# News@Math&Stat

# Department of Mathematics and Statistics University of Maryland, Baltimore County

1000 Hilltop Circle, Baltimore, MD 21250, 410-455-2412, <a href="www.math.umbc.edu">www.math.umbc.edu</a>
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AN HONORS UNIVERSITY

Welcome by Department Chair Nagaraj K. Neerchal

It is a pleasure to bring to you the Spring 2010 issue of the department newsletter. In April we held the 4<sup>th</sup> Annual Probability and Statistics Day, during which we celebrated 25 years of the Statistics Graduate Program. The event was attended by more than 100 people including about 25 of the 56 PhD alumni of the program. Other items discussed in this issue include the 1<sup>st</sup> Chesapeake SIAM Student Chapter Conference, Undergraduate news, and Graduate program accomplishments. In other news, please join me in welcoming a new staff member, Ms. Angela McNulty (who has taken over this newsletter), and congratulating our colleagues and students receiving honors and awards. As always, your feedback is most welcome. Enjoy!



#### Dr. Matthias Gobbert Wins University System Award for Mentoring



Our colleague, **Dr. Matthias Gobbert**, is the recipient of the 2010 University System of Maryland Board of Regents' Faculty Award for Excellence in Mentoring. The entire department is honored by this recognition of his success in using the Center for Interdisciplinary Research and Consulting in leading many graduate students to their first publications. Dr. Gobbert was honored at the UMBC Faculty and Staff Awards Ceremony on April 7, and the award was formally given as part of the Board of Regents meeting on April 16. The photo shows (from left to right) Board of Regents Chair **Clifford M. Kendall**, Provost **Elliot Hirshman**, **Dr. Gobbert**, and University System Chancellor **William** 

"Brit" Kirwan at the Regents meeting.

### New Staff Member Joins the Math Department

The Department Welcomes a New Staff Member, **Angela McNulty**, who is working with us part time providing administrative and database support. Continuing is **Boris Alemi** as Systems Specialist, **Deneen Blair** as Assistant Director of Finance and Programs and **Tarsha Randolph** as Administrative Assistant II.

# News from the Graduate Program by Graduate Directors Kathleen Hoffman and Anindya Roy

Greetings from the Graduate Program Directors: We are happy to announce a very successful recruiting year. We welcome eight new students (five full-time and three part -time) in the applied mathematics program and ten new students (five full-time and five -part time) in the statistics program in the fall. We held two successful recruiting events, one in the fall and another in the spring. We thank all our colleagues for their support in this important endeavor. We would like to congratulate our recent graduates





and wish them every success in the future. We would also like to recognize the following students who received awards at the fifth annual student recognition day: Alan Alexanderian, Sergey Erenburg, Hui Huang, Elizabeth Murrin, Subhash Paruchuru, Navneet Sushon, Yushu Yang and Airong Yu. The biostatistics track with the statistics program is growing and this year Aijun Yu is joining the program with an NICHD pre-doctoral scholarship. The faculty has worked hard to develop strategic changes to the applied math masters and doctoral programs. We will be implementing these changes over the summer. We look forward to a successful and productive year.

#### News from the SIAM Student Chapter by President Alen Alexanderian



From the 1<sup>st</sup> Chesapeake SIAM Student Chapter Conference: SIAM Chapter Officers and the keynote speaker, Dr. Douglas Arnold. From left to right: **Zana Coulibaly**, **Noemi Petra**, **Alen Alexanderian**, **Aaron Churchill**, **Kyle Stern**, **Dr. Douglas Arnold**, and **Dr. Susan Minkoff**.

The SIAM student chapter at UMBC is successfully ending its second year. In the Fall of 2009, the chapter hosted two professional development sessions in the department. The topic for the first session was how to succeed in graduate school and featured presentation by chapter officers **Alen Alexanderian** and **Noemi Petra**, as well as by **Dr. Renetta Tull** (Assistant Dean for Graduate Student Development at UMBC). In mid-November, the chapter invited **Sonja Follett** (English Language Center at UMBC) to present a session on technical writing. As a follow-up to the technical writing session, in Spring 2010, **Dr. Kathleen** 



**Hoffman** and **Dr. Rouben Rostamian** discussed layout and software tools for designing research posters. Our most exciting event occurred on April 27, 2010, when the 1<sup>st</sup> Chesapeake SIAM Student Chapter Conference was held. The conference attracted approximately 70 participants from UMBC and other local universities. The one day event featured a keynote talk on the Mathematics of Golf by **Dr. Doug Arnold** (President of SIAM., and a poster session



showcasing graduate and undergraduate research from UMBC, Johns Hopkins University, University of Maryland College Park, Shippensburg University, and George Mason University. To cap off the year, the chapter will send a group of students to the SIAM Annual Meeting in Pittsburgh in July. The chapter officers for 2009-2010 are Alen Alexanderian (President), Noemi Petra (Vice President), Aaron Churchill (Secretary), Kyle Stern, (Treasurer), and Zana Coulibaly (Webmaster). The chapter faculty advisor is Dr. Susan Minkoff.

