

CSAM NEWSLETTER



COLLEGE OF SCIENCE AND MATHEMATICS

A Spectrum of Possibilities

MOU Signed With USEPA

by Nick Smith-Sebasto, Earth and Environmental Studies

As part of a continuing demonstration of commitment to the environment, sustainability and “being green,” Montclair State University became the first university in the nation to enter into a Memorandum of Understanding (MOU) with the United States Environmental Protection Agency (EPA) regarding green building construction and operation. The purpose of the MOU is to formally create a mutually beneficial working relationship between the signatories. By signing the MOU, the University is agreeing to management and operational principles that will ensure that it meets high environmental standards and reduces its carbon footprint.

The MOU was officially announced at a joint press conference held in University Hall, the first LEED certified building on campus, on June 17th. Former Provost Richard A. Lynde signed the agreement for Montclair State while Deputy Director for the Division of Environmental Planning and Protection Joanne Brennan McKee signed for the EPA. This MOU simultaneously represents recognition for Montclair’s commitment to sustainability and the environment, and our ongoing pledge to maintain and increase our effort for a greener campus in the future,” said Robert S. Prezant, Dean of the College of Science and Mathematics. According to Alan Steinberg, Regional EPA Administrator, the MOU “underscores innovation and comprehensive com-

mitment towards sustainable development” on the part of the University. “Montclair is looking greener every-day,” he observed. Lynde noted that the signing was “historically significant” since it occurred during the University’s centennial anniversary.

Highlights of the MOU include the University’s:

- Food waste composting program, the only one of its kind in the state. Since the beginning of the autumn 2007 semester, over 30,000 lbs of food scraps have been composted in an aerobic, in-vessel digester, resulting in a 15 metric ton equivalent reduction in CO2 emissions.
- Commitment to green cleaning. Over 80% of the cleaning products currently used on campus are considered to have minimal negative environmental impacts. Additionally, the University considers environmental impact when purchasing other products, such as paper.
- Agreement to join the EPA’s Energy Star and to attempt to reduce its energy consumption by 10 percent.
- On-going use of solar power from the PV array on the roof of Finley Hall.
- Commitment to water conservation.

In the October 20, 2006 issue of The Chronicle of Higher Education, the cover story was about creating sustainable universities. The subtitle was: “With great fanfare, universities are trumpeting their efforts to make soci-

ety more equitable and environmentally healthy. Will they succeed?” If Montclair State University is any indication then the answer is an emphatic yes. As Steinberg opined, “Montclair State University gets an A plus for its efforts.” ♦

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From Dean Prezant



As we near what many consider the most pivotal presidential election of the past many decades, it tends to bring out the best and the worst in our politicians and in the public debate that surrounds the process. Inflated egos and misguided self-importance of radio talk show hosts and political bloggers tend to pollute opinions with hearsay, half-truths, and outright falsehoods. It's in this atmosphere that the public must tease fact from fiction and rhetoric from honest debate. It's also here that a firm understanding of how science works can help. Sorting through the noise in a politically charged environment requires a bit of critical thinking, a process that is inherent in science learning. Such approaches represent the "standard" within the disciplines of our College of Science and Mathematics. Student learning within the sciences is about filtering the illusions and imagery that can be conjured up by extraneous or irrelevant results of a poorly designed or non-controlled experiment. Students of the sciences learn to avoid using inappropriate statistical tests. Students of science avoid making assumptions without careful analysis of data. And critically, scientists never put the results they want in front of the results they obtained. Science is about honesty, it is about building and understanding historic events and results as we ask new questions, design new experiments, and consider new directions.

There has recently been a concerted effort to have the two major presidential candidates hold a debate on issues of

science. This was promoted through a grassroots effort called Science Debate 2008. This group notes that "85% of Americans want presidential candidates to debate science issues" [<http://www.sciencedebate2008.com/www/index.php?id=2>]. To date, while both candidates recently appeared in a religious-based discussion forum, neither has accepted the opportunity to participate in a similar science-based forum. In all likelihood this reflects not the candidate's fear of having this discussion but more likely their misperceptions that 1) The public does not care about these issues or 2) The issues of major concern (e.g. global warming, stem cell research, war-induced brain trauma, drug discovery support, endangered species act, science and math learning etc.) carry too much emotion (and political weight) within the public to serve either candidate well at the polls. Because these issues in science are about our global future, and as you can see in this issue of our CSAM Newsletter, our College retains a major academic investment in many of these issues. Our recently signed MOA with the US EPA, efforts to enhance STEM learning, our programs in pharmaceutical chemistry and environmental management, issues in the Passaic River watershed, the upcoming neurotrauma symposium – these and much more reflect our need for presidential leadership that understands the issues and supports educational and research programs mandated to insure our global future. As you cast your vote in November, my hope is that, whichever candidate you gravitate towards, you've given some "scientific thought" to your decision. ♦

Sokol Inducted into NJ Hall of Fame

by Ann Frechette, Dean's Office

The late Dr. Herman Sokol (class of '37) has been accepted into The New Jersey Inventors Hall of Fame – joining the ranks of such distinguished scientists as Thomas Edison, Roy Plunkett, Albert Einstein, Charles J. Fletcher and Calvin Southern Fuller.

