

# national association of mathematicians



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## IN THE NEWS

Most of us have heard of, or even met Dr. Clarence Stephens, the renown founder of the Morgan-Potsdam method of teaching mathematics. For most of the first 30 years of NAM Dr. Stephens attended meetings of NAM, and later CAARMS. He was always accompanied by his charming wife Harriette who was also a lifetime member of NAM. On August 1, 2007 Harriette Josephine Stephens passed at the age of 88 years. The Stephens were married 64 years.

**Infinite Possibilities Conference 2007** will take place at North Carolina State University November 2-3, 2007. See inside for more information.

**NAM's MATHFest 17** will be held at Spelman College in Atlanta on November 8, 9, and 10, 2007.

Please Pay Your NAM Dues. This Newsletter and NAM's programs are financed by its dues paying membership. Please pay. See the end of the newsletter for the form.

### Error

During the Business meeting of 2007, NAM realized it must raise its yearly membership dues from \$25 to \$50. Unfortunately, due to a lapse of this editor, the dues change was not reflected in the first Newsletter issued this year, 38.1. To those of you who thankfully submitted your dues we ask you to consider sending an additional \$25.

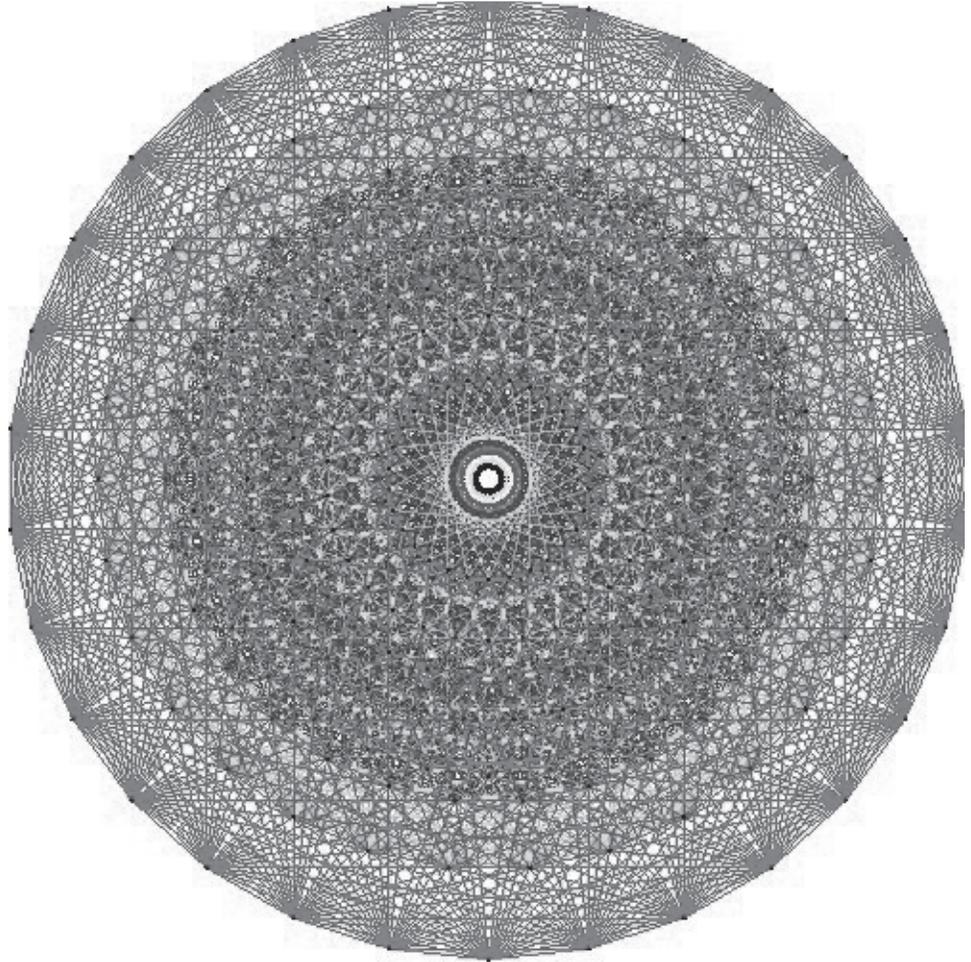
The Southern University staff has agreed to be the future editor(s) of the NAM Newsletter. Scott Williams, the current editor will retire at the end of 2007.

