa.edu.

Kenyon College

The Mathematics Department at Kenyon College invites applications for a tenure track position at the assistant professor level. Applicants must have a Ph.D. in mathematics. We will consider applicants with any specialty; however, we are particularly interested in applicants with a strong background in applied mathematics, broadly defined. Kenyon College is a highly selective private liberal arts college dedicated to undergraduate education.

For a more complete job description and application instructions visit: www.kenyon.edu/mathsearch.xml. An Equal Opportunity Employer, Kenyon welcomes diversity and encourages the applications of women and minority candidates.

Calvin College

The Calvin College Department of Mathematics and Statistics invites applications for full-time faculty positions to begin in the fall of 2006. We hope to fill one regular tenure-track position and possibly one temporary position as well, although both positions are subject to administrative approval. The department seeks candidates who demonstrate strong commitments to excellence in both undergraduate teaching and scholarship. Applications from candidates in statistics, applied mathematics, mathematics education, and all other areas of the mathematical sciences will be considered.

The department has 14 full-time faculty members and graduates approximately 20 mathematics majors per year, half of them in the secondary education program. Five graduates are currently enrolled in PhD programs, three in statistics and two in mathematics. The department also provides courses in applied mathematics that support Calvin's accredited programs in engineering and computer science as well as strong programs in the natural sciences.

Calvin College is a private four-year college with an enrollment of 4,300 students. It is a Christian college in the Reformed tradition and all candidates are expected to support the religious mission of the college and to affirm the Christian faith as expressed in the Reformed creeds. More information about the mission of the college may be found at <http://www.calvin.edu/admin/provost/mission/index.htm>. The college is an equal opportunity employer and strongly encourages applications from women and minority candidates.

To apply, send a cover letter, curriculum vitae, and a graduate transcript to the address below and arrange to have three letters of reference sent to the same address. In order for the application to be considered, the cover letter must specifically address the ways in which the applicant can support the mission of the college. Send all documents to: Search Committee, Department of Mathematics and Statistics, Calvin College, 1740 Knollcrest Circle SE, Grand Rapids, MI 49546

Applications must be complete by December 15, 2005 in order to be considered in the first round. Later applications will be accepted until all positions are filled.

University of Arkansas

University of Arkansas Department of Mathematical Sciences invites applications for a tenure-tracked Assistant 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.

For more information see <http://www.uark.edu/depts/mathinfo/mathedposition>. The University of Arkansas is an equal opportunity, affirmative action institution.

Western Michigan

Chair Position: Western Michigan University Department of Mathematics. We seek a strong forward-looking leader to work effectively with administrators and over 30 full time faculty to further our department's success in the areas of pure mathematics, applied mathematics, and mathematics education. Essential attributes are an established research record, demonstrated ability in teaching, and commitment to undergraduate and graduate education. Applicants must have a doctorate and accomplishments that merit appointment as a tenured professor in our department, and a demonstrated commitment to EEO and the goals of Affirmative Action. Prior external funding and administrative experience is desirable. Information available at: www.wmich.edu/math/chairsearch.

Lafayette College

Lafayette College invites applications for a tenure-track position in mathematics beginning August 2006. A Ph.D. in mathematics or statistics is required; ABD may be considered. The teaching load is five courses per year. Lafayette is a highly selective private college offering programs in the liberal arts and engineering to more than 2000 students. The department offers programs in mathematics and a joint program in mathematics and economics, serves students in a variety of other programs and contributes to interdisciplinary seminars. A successful candidate must demonstrate a strong commitment to undergraduate teaching and continuing scholarly development.

Please send vita, teaching and research statements, and three letters of recommendation (addressing teaching and research) to Search Committee, Mathematics Department, Lafayette College, Easton, PA 18042-1781. Review of applications will begin December 1, 2005.

Lafayette College is an Equal Opportunity Employer and encourages applications from women and minority candidates.

University of North Carolina - Greensboro

Applications are invited for a tenured or tenure-track assistant/associate professorship, in mathematics or mathematics education, to start in Fall 2006. Applicants must have or anticipate a Ph.D. in mathematics or in mathematics education by August 2006 and will be expected to maintain an active research program in mathematics or mathematics education. The person in this position will serve as coordinator for the Department's teacher education programs, will be responsible for advising and teaching courses for prospective mathematics teachers, and will be the Department's primary liaison to the School of Education. The department offers the BS, BA, MA degrees in mathematics and the BS, MS degrees in computer science.