Siam.

#### News from the MSGSA by Vice President Jyoti Saraswat and Secretary David Trott

The Mathematics and Statistics Graduate Student association marked its fourth year as a recognized member of the UMBC community. The main purpose of the MSGSA is to represent the graduate students in the Department of Mathematics and Statistics to the larger university community as well as act as a liaison between students and administration within the department. A number of activities were conducted throughout the academic year. The association hosted two departmental parties, a number of graduate meetings, pizza luncheons, and actively assisted in the graduate program recruitment efforts. MSGSA also takes the credit of producing the first Departmental T-shirt. The current officers for 2010 are **Pavan Potharaju** (President), **Jyoti Saraswat** (Vice President), **David Trott** (Secretary), **Zana Coulibaly** (Treasurer), **Faraz Shaikh** (GSA Senator). We would like to acknowledge **Dr. Sinha** for his generous contribution to the MSGSA funds this semester. We are committed to ensuring more social events in the coming months.

#### News from the Undergraduate Program by Undergraduate Advisor Yen-Mow Lynn

After extensive dialogues with representatives from the departments of Biological Sciences, Economics, Information Systems, and others, N. Neerchal and B. Peercy have developed a new 4 credit **Applied Calculus Course** to replace the old 3 credit Elementary Calculus course, MATH 155. Basic ideas of differential and integral calculus with an emphasis on elementary techniques of differentiation and integration with applications will be discussed. Technology will be utilized to enhance understanding of the concepts and their applications. This course is not recommended for students majoring in mathematics, computer science, engineering, or physical sciences. **Prerequisite**: A suitable score on the LRC Algebra placement test or MATH 106. The one credit



hour increase corresponds to the additional discussion on lecture topics as well as the introduction of the technology component appropriate for the applied nature of the course. Credit will not be given for both MATH 151 and 155. The proposed course was approved by the Mathematics and Statistics faculty and the Faculty Senate Undergraduate Council.

### MSGSA End of the Semester Spring Party



MSGSA arranged the end of semester spring party on May 8th in the commons game room. It has become the department tradition to have the parties in the game room for the last four years. The game room located in the commons (www.umbc.edu/commons) provides many different activities for all ages. These have parties have become quite popular with students, faculty as well as their families. The faculty and the students got together under one roof in an informal environment and shared the delicious food and engaged in various games and activities. Sungwoo Choy won the Table Tennis tournament and Kyle Stern won the Billiards tournament.





#### News from the Council of Majors and Pi Mu Epsilon by Vice President Alexandria Volkening

The UMBC chapter of Pi Mu Epsilon is happy to announce its new inductees for 2009-2010: Rachael Davis, Gregory Handy, Amanda Harris, Cameron Howerd, Ranjith Keerikkattil, Victoria Kohl, Samuel Khuvis, Na Rae Lee, David Mason, Anthony Simms, Christine Sweigart, Alexandria Volkening, and Patricia Welker. These students have displayed academic excellence in the field of mathematics and hold GPAs in their major about 3.25. In addition to welcoming its new members, PME (along with the Math and Statistics Council of Majors) has held several events this semester. The Biophysics talk given in April by UMBC alumna, Lauren Perskie, had a great turnout, and the Mobuis Bagel Competition held May 12<sup>th</sup> was a huge success. Many thanks to PME faculty mentor, Dr. Jinglai Shen, and to the 2009-2010 officers, especially Aaron Pearlman. Congratulations to 2010-2011's leaders elect: President Victoria Kohl, Vice President Alexandria Volkening, Treasurer Samuel Khuvis, and Secretary Patricia Welker.

#### Record Attendance for Software Workshop on COMSOL Multiphysics

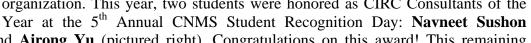
The Center for Interdisciplinary Research and Consulting (CIRC) in the Department of Mathematics and Statistics makes the expertise of the department's faculty and students available to the community both on- and off-campus. CIRC sponsored a free workshop on the finite element software package, COMSOL Multiphysics, on April 8<sup>th</sup>, which was conducted by a

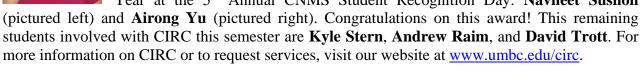


COMSOL engineer. The morning and afternoon workshops had a record attendance of 38, including many visitors from industry and other universities. CIRC students profited this semester also by a joint paper at the Cyberknife Conference, led by our long-time client **Dr. M. Didolkar** of Sinai Hospital. For the first time, CIRC



had an undergraduate student as CIRC affiliate in **Jackie King**, who worked with **Elizabeth Stanwyck** and **Dr. Nagaraj Neerchal** on a project on energy conservation sponsored by Baltimore Civic Works, a not-for-profit citizen advocacy organization. This year, two students were honored as CIRC Consultants of the