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

### $E_8$

In January 2007, there was a world-wide mathematical announcement: The inner workings of one of the most complicated structures ever studied: the object known as  $E_8$  has been "mapped" (a calculation of the structure of representations of the split real form). This achievement is significant both

as an advance in basic knowledge and because of the many connections between  $E_8$  and other areas, including string theory and geometry. The magnitude of the calculation is staggering: the answer, if written out in tiny print, would cover an area the size of Manhattan. The effort was the result of a four-year collaboration of 18 mathematicians including African American Dr. Alfred Noel of the University of Massachusetts at Boston.



So what is  $E_8$ ? There are 4 different but related things known as  $E_8$ .

1.  $E_8$  is first of all the largest exceptional root system, which is a set of vectors in an 8-dimensional real vector space satisfying certain properties. Root systems were classified by Wilhelm Killing in the 1890s. He found four infinite classes of Lie algebras, labelled  $A_n$ ,  $B_n$ ,  $C_n$ , and  $D_n$ , where  $n=1,2,3,\dots$ . He also found five more exceptional ones:  $G_2$ ,  $F_4$ ,  $E_6$ ,  $E_7$ , and  $E_8$ .

The  $E_8$  root system consists of all vectors (called roots)  $\langle a_1, a_2, a_3, a_4, a_5, a_6, a_7, a_8 \rangle$  where all  $a_i$  are integers or all integers plus  $1/2$ .  $1/2$ , the sum is an even integer, and sum of the squares is 2. An example with all integers is  $\langle 1, 0, 1, 0, 0, 0, 0, 0 \rangle$  (there are 112 of these) and an example with half-integers is  $\langle 1/2, 1/2, -1/2, -1/2, -1/2, 1/2, 1/2, -1/2 \rangle$  (there are 128 of these).  $E_8$  has 240 roots. The 8 refers to the fact that there are 8 coordinates. See a visualization of the 248 dimension  $E_8$  below.

2.  $E_8$  refers to the root lattice obtained by taking all sums (with integral coefficients) of the vectors in the root system. It consists of all vectors above with all  $a_i$  integers, or all  $a_i$  integers plus  $1/2$ , and whose sum is even. The integers of squared length 2 are precisely the roots. This lattice, sometimes called the "8-dimensional diamond lattice", has a number of remarkable properties. It gives most efficient sphere-packing in 8 dimensions, and is also the unique even, unimodular lattice in 8 dimensions. This latter property makes it important in string theory.

3.  $E_8$  is a semisimple Lie algebra. A Lie algebra is a vector space, equipped with an operation called the Lie bracket. A simple example is the set of all 2 by 2 matrices. This is a 4-dimensional vector space. The Lie bracket operation is  $[X,Y]=XY-YX$ .  $E_8$  is a 248-dimensional Lie algebra. Start with the 8 coordinates above, and add a coordinate for each of the 240 roots of the  $E_8$  root system. This vector space has an operation on it, called the Lie bracket: if  $X,Y$  are in the Lie algebra so is the Lie bracket  $[X,Y]$ . This is like multiplication, except that it is not commutative. Unlike the example of 2 x 2 matrices, it is very hard to write down the formula for the Lie bracket on  $E_8$ .

This is a complex Lie algebra, i.e. the coordinates are complex numbers. Associated to this Lie algebra is a (complex) Lie group, also called  $E_8$ . This complex group has (complex) dimension 248. The  $E_8$  Lie algebra and group were studied by Elie Cartan in 1894.

4.  $E_8$  is one of three real forms of the the complex Lie group  $E_8$ . Each of these three real forms has real dimension 248. The group which we are referring to in this web site is the split real form of  $E_8$ .

Consider 16x16 real matrices  $X$  satisfying two conditions. First of all  $X$  is a rotation matrix, i.e. its rows and columns are orthonormal. Secondly assume  $X^2=-I$ . The set of all such matrices  $V_0$  is a geometric object (a "real algebraic variety"), and it is 56-dimensional. There is a natural way to add a single circle to this to make a 57-dimensional variety  $V$ .  $E_8$  is a group of symmetries of  $V$ .

As for the "mapping" of  $E_8$ , what actually is calculated are certain polynomials that tell one how to build arbitrary irreducible representations out of something simpler which one does understand, certain induced representations called "standard" representations.

The above description of  $E_8$  is adapted from <http://aimath.org/E8/e8.html>.