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 (1840), Department of Mathematical Sciences, University of North Carolina at Greensboro, Greensboro NC 27402. Applications received by January 31, 2006 will be guaranteed full consideration. The University of North Carolina at Greensboro is an affirmative action, equal opportunity employer. EEO/AA. We cannot process email applications.

Miami University Hamilton

Miami University Hamilton invites applications for a tenure-track position in mathematics at the Assistant Professor level beginning Fall 2006. A Ph.D. by August 2006 in a mathematical science or mathematics education and strong credentials or demonstrated potential for high quality teaching is required. The ability and willingness to teach mathematics service courses for education and/or computer science majors is desired. Teaching load is typically 24 semester hours/year at the first and second year levels, with opportunities to teach in the area of specialty. Service and scholarly activity are also required at appropriate levels. Salary is competitive. Women and minorities are strongly encouraged to apply. Send letters of application, AMS cover sheet, curriculum vitae, description of current research, statement of teaching philosophy, and three letters of recommendation (at least one should address teaching) to:

Dr. David Sobeki, Search Committee Co-chair Miami University Hamilton 1601 University Blvd. Hamilton, Ohio 45011

Screening will begin December 12, 2005 and continue until position is filled. For more information call 513-785-3226 or write sobeckdm@muohio.edu. Miami University is an affirmative action, equal opportunity employer.

Louisiana State University, Department of Mathematics

Applications are invited for three anticipated tenured or tenure-track faculty positions. Applications are invited for all areas and ranks, but special consideration will be given for positions in scientific computation, topology or geometric analysis, and partial differential equations with either a pure or applied emphasis. *Detailed information is available at www.mathjobs.org/jobs/LSU/*

Review of applications will begin November 23, 2005, but applications will be accepted and reviewed until candidates are selected. To apply, we request that applicants use the secure AMS online application system at www.mathjobs.org/jobs. You may also write to: Hiring Committee, Department of Mathematics, Louisiana State University Baton Rouge, LA 70803

Georgetown University

The Department of Mathematics at Georgetown University has an opening for a tenure track assistant or associate professor for Fall 2006. The Department is starting a new Masters program in Mathematics and Statistics in 2006 and plans to hire two additional junior level statisticians in the following years. The new colleague is expected to be involved in all aspects of these efforts.

The successful candidate should have an earned doctorate in statistics or mathematical statistics; and should have broad interests, a successful research program, documented excellence in undergraduate teaching, experience in consulting and graduate level teaching, and familiarity with software tools such as Matlab, SAS, and S-Plus. The candidate should bring expertise in one or more of the following areas: time series and longitudinal studies, categorical data analysis/data mining/large data sets, stochastic modeling, microarray analysis, computational statistics. We are looking for a candidate who will work well in a department with non-statisticians as colleagues and on a campus with statistical groups in several other departments. The teaching load will be two courses per semester. The salary will be competitive. The Washington area is home to a large and active statistical community and offers many opportunities for collaboration and consulting.

Applicants should send a curriculum vitae and three to five sample publications to Hiring Committee, Department of Mathematics, Georgetown University, Washington, DC 20057-1233 and arrange for three letters of reference to be sent to the same address. At least one of these letters should address teaching. Review of applications will start on December 1, 2005, and will continue until the position has been filled.

Georgetown University is an Equal Employment Opportunity/Affirmative Action employer, committed to a diverse faculty, staff, and student body. Women and minority candidates are strongly encouraged to apply.

University of Illinois, Chicago

Joint Positions in Learning Sciences and Mathematics or Education at UIC

The University of Illinois at Chicago announces the first two of four positions as part of a university-wide initiative in Learning Science (<http://litd.psych.uic.edu/learningsciences>). Both positions are tenure track, preferably at the Assistant Professor level, beginning August 2006. One position is joint with the Department of Mathematics, Statistics, and Computer Science in the College of Liberal Arts and Sciences; the second is joint with an appropriate program area in the College of Education.

Applicants for the position in Mathematics Education and Learning Sciences must have a doctorate, a strong mathematics background, and strong research in Mathematics Teaching and Learning. Experience with research and evaluation related to K-12 education is desirable. Position responsibilities involve carrying out a program of research and scholarship at the national level, including work within the research program of the Teaching Integrated Mathematics and Science Project within the College's Institute for Mathematics and Science Education (IMSE), and teaching graduate courses in the Learning Sciences Program and the Department of Mathematics, Statistics, and Computer Science.