Dr. Herman Sokol was one of several U.S.-based research chemists who were pioneers in the discovery, development, and manufacture of a large family of antibiotics called tetracyclines. Within three years of its first commercial introduction in the early

1950s, this drug became the most prescribed broad spectrum antibiotic in the U.S. and remains the drug of choice for a number of serious infectious diseases.

Established in 1987 and sponsored by the Research & Development Council of New Jersey, the mission of the New Jersey Inventors Hall

of Fame is to promote and foster creativity, innovation and invention contributing to economic growth and improving the quality of life. The Hall of Fame honors New Jersey inventors and encourages recognition of New

Jersey as the "Invention State."

It selects awardees based on the importance of the problem solved by the invention, the novelty of the inven-



tion, and the contribution to the advancement of the state-of-the-art, commercial impact and the utilitarian or socioeconomic impact. To qualify for the award, the inventor must have completed a substantial portion of the work in New Jersey or have been a New Jersey resident while working on the project.

In his nomination of Dr. Sokol, Dean Robert Prezant states "After Herman Sokol graduated from Montclair State Teachers College in the 1930s, he went on to become a pioneer in the development of antibiotics, the introduction of basic manufacturing processes for this class of pharmaceuticals, and head of one of New Jersey's leading pharmaceutical companies – Bristol-Myers."

In the early 1980's, Dr. Sokol and his wife Margaret ('38 Mathematics) refocused their attention on Montclair State. Their generosity has been seen and felt throughout campus, from the Sokol Seminar Room in Science Hall

to scholarships, fellowships, research awards, Science Lecture Series, and the University's first named chair.

An \$8.5 million bequest from the Sokol estate in 2007– the largest gift in Montclair State's history – is being used to create endowed fellowships, professorships, a faculty awards program for the College of Science and Mathematics (CSAM), and the Margaret and Herman Sokol Institute of Pharmaceutical Life Sciences.

Dr. Sokol's career as an inventor not only included the discovery of new antibiotics, but the development of methods for the purification of both finished pharmaceutical products and process reagents, the development of highly efficient processes for the production of raw materials, and solutions to numerous problems associated with packaging finished pharmaceutical products.

Dr. Sokol moved from pharmaceutical research to business management

in the late 1950s and joined Bristol-Myers in 1962 to organize the company's international pharmaceutical program. He was elected a director of the company in 1973, acting as chairman of its pharmaceutical, health care and international divisions. In 1976, he was named president of Bristol-Myers, a position he held until retiring in 1981.

Dr. Sokol was a trustee of New York's East River Savings Bank and a member of the Board of Directors of International Flavors & Fragrances, Inc., GAF Corporation, Albany International Corp., the Whitehead Institute for Biomedical Research, the American Chemical Society, the New York Academy of Science, and the Pharmaceutical Manufacturers Association.

Following Dr. Sokol's death in 1985, Mrs. Sokol continued to generously support the sciences at several colleges and universities across the country, including MSU. ♦

Sokol Institute Launches Fellows Program

by John Siekierka, Department of Chemistry and Biochemistry

Sokol Institute of Pharmaceutical Life Sciences continues to grow with the launch of the Sokol Institute Fellows Program in March of 2008. The program is designed to promote trans-disciplinary research between two or more CSAM departments or with outside collaborators in an area relevant to the pharmaceutical life sciences. The Institute provides funding up to \$50,000 per collaborator over a two year period to selected programs. Details of the program can be found on Sokol Institute web page at <http://www.montclair.edu/sokolinstitute>.

Research proposals were reviewed by the Institutes Internal Advisory Board and external reviewers from academia

and industry and two were approved in July with four faculty appointed as Sokol Institute Fellows. The first proposal from Dr. Nina Goodey (Chemistry & Biochemistry) and Dr. Katherine Herbert (Computer Science) is entitled, "Predicting drug-target relationships for dihydrofolate reductase (DHFR) homologs through phylogenetic analysis." The goal of this project is to discover and exploit homology relationships between DHFRs from various organisms and to predict novel drug-DHFR interactions in pathogenic organisms through the creation of a new computational toolkit called "DrugTree." For example, anti-malarial drugs known to act by inhibiting malarial DHFR would be screened using this computational

technology against related DHFRs from a variety of pathogens with the intent of identifying new uses for existing drugs to treat diseases caused by these pathogens.