At <http://www.youtube.com/watch?v=gXC5U3-CjBI> one can see a congressman address Congress on  $E_8$ .

## The Home of the First African American Mathematics Ph.D

In June of 2007, a plaque honoring Johnson Duncan Cox and his son, Elbert Frank Cox, was installed at the 600 block of Cherry Street in Evansville, Indiana. The plaque reads:

### HOME OF JOHNSON DUNCAN COX

J.D. COX (1873-1952) WAS A TEACHER AND PRINCIPAL AT THIRD AVENUE SCHOOL FOR 40 YEARS. IN 1925, HIS SON, ELBERT FRANK COX, BECAME THE FIRST GRADUATE OF AN EVANSVILLE HIGH SCHOOL TO RECEIVE A PHD DEGREE AND THE FIRST AFRICAN AMERICAN TO EARN A PHD IN MATHEMATICS.



Dr. Talitha Washington

The Evansville-Vanderburgh School Corporation, University of Evansville, University of Southern Indiana and IVY-Tech joined together to support the plaque. On November 18th, 2006, a dedication ceremony took place at Liberty Missionary Baptist Church where J.D. Cox's picture can still be found in the main hallway of the church. The ceremony was attended by the Cox family, the Evansville community, and members of the Kappa Alpha Psi Fraternity who showed their support for their Kappa brother, Elbert.

Dr. Talitha Washington is the second African American from Evansville to earn a PhD in mathematics and coordinated the installation of the plaque. "I came to know J.D. and Elbert Cox by accident while browsing online. It is a privilege for me to provide the Evansville community an opportunity to honor and remember two educators who contributed greatly to our community and to the world," she said. "We must share their story with our community - especially our children - so that they too can aspire to achieve great heights.

## **A Great Research Mathematician Dies**



**John Ewell at CAARMS in 2003.**

One of the great African American Mathematicians has died. Dr. John Albert Ewell III, 79, of Knoxville, Tenn., formerly of DeKalb, Ill., passed away Saturday, July 21, 2007.

John Ewell did not follow the usual path of a mathematician. There were long periods between each degree. Ewell earned a B.A. in Chemistry at Morehouse College in 1948. He earned an M.S. in Mathematics (1955) from the University of California at Los Angeles where he also earned a Ph.D. in 1966. His advisor was Ernst Strauss and his thesis title is *On the Determination of Sets by Sets of Sums of Fixed Order*, Advisor: Ernst Straus

From 1955 to 1970, he held the position of Assistant Professor of Mathematics at Southern University, California State University Long Beach, and York University Ontario, Canada. In 1970, Dr. Ewell became Associate Professor at California State University Sonoma. From 1973 to 1998 he taught at Northern Illinois University from which he retired as Professor Emeritus August 15, 1998.

Professor Ewell is among the top ten most published African American Mathematicians. He published 56 papers in Mathematics primarily in Number Theory. 17 of these papers were published AFTER HE RETIRED.

## Annual Etta Falconer Lecture At Spelman College

On April 24, 2007, Roselyn Elaine Williams, Ph.D., of Florida Agricultural and Mechanical University delivered the Third Annual Etta Z. Falconer Lecture at Spelman College. The lecture honors the life and legacy of Etta Zuber Falconer, Ph.D., Spelman's distinguished mathematician, educator and mentor. Previous years' lecturers were Dr. Carolyn Mahoney and Dr. Teresa Edwards.



Roselyn Elaine Williams, Ph.D.

Dr. Williams, a leader for several funded grants designed to increase the number of African-American science, mathematics, engineering, and technology students who earn graduate degrees, spoke to a combined student and faculty audience from area colleges and universities on "Research Experiences for Undergraduates." She stressed the value of undergraduate research in helping to develop professional skills and attitudes beyond those that are normally gained through college coursework and surprised the audience by inviting a sophomore REU student who is pursuing a chemistry major and mathematics minor to come to the stage and share her experience with interdisciplinary research. She also encouraged students to pursue graduate degrees.

Dr. Williams earned the Bachelor of Science degree at Spelman College in 1972 and the Master of Science degree at the University of Florida in 1974, both in mathematics. In 1988 she earned a doctorate in mathematics at Florida State University with a dissertation entitled Finite dimensional Hopf algebras. She is a long-time active member of the National Association of Mathematicians (NAM) where she is currently secretary-treasurer. On behalf of Spelman's mathematics department, Dr. Fred Bowers presented Williams with a plaque in recognition of her many contributions to the mathematics community.