#### **Kudos**

Associate Professor of Mathematics and Statistics, **Dr. Susan Minkoff** (pictured left), attended the Coalition for National Science Funding Exhibition on Capital Hill as the representative from the <u>American Mathematical Society</u>. The event was held in the Rayburn House Office Building and was attended by Congressional staff, representatives from the scientific community, and several members of Congress. Minkoff presented two posters titled "Industrial Modeling" and "Simulation: The Wave of the Future." She also had an opportunity to speak with the offices of **Senator Mikulski**, **Senator Cardin**, and **Representative Elijah Cummings.** 



• The College of Natural and Mathematical Sciences held their 5<sup>th</sup> Annual CNMS Student Recognition Day on May 7<sup>th</sup>, 2010. Congratulations to the following students who were awarded this year: Alen Alexanderian (Outstanding Graduate Research), Sergey Erenburg (Outstanding Graduating Senior), Gregory Handy (Outstanding Undergraduate Teaching Assistant), William Hardesty (Outstanding Graduating Senior), Hui Huang (Outstanding Graduate Research), Michael Lombardi (Outstanding Graduating Senior), David Mason (Outstanding Senior: Academic Excellence), Elizabeth Murrin (Outstanding Graduate Teaching Assistant), Subhash Parchuru (Outstanding Graduating Senior), Navneet Sushon (CIRC Consultant of the Year), Alexandria Volkening (Outstanding Senior and Outstanding Undergraduate Teaching Assistant), Yushu Yang (Outstanding Graduate Teaching Assistant), Airong Yu (CIRC Consultant of the Year).

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4<sup>th</sup> Annual Probability and Statistics Day





On Saturday, April 24th, UMBC's Department of Mathematics and Statistics celebrated the Silver Jubilee of their Statistics Graduate Program. This was also done in conjunction with their 4th Annual Probability and Statistics Day! Over 100 participants attended the conference. Distinguished professors **Ray Carroll**, **Bruce Lindsey**, **Ron Butler**, and the ASA President-Elect, **Nancy Geller** were the keynote speakers. Many alumni from UMBC's statistics program attended the function and presented talks. On Friday, April 23<sup>rd</sup>, several of the participants enjoyed workshops on "Adversarial Risk Analysis" by **David Banks** and "Statistical Meta-Analysis with Applications" by **Guido Knapp**.

Saturday's program was inaugurated by UMBC's **Provost Elliott Hirshman** (pictured with Drs. Neerchal and Sinha). The conference also featured awards for best oral and poster presentations by students. UMBC's College of Natural and Mathematical Sciences Dean, **Philip Rous**, recognized every doctoral student that graduated from statistics during the past 25 years. He also recognized the outstanding contributions of the program's senior most, and founding member, **Dr. Bimal Sinha**. The Dean commended the leadership of **Dr. Nagaraj Neerchal** as the Chair of the Department, and **Dr. Anindya Roy** as the Graduate Program Director. The conference ended with an excellent banquet and an entertaining and motivational speech titled "All I Want to do When I Grow Up...Be an ASA

President," given by the current ASA President, Sastry Pantula.

**Image credits:** Willy Weng

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Professor Arthur Pittenger Celebrates Retirement

Friends and colleagues gathered on April 14, 2010 in the UC Ballroom Lounge to celebrate the retirement of **Arthur Pittenger**. A Stanford graduate, Art began his career at UMBC in 1972 after teaching at Rockefeller University, the University of Michigan, and teaching sabbaticals at both Oxford and the University of British Columbia. Professor Pittenger played an important role in the development of the Math and Statistics Department, including the key contributions of the development of the campus's first minor program, the first Putnam teams, as well as the creation of tracks within the Undergraduate major program. Along with his academic and teaching contributions, Arthur also served as Interim Dean and Dean of Arts and Sciences in 1988-





1993, as well as a subsequent year as Interim Provost. He returned to the Department in 1994 and began work in the emerging field of quantum computation, with a book published in 2000 on the subject. Pittenger is a member of the American Mathematics Society, a fellow of the Institute for Mathematical Statistics, as well as a consultant for the NSA since 1976. His wife, Judy, one of his sons, and other family were present on April 14<sup>th</sup> to witness the department toast (and roast) of his exemplary career. Former Vice Provost Charles Woolston, Department Chair Nagaraj Neerchal, and President Freeman Hrabowski were among those who spoke of Arthur's commitment and contributions to the growth of UMBC and the Department of Mathematics and Statistics.



Image credits: Tim Ford, Biological Sciences