The second proposal approved was contributed by Dr. Hans Schelvis (Chemistry & Biochemistry) and Dr. Carlos Molina (Biology & Molecular Biology). Their proposal entitled, "Binding of ICER (Inducible cAMP Early Repressor) to its own promoter as a mode of cooperative regulation." The lack of cellular expression of the ICER protein has been shown to be a common phenomenon in several types of human cancer, including prostate cancer. Increasing

continued on page 11

Advisory Council—Member Profile

(Editor's note: The following is part of a series which features a member of the CSAM Advisory Council.)

One of the newest members of the CSAM Advisory Council is the Research & Development Council of New Jersey (RDNJ) President Allan Fliss. Allan has headed the RDNJ for the past nine years and works closely with the Council's Executive Committee and Board of Directors in setting direction and determining key initiatives for the Council. Among the Council's most recent initiatives is addressing the



critical challenges research-based industries in New Jersey face in directing students to pursue careers in the sciences.

Allan is also a partner in the integrated marketing communications agency, Richartz, Fliss, Clark & Pope. He began his career with MCI as a public relations manager with responsibilities for external and investor communications. Since that time he has amassed 30 years of experience in all facets of public relations management including the strategic development of many award-winning campaigns.

In addition to MCI, Allan served as Manager of Public Relations for the

American Society of Travel Agents. He began his agency career developing award winning public relations campaigns for such company's as Allied Signal, DuPont, National Starch & Chemical Company, Mepco Electra, division of North American Phillips, Permabond, Huls, among others. He is a former President of the Public Relations Society of America, NJ Chapter.

Allan holds an MS degree in Public Relations from Boston University and a BS in Journalism from West Virginia University. He resides in Montville, NJ, with his wife Ronnie and their two basset hounds, Murray and Barney. They also have two children, Jessica and Ian. ♦

Success in MSU's DEnvM Program

by Duke Ophori, Earth and Environmental Studies

MSU's doctoral program in Environmental Management has continued in its successful pathway. Dr. Jennifer Rose Callanan became the third graduate of the program to successfully defend her dissertation entitled "Long-Term Impacts of Forest Fires on Soil Chemical Properties as a Result of Mineral Alterations and Implications on Forest Management Practices." She received her degree in August 2008.

Dr. Callanan came to MSU as an undergraduate student from North Arlington High School in New Jersey in September 1995. She obtained her Bachelor and Master degrees in Geoscience in the Department of Earth and Environmental Studies in 2001 and 2005, respectively. She entered the newly established Environmental Management doctoral program in fall 2004. During the course of her graduate study, Dr. Callanan authored and coauthored several publications and presentations based on her dissertation research. She was supervised by her advisor, Dr. Gregory Pope. Committee members included Dr. Matthew Goring (Earth & Environmental Studies - MSU), Dr. Andrew McDougall (Mathematical Science - MSU), and Dr. Walter Bien (Bioscience & Biotechnology and Pinelands Research Center (Drexel University). Currently,

Dr. Callanan works as an Assistant Professor at William Paterson University here in New Jersey.

Another significant development also occurred in August 2008 when Naushad Kollikkathara successfully defended his dissertation entitled "Integrated System Dynamic Study and Prognosis on Municipal Solid Waste Management for Northern New Jersey Urban Area." He will receive his degree in January 2009.

Montclair State University remains one of the very few doctoral programs in the nation specifically for environmental management. Drs. Victor Onwueme and Sandow Mark Yidana were the first and second graduates of MSU's doctoral program in Environmental Management, receiving their degrees in January and May 2008 respectively. Currently, there are fourteen students enrolled, of whom three have advanced to doctoral candidacy, while the rest are in earlier stages of the program. ♦

Visit CSAM at
<http://csam.montclair.edu>

MSU Hosts Neurotrauma Symposium

The College of Science and Mathematics, in conjunction with St. Joseph's Medical Center will host a day-long symposium on the scientific, medical and technical advances in brain trauma injury on Monday, October 13, 2008 beginning at 8:15 a.m. President Cole will give welcoming remarks followed by 14 international specialists in neuro-

trauma leading the participants through the most advanced thinking on roadside care of the neurotrauma patient, advances in treatment, rehabilitation, and research. MSU Psychology professor, Dr. Julian Keenan, will present "The brain and denial: From self to self-deception."