As part of the program, several highlights of Falconer's life and 37 years of service to the Spelman College community were noted. She was remembered as an esteemed colleague and for her many roles and positions, including chair of the Division of Natural Sciences; Associate Provost for Science Programs and Policy; and Fuller E. Calloway Professor of Mathematics. In every role she mentored and inspired generations of minorities, especially African-American women in science. Her contributions were recognized with several awards and honors, including the Louise Hay Award from the Association of Women in Mathematics; the Mentor Award for Lifetime Achievement from the American Association for the Advancement of Science; the Distinguished Service Award and Lifetime Achievement from NAM, and an honorary doctorate from the University of Wisconsin at Madison.

Among the attendees were Falconer family members Alice Wilson, M.D., Walter Falconer, M.D., and Dolan Falconer Jr., the daughter and two sons of EZ Falconer and her late husband Dolan Sr. The Falconers awarded the Etta Z. Falconer Scholarship to junior mathematics major Luvenia Hellams.

Submitted by Tasha Inniss, Ph.D. and Sylvia Bozeman, Ph.D.

## **HBCU at US-Africa Advanced Studies Institute** by Asamoah Nkwanta, Morgan State University

The Center for Discrete Mathematics and Theoretical Computer Science (DIMACS) at Rutgers University, in collaboration with the African Institute for Mathematical Sciences (AIMS), and the South African Centre of Excellence for Epidemiological Modeling and Analysis (SACEMA) held an institute on mathematical modeling of infectious disease in Africa June 11-22, 2007, and a follow-up three-day capstone workshop at Stellenbosch University June 25-27, 2007. Funding was also provided by the US National Science Foundation provided funding for the workshop and advanced studies institute.

The organizing committee consisted of Brenda Latka and Fred Roberts of DIMACS, Wayne Getz of the University of California at Berkeley, Abba Gumel of the University of Manitoba, Fritz Hane of AIMS, John Hargrove of SACEMA, Simon Levin of Princeton University, Edward Lungu of the University of Botswana, and Alex Welte of the University of Witwatersrand. Abdul-Aziz Yakubu of Howard University and Asamoah Nkwanta of Morgan State University participated in the organization of the student participation in collaboration with the organizing committee.



Faculty researchers Clemence, Castillo-Chavez, Fefferman, Nkwanta, and Yakubu presented papers at the workshop. Aletha Smith presented a student research poster. During the advanced studies institute the students were divided in groups and assigned research projects. They are expected to continue working on their projects after the workshop and institute. A follow-up workshop is being planned for the US and Africa students to report on their research projects.

The advanced studies institute consisted of a series of lectures and tutorials on the analysis of various mathematical models for the spread of emerging and re-emerging diseases. About half of the students selected for the institute were from the United States and half from Africa. The first week provided a basic introduction to mathematical modeling in epidemiology. The second week covered more advanced topics. Information on the institute instructors and their lecture slides can be found at the website: <http://dimacs.rutgers.edu/Workshops/AIMS/>. Details on the 2007 and 2006 workshops can be, respectively, found at the websites: <http://dimacs.rutgers.edu/Workshops/AfricaDiseases/> and <http://dimacs.rutgers.edu/Workshops/Diseases/>.

HBCU student participation at the advanced studies institute and workshop consisted of Ashley Crump, Devroy McFarlane, Anike Oliver, and Evelyn Thomas of Howard University; Anthony Ogbuka and Nakeya Williams of Morgan State University; and Camisha Parker of Virginia State University. Faculty participation consisted of Abdul-Aziz Yakubu, Asamoah Nkwanta; and Dominic Clemence and Mingxiang Chen of North Carolina A&T State University; and Moses Haimbodi of Lincoln University. Other US participation not from an HBCU consisted of the students Althea Smith of North Carolina State University; and Danielle Robbins and Alicia Urdapilleta of Arizona State University. The faculty participants consisted of Carlos Castillo-Chavez of Arizona State University and Nina Fefferman of DIMACS. Among the Africa participants were Farai Nyabadza of the University of Botswana, and Henry Mwambi of the University of KwaZulu Natal of South Africa and his student Thembile Mzolo. See the DIMACS website for other participants.