Applicants for the Education position must have a doctorate related to research in the Learning Sciences with demonstrated expertise in education. We seek applicants with a record of research and publication at the national level, or the potential for achieving same. Position responsibilities include an active program of research and teaching graduate courses in the Learning Sciences Program and the appropriate program area in education.

UIC is an Affirmative Action/Equal Opportunity Employer seeking applicants who are from diverse backgrounds and/or have disability status.

Applicants for each position should include a letter indicating the position applied for, vita, and statement of research and teaching interests, and have three letters of recommendation forwarded to Susan Goldman or James Pellegrino in care of Learning Sciences Search Committee, LITD, M/C 285, University of Illinois at Chicago, 1007 West Harrison Street, Chicago, IL 60607. Review of applications will begin on January 1, 2006 and continue until the positions are successfully filled.

Director, Mathematical Sciences Research Institute (MSRI)

Applications are invited for the position of Director at the Mathematical Sciences Research Institute (MSRI), an independent research organization located on the campus of the University of California in Berkeley. The appointment will be for a five-year term starting July 2007. For more information, see www.msri.org/about/jobs/director. Applications will be considered starting March 1, 2006.

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.

HBCU Retreat and Follow-On Program

The NSF and Army Research Office are recommending funding for workshops to be held at U.S. Military Academy (USMA) to develop new mathematics curriculums at or below calculus.

The goals of this proposed three-year program are to: (1) provide a structured opportunity for ten HBCUs to reform their college algebra or calculus curriculum and (2) Develop and pilot test reform programs. Five HBCUs will be selected this spring (2006) to participate in a curriculum retreat at USMA. During the retreat, each school team, assisted by a mentor, will finalize a reform plan suitable to their school and develop an implementation strategy. The "Follow-On" portion of the program will consist of the mentors making two site visits to each school and presentations at the Joint Mathematics Meetings. The program will cover the travel expenses as well as provide a small stipend to those attending the Retreat. In addition each participating school will be offered an opportunity to apply for a \$5,000 mini-grant to facilitate implementation of their reform program.

For further details contact Don Small (phone: 845-938-2227; email: Donald.Small@usma.edu) or Dennis Davenport (phone: 513.529.3555; email: davenpde@muohio.edu).

NAM Faculty Conference on Research and Teaching Excellence

The conference will be at Albany State University in Albany, GA on March 10 - 12, 2006. See: <http://jewel.morgan.edu/~nam/>



National Association of Mathematics Membership Form

(For New Applications and Annual Membership Renewal)

Membership Calendar Year: January 1 - December 31

Name _____

Address _____

Institution/Employer _____

Telephone: Home () _____ Office () _____

Fax () _____ E-mail Address _____

Select Appropriate Membership Type

Student : \$15 Individual : \$25 Contributing : \$50 Sustaining : \$75

Institutional : \$100 Life : \$400

PLEASE RETURN THIS COMPLETED FORM AND MEMBERSHIP DUES TO :

Dr. Roselyn E. Williams, Secretary-Treasurer

National Association of Mathematicians;

P.O. Box 5766

Tallahassee, Florida 32314-5766

(850)412-5236 (office)

email: Roselyn.Williams@fam.u.edu

Web page: (new) <http://www.math.buffalo.edu/mad/NAM/NAM-index.html>

Individuals and Students: Please complete below if you did not send NAM this information within the past three years.

List all degrees you currently hold. Circle the correct degree.

B.S. or B.A.: Area _____ Institution _____

M.S. or M.A.: Area _____ Institution _____

Ph.D. or Ed.D.: Area _____ Institution _____

Other: Area _____ Institution _____

Desired Participation in NAM

Institutional Representative (for NAM) Area or State Representative _____

Committee Membership (specify interest): _____

Need additional information about the organizational structure of NAM

Ethnicity:

African American Hispanic American White Other _____

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Editor Dr. Scott W. Williams State University of New York at Buffalo	Department of Mathematics 244 Mathematics Building University at Buffalo Buffalo, NY 14260-2900 http://www.math.buffalo.edu/~sww	(716) 836-8948 (H) (716) 645-6284 ext 156 (716) 645-5039 (fax) sww@buffalo.edu
Executive Secretary Dr. Leon Woodson Morgan State University	Department of Mathematics Morgan State University Baltimore, MD 21251-0001 http://jewel.morgan.edu/~woodson/	(443) 885-3776 (O) (443) 885-8216 (fax) (410) 319-4323 woodson@morgan.edu
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Scott W. Williams

NAM Newsletter

Department of Mathematics

244 Mathematics Building

University at Buffalo

Buffalo, NY 14260-2900

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