This Neurotrauma Symposium is

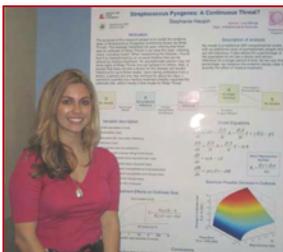
open to EMS personnel, nurses, physicians, and therapists involved with the treatment of trauma patients and academicians and students interested in current research in the field.

More information and on-line registration are available at <http://csam.montclair.edu/>. ♦

2nd Annual Student Research Symposium

by Diana Thomas, *Mathematical Sciences*

The Second Annual Student Research Symposium held on May 3 in University Hall was a tremendous success thanks to all the student, faculty and staff participation. There were a total of 29 student talks and 38 student posters and overall 139 student participants (including students in team presentations). The interaction between the



College of Humanities and Social Sciences and College of Science and Mathematics brought together some interesting conversations between students from the two colleges. A wonderful example of this occurred when CHSS student was speaking on medical ethics issues and possible legal solutions to these problems and a molecular biology student spoke up to clarify which of these solutions would be scientifically feasible. To view more images of this day, join the Montclair State University Student Symposium face book website. We

hope to have more great interactions and discussions between disciplines at the Third Annual Student Research

Symposium to be held on April 30, 2009 from 4:00 p.m. to 7 p.m. in University Hall. ♦



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CSAM Awards Scholarships

In recognition of College of Science and Mathematics' increasingly outstanding students, CSAM continually strives to obtain support and scholarship for its students. Among this year's awards are:

The Margaret and Herman Sokol Freshman Chemistry Scholarship for incoming chemistry majors recommended by their high school principals and/or high school chemistry teachers. This year's recipients of a \$1,000 are Vincent Ciccotelli (Cherry Hill HS East), Ryan McPartland (Butler HS), Brian Ruderman (Holmstead School HS) and Andrew Hernandez (Edison Township HS).

The \$1,000 Verizon Scholarship was awarded to incoming freshmen with financial need who will major in Computer Science or Information Technology. The recipients are Kevin Scott (The Family Foundation School), James Centrella (Passaic County Technical Institute), Nicole DeAmorin (Nutley HS) and Martin Campetta (Bergen

County Technical HS).

In partnership with the Investors Savings Bank, scholarships to support undergraduate research in the STEM (science, technology, engineering, and mathematics) areas were awarded to three students to pursue projects that will give them real-life research experience. Working with Dr. Aihua Li in the Department of Mathematical Sciences, Cihan Karabulut will work on Solving Certain Diophantine Equations by Applying Invariant Theory. In the Department of Chemistry and Biochemistry, Rita Sheth will examine the Purification of Dihydrofolate Reductase from the Fresh-Water Snail *Helisoma trivolvis*, under the mentorship of Dr. Nina M. Goodey. And Anthony Cullen will work under Dr. Dirk Vanderklein in the Department of Biology and Molecular Biology on Carbon Allocation Priorities in Japanese Barberry. Each student will receive \$2,500 from Verizon and \$1,000 from CSAM. ♦

EAES Faculty Awarded a Fulbright Grant

Dr. Robert W. Taylor of the Department of Earth & Environmental Studies has been awarded a Fulbright Research Scholar Grant to the Philippines for the Spring Semester 2009 for the project, "Sustainability, Urban Redevelopment and Environment: The City of Manila, Philippines." Dr. Taylor will be directing graduate student researchers from De La Salle University of the Philippines in partnership with the Mayor's Office of the City of Manila in creating the necessary baseline metrics for the development of a sustainability management plan for the City of Manila. These metrics in-

clude: energy conservation and renewables, reuse of underutilized land, transportation design and traffic congestion, greenhouse gas emissions reduction, waterfront rede-



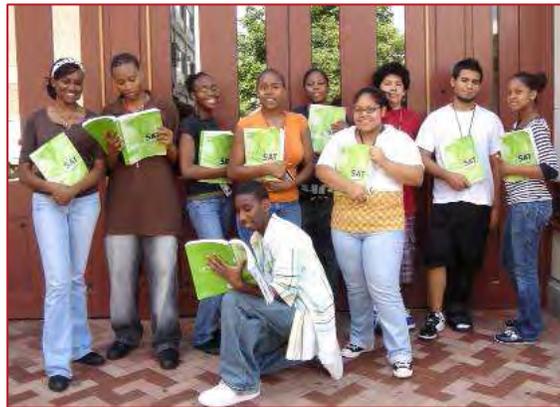
velopment and preservation, green infrastructure, buildings and zoning and sustainable redevelopment of the built environment. As part of the research design, Dr. Taylor will be leading sustainability workshops as data-gathering vehicles for a variety of stakeholders, and exploring the viability of different models for injecting sustainability practice into public and private decision-making. ♦