## **Project NExT**

Project NExT and the Young Mathematician's Network invite submissions of abstracts for a poster session to be held on Sunday, January 6, 2008 from 2:00 to 4:00 p.m. (room TBA) at the Joint Mathematics Meetings in San Diego. Our poster sessions the past eleven years were a great success. Visitors to the session each year were numerous, and included many prospective employers. This session provides an excellent way to showcase one's work in a relaxed, informal environment.

The poster size will be 48" by 36"; it is best to have the posters 36" high. Posters and materials for posting pages on the posters will be provided on-site. We expect to accept about thirty posters from different areas within the mathematical sciences. Should you have a special requirement involving a computer hook-up, please let us know and we will check to see if it may be accommodated.

The deadline for final consideration is December 15, 2007. Preference will be given to those who did not earn a Ph.D. prior to 2002; please include with your submission when and where you received your Ph.D., or indicate when you expect to receive it. Please submit your abstract via e-mail, not an attachment. If it includes mathematical formulas, please submit it in basic LaTeX or TeX format. Submissions will be acknowledged quickly by e-mail. Accepted abstracts will be posted at <http://www.youngmath.net/Documents/2008/Posters/> before the Joint Meetings.

If you are interested in participating, submit copies of your abstract to:

Prof. Mike Axtell

Department of Mathematics & Comp. Sci.

Wabash College P. O. Box 352 Crawfordsville, IN 47933-0352

Phone: (317) 496-7995 e-mail: [axtellm@wabash.edu](mailto:axtellm@wabash.edu)

AND

Prof. Kevin Charlwood

Dept. of Math & Statistics Morgan Hall 275 I

Washburn University Topeka, KS 66621

Phone: (785) 670-1499 e-mail: [kevin.charlwood@washburn.edu](mailto:kevin.charlwood@washburn.edu)

## **NAM Calendar**

You can find NAM's *Online Conference Calendar* and the most recent links to relevant conferences announcements at NAM's official website <http://www.nam-math.org/>

Many details concerning 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 :

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

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

2009: Vice President; Region B representative; Majority Institution Representative.

2010: Secretary/Treasurer; Region C Representative; Community College Representative.

2011: President; Region A Representative; Government/Industry Representative.

## **Job Openings**

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

## **Institute for Advanced Study, School of Mathematics**

The School of Mathematics has a limited number of memberships, some with financial support for research in mathematics and computer science at the Institute during the 2008-09 academic year. Candidates must have given evidence of ability in research comparable at least with that expected for the Ph.D. degree.

During the 2008-09 year, Alice Chang of Princeton University will lead a special program on geometric partial differential equations. The emphasis will be on non-linear partial differential equations with applications to problems in differential, conformal and convex geometry. Topics covered will include Yamabe type equations, Q-curvature equations, fully non-linear equations in conformal and convex geometry, construction of conformal invariants and operators, problems in conformally compact Einstein manifolds, measure and probability theory approaches to the Ricci Tensor. Partial differential equations continue to be one of the central tools for studying geometric and even topological questions, and one goal of this program will be to bring researchers in geometry and PDE together to study problems of common interest in areas such as those mentioned above.

Recently the School has established the von Neumann Early Career Fellowships. Six of these fellowships will be available for the 2008-09 academic year. To be eligible for the von Neumann Fellowships, applicants should be at least 5 years following the receipt of their Ph.D. but not yet eligible to receive their first paid sabbatical.

The Veblen Research Instructorship is a three-year position which the School of Mathematics and the Department of Mathematics at Princeton University established in 1998. Three-year instructorships will be offered each year to candidates in pure and applied mathematics who have received their Ph.D. within the last three years. The first and third year of the instructorship will be spent at Princeton University and will carry regular teaching responsibilities. The second year will be spent at the Institute and dedicated to independent research of the instructor's choice.

Application materials may be requested from Applications, School of Mathematics, Institute for Advanced Study, Einstein Drive, Princeton, NJ 08540; email: [applications@math.ias.edu](mailto:applications@math.ias.edu). Application forms may be downloaded via a Web connection to <http://www.math.ias.edu>. Application deadline is December 1.

The Institute for Advanced Study is committed to diversity and strongly encourages applications from women and minorities.

### **Purdue University Two positions**

#### **Tenure/tenure track faculty**

The Mathematics Department at Purdue University seeks to fill several positions in pure and applied mathematics at the level of assistant professor or higher for August 2008. Appointments will be made based on demonstrated research and teaching qualifications. Ph.D. (or its equivalent) in mathematics or a closely related field is required. Outstanding applicants from various research areas of pure and applied mathematics will be considered.

Because the department has several openings in applied mathematics, candidates who have significant research accomplishments in applied mathematics or computational applied mathematics are especially encouraged to apply.

Applications should be submitted online through [www.mathjobs.org](http://www.mathjobs.org) and should include (1) the AMS cover sheet for academic employment, (2) a curriculum vitae, (3) a research statement, and (4) four letters of recommendation, one of which discusses the candidate's teaching qualifications. Reference letter writers should be asked to submit their letters online through [www.mathjobs.org](http://www.mathjobs.org). Direct all inquiries to [goeke@math.purdue.edu](mailto:goeke@math.purdue.edu). Applications are considered on a continuing basis but candidates are urged to apply by November 1, 2007. Purdue University is an Affirmative Action/Equal Access/Equal Opportunity Employer. Women and individuals from underrepresented groups are strongly encouraged to apply. The university is supportive of the professional needs

of dual career couples. For more information about our department, see [www.math.purdue.edu/](http://www.math.purdue.edu/).

### **Research Assistant Professor**

These three-year positions to commence August 2008 are open to mathematicians who demonstrate exceptional research promise and a strong teaching record. Ph.D. by August 18, 2008 is required. Applicants should have research interests in common with Purdue faculty.

Applications should be submitted online through [www.mathjobs.org](http://www.mathjobs.org) and should include (1) the AMS cover sheet for academic employment, (2) a curriculum vitae, (3) a research description, and (4) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Reference letter writers should be asked to submit their letters online through [www.mathjobs.org](http://www.mathjobs.org). Direct all inquiries to [goeke@math.purdue.edu](mailto:goeke@math.purdue.edu). Screening of applications will begin November 1. Some offers will be made before the end of January 2008.

Purdue University is an Affirmative Action/Equal Access/Equal Opportunity Employer. Women and individuals from underrepresented groups are strongly encouraged to apply. For more information about our department, see [www.math.purdue.edu/](http://www.math.purdue.edu/).

## **Northwestern University Two positions**

### **Boas Assistant Professor**

Applications are solicited for up to three Ralph Boas assistant professorships of three years each starting September 2008. These are non-tenure track positions with a teaching load of four quarter courses per year. We invite applications from qualified mathematicians in all fields.

Applications should be made electronically at [www.mathjobs.org](http://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 (4) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Inquiries may be sent to: [boas@math.northwestern.edu](mailto:boas@math.northwestern.edu).

Department of Mathematics, 2033 Sheridan Road, Northwestern University, Evanston, Illinois 60208-2730

### **Tenure/Tenure Track**

Applications are welcomed at any time, but the review process starts December 1, 2007. Northwestern University is an affirmative action, equal opportunity employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

Applications are invited for anticipated tenured or tenure-track positions starting September 2008. 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](http://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 (4) three letters of recommendation, one of which discusses the candidate's teaching qualifications. Inquiries may be sent to: [boas@math.northwestern.edu](mailto:boas@math.northwestern.edu).

Applications are welcome at any time. Northwestern University is an affirmative action, equal opportunity employer committed to fostering a diverse faculty; women and minority candidates are especially encouraged to apply.

## **Mathematical Sciences Research Institute**

Deputy Director  
Associate Director

Applications are invited for the positions of Deputy Director and Associate Director at the Mathematical Sciences Research Institute (MSRI), an independent research organization located on the campus of the University of California in Berkeley. The appointments will be for a term of at least two years starting August 2008. For more information, see <http://www.msri.org/about/jobs/ddad>. Applications will be considered starting November 1, 2007.

MSRI is an equal opportunity employer.

### **University of Pittsburgh**

#### **Representation Theory/Algebraic Geometry/Number Theory/Combinatorics**

The Mathematics Department of the University of Pittsburgh invites applications for a tenure-track or tenured position in representation Theory/Algebraic Geometry/Number Theory/Combinatorics to begin in the Fall Term 2008, pending budgetary approval. The appointment is at the Assistant Professor level or above, depending on the credentials of the applicant. We seek excellence in teaching and research so applicants should demonstrate substantial research accomplishment and dedication to teaching. Send a vita, three letters of recommendation, a research statement and evidence of teaching accomplishments to: Search Committee in Algebra, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260. Review of completed files will begin on November 30, 2007 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.

#### **Probability, Stochastic Analysis, Mathematical Finance**

The Mathematics Department of the University of Pittsburgh invites applications for a tenure-track in Probability, Stochastic Analysis, or Mathematical Finance to begin in the Fall Term 2008, pending budgetary approval. The appointment is at the Assistant Professor level. We seek excellence in teaching and research so applicants should demonstrate substantial research accomplishment and dedication to teaching. Send a vita, three letters of recommendation, a research statement and evidence of teaching accomplishments to: Search Committee in Probability, Stochastic Analysis, and Mathematical Finance, Department of Mathematics, University of Pittsburgh, Pittsburgh, PA 15260. Review of completed files will begin on November 30, 2007 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.

### **Shippensburg University**

The Mathematics Department at Shippensburg University seeks candidates for a tenure-track position at the assistant professor level. Qualifications include a Ph.D. in the mathematical sciences, effective communication skills, an active program of mathematical scholarship, and a commitment to teaching excellence. Please see our full position announcement at <http://webspace.ship.edu/math> for details. Application review begins November 16, 2007 and will continue until the position is filled. Shippensburg University is an equal opportunity educational employer.

### **SUNY Geneseo**

The Department of Mathematics at SUNY Geneseo is conducting a search for a tenure track faculty position to begin the fall semester, 2007. Qualified candidates from all fields of the mathematical sciences, including statistics and Mathematics Education, will be considered. The particular field is less important than the ability and willingness to assume responsibilities as needed in a department with approximately 20 faculty and 250 majors. Interested candidates can find additional information and application instructions at <http://jobs.geneseo.edu/>.

**Dartmouth College**  
**John Wesley Young Research Instructorship**

The John Wesley Young Instructorship is a postdoctoral, two- to three-year appointment intended for promising Ph.D. graduates with strong interests in both research and teaching and whose research interests overlap a department member's. Current research areas include applied mathematics, combinatorics, geometry, logic, noncommutative geometry, number theory, operator algebras, probability, set theory, and topology. Instructors teach four ten-week courses distributed over three terms, though one of these terms in residence may be free of teaching. The assignments normally include introductory, advanced undergraduate, and graduate courses. Instructors usually teach at least one course in their own specialty. This appointment is for 26 months with a monthly salary of \$4,667 and a possible 12 month renewal. Salary includes two-month research stipend for Instructors in residence during two of the three summer months. To be eligible for a 2008-2011 Instructorship, candidate must be able to complete all requirements for the Ph.D. degree before September 2008. Applications may be obtained through a link at <http://www.math.dartmouth.edu/recruiting/> or <http://www.mathjobs.org> – Position ID: 237-JWY. General inquiries can be directed to Annette Luce, Department of Mathematics, Dartmouth College, 6188 Kemeny Hall, Hanover, New Hampshire 03755-3551. At least one referee should comment on applicant's teaching ability; at least two referees should write about applicant's research ability. Applications received by January 5, 2008 receive first consideration; applications will be accepted until position is filled. Dartmouth College is committed to diversity and strongly encourages applications from women and minorities.

**University at Buffalo, SUNY**

The Department of Mathematics anticipates the appointment of several tenure-track assistant professors, effective August, 2008. Salary will be competitive. We seek candidates in the field of Applied Mathematics, particularly with an interest in scientific computing, modeling and simulation, applied probability and stochastic processes. Applicants should have excellent research accomplishments and potential, a Ph.D. in the mathematical sciences and a strong commitment to teaching.

A complete application consists of: electronic application, a curriculum vitae and a statement of research interests. These materials can be electronically submitted through the following link:

<https://www.ubjobs.buffalo.edu/applicants/jsp/shared/frameset/Frameset.jsp?time=1188313507684>

Four letters of recommendation can be mailed under separate cover to the following address: Search Committee; Department of Mathematics; University at Buffalo, SUNY; Mathematics Building 244; Buffalo, NY 14260-2900

The deadline for applications is December 1, 2007. No paper applications will be accepted.

The University at Buffalo is an Equal Opportunity Employer/Recruiter. We are interested in identifying prospective minority and women candidates. No person, in whatever relationship with the University at Buffalo, shall be subject to discrimination on the basis of age, color, creed, handicap, marital status, national origin, race, religion, sex, sexual orientation or veteran status.

**Case Western Reserve University**

Department of Mathematics, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, Ohio, 44106-7058. Tenure-track and temporary positions. Open rank, however appointment at the rank of assistant professor is strongly preferred. Tenure track in area of numerical analysis/scientific computing to enhance Department program.

Also NSF funded post-doc in area of functional analysis/convexity. For more information, see <http://www.case.edu/artsci/math/employment.htm>. The successful tenure-track candidate will hold the Ph.D. or equivalent and have, relative to career stage, a distinguished record of publication, research, service, and teaching. Compensation commensurate with qualifications. Applications will be considered on receipt; applications will be accepted until position is filled. Electronic applications to: James Alexander, [math-faculty-position@cwru.edu](mailto:math-faculty-position@cwru.edu), consisting of a letter of application, AMS cover sheet, CV, and have three letters of reference sent. CWRU is a recipient of an NSF ADVANCE institutional transformation grant to increase the participation of women in science and engineering. Case Western Reserve University is committed to diversity and is an affirmative action, equal opportunity employer. Applications from women and minorities are especially encouraged.

### **Eureka College**

The Science and Mathematics Division seeks candidates for a tenure-track professorship in mathematics with teaching duties including courses for math majors, math education specializations and general education mathematics. Please see our full position announcement at [www.eureka.edu/employment](http://www.eureka.edu/employment) for details.

Electronic applications may be sent to: [employment@eureka.edu](mailto:employment@eureka.edu). Applicant screening will begin on 8/15/2007 and continue until the position is filled. Eureka College is an equal opportunity employer committed to achieving diversity within its administration, faculty, staff, and students.

### **Williams College**

The Williams College Department of Mathematics and Statistics invites applications for one tenure track position in mathematics, beginning fall 2008, at the rank of assistant professor (in an exceptional case, a more advanced appointment may be considered). We are seeking a highly qualified candidate who has demonstrated excellence in teaching and research, and who will have a Ph.D. by the time of appointment.

Williams College is a private, residential, highly selective liberal arts college with an undergraduate enrollment of approximately 2,000 students. The teaching load is two courses per 12-week semester and a winter term course every other January. In addition to excellence in teaching, an active and successful research program is expected.

To apply, please send a vita and have three letters of recommendation on teaching and research sent to the Hiring Committee, Department of Mathematics and Statistics, Williams College, Williamstown, MA 01267. Teaching and research statements are also welcome. Evaluation of applications will begin on or after November 15 and will continue until the position is filled. Williams College is dedicated to providing a welcoming intellectual environment for all of its faculty, staff and students; as an EEO/AA employer, Williams especially encourages applications from women and minorities. For more information on the Department of Mathematics and Statistics, visit <http://www.williams.edu/Mathematics>.

### **University of Dayton Department of Mathematics**

Applications are invited for a tenure track position in the Department of Mathematics at the assistant professor level starting in August 2008. Candidates must have a Ph.D. in statistics or in mathematics with emphasis in statistics. Candidates must have a commitment to teaching, advising, curriculum development and research supervision at the undergraduate and graduate levels. For complete application details, see <http://www.udayton.edu/~mathdept>

The University of Dayton is a private comprehensive Catholic university founded by the Society of Mary in 1850. The University of Dayton is an Equal Opportunity/Affirmative Action employer. The University of Dayton is firmly committed to the principle of diversity.



# National Association of Mathematics Membership Form

(For New Applications and Annual Membership Renewal)

Membership Calendar Year: January 1 - December 31

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### Select Appropriate Membership Type

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**PLEASE RETURN THIS COMPLETED FORM AND MEMBERSHIP DUES TO :**

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

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| <b>Editor</b><br>Dr. Scott W. Williams<br>State University of New York<br>at Buffalo                           | Department of Mathematics<br>244 Mathematics Building<br>University at Buffalo<br>Buffalo, NY 14260-2900<br><a href="http://www.math.buffalo.edu/~sww">http://www.math.buffalo.edu/~sww</a>   | (716) 836-8948 (H)<br>(716) 645-6284 ext 156<br>(716) 645-5039 (fax)<br>sww@buffalo.edu |
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**Scott W. Williams**  
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Department of Mathematics  
244 Mathematics Building  
University at Buffalo  
Buffalo NY 14260-2900

**F a l l 2 0 0 7**