Washington Mutual Funds SAT Prep Course

by Donna Lorenzo, Health Careers Program and the Upward Bound Project

Thanks to the generosity of a \$5,000 grant from Washington Mutual, the Montclair State University CSAM Upward Bound Project was able to provide a four-week modified Kaplan SAT Review course which was tailored to the needs of the project's students. Students attended Kaplan classes for ten hours per week, totaling 40 hours of instruction and test taking exercises. There were a total of 11 high school students enrolled of which 63% African American and 36% Latino. Six of the students were rising seniors and five were rising juniors. All of the students are low income and first generation college bound. All attend urban public schools in the New Jersey municipalities of Newark and Paterson - two of the largest school districts in the State.

After completing the program, there was an average increase in test scores for all participants of 185 points with individual students' increase ranging between 60 and 370 points. Sixty three percent of the students earned total SAT scores above 1000. Overall, all students were challenged and increased their scores in at least one of the test administrations. All students (100%) had an increase in the Mathematics section, 54% of the students had an increase



in the Critical Reading section and 72% of the students had an increase in the Writing section. In Mathematics section, the average test score increased from 341 to 435. The most increase (60 points) was in the Writing section where the average test score increased from 355 to 415. In the Critical Reading section, the average test score increased from 367 to 389.

The Upward Bound participants have a range of unaddressed needs that places their ability to earn a postsecondary baccalaureate degree at risk. It is the intent of the Project to remediate competencies and proficiencies. The Project has been successful in this goal as indicated by the scores above. Washington Mutual's grant to the program has changed lives. According to Ms. Maria A. Torres, Associate Director of the Upward Bound Project, "By providing students with the opportunity to participate in the class, many students have less test-taking anxiety and have heightened their own personal as well as academic self-esteem." At a per student cost of \$454.54, Washington Mutual has made an investment in our nation's youth, which is the blue chip stock of America. This gift has certainly invested in human capital. ♦

High Schoolers Study River

by Kirk Barrett, Passaic River Institute

Several times throughout the last school year, students at Passaic Valley High School in Little Falls donned wading boots, grabbed their water testing gear and headed out for the Peckman River which runs behind the school. The students have been conducting chemical tests on the water and determining what animals live on the stream bottom. They recorded their results throughout the year, developed a research project and presented it at the first annual conference of the "Passaic River Environmental Education and Monitoring Organization" (PREEMO) on May 28th at Montclair State University.

For this report, the class traveled to four different points along the Peckman River in one day, making chemical tests at each spot. The testing began at the start of the Peckman River and was completed near its end. Their report summarized what they found in their investigation. Each of the students had a role in their oral presentation which included Powerpoint for their graphs and pictures of their trip to the various points along the river.



When asked what he thought the students gained from this study of the Peckman, teacher Mr. Billy Goodman stated

"We'd been studying that one spot on the Peckman River (behind Passaic Valley High School) all year. It was an eye opener to see where the river started...when it was just a little stream. It was nice for them to see what the river looked like at its beginning and to see that chemically it was very clean with very little nitrogen or phosphates and so forth." Megan Protze, one of Mr. Goodman's AP Environmental Science students stated, "Getting to learn about the river was integral (to the coursework). It was interesting to see that the river wasn't as dirty as we all thought it was. As corny as it sounds, we felt we got to know the river. We thought we were qualified to talk about it. I hope that future classes get to experience the class as we did."

Other participating schools in the PREEMO conference included Barringer High School in Newark, Newark Academy in Livingston and Wallington High School in Wallington, NJ. New to the program for the 2008/2009 school year will be the Montclair Kimberley Academy in Montclair.

The PREEMO project is funded by a grant from the US Environmental Protection Agency through June 2009. The Passaic River Institute is seeking funding to continue the program. More information can be found at www.preemo-msu.org. ♦

PRI Symposium Returns to MSU

Montclair State's Passaic River Institute is organizing the Third Passaic River Symposium on campus at the Conference Center in University Hall on Thursday October 16th. The first and second symposia were also held at MSU, in 2004 and 2006 respectively. It is now time to reconvene to gauge progress made in addressing problems in the Passaic Basin, what new efforts have been launched, and what challenges remain. The second symposium attracted over 300 participants and similar attendance is expected this time. Updates on the multi-agency "Lower Passaic River Restoration Project" will be prominently featured.

Confirmed speakers for this year's conference included the Regional Administrator of USEPA, Alan J. Steinberg, the Commander for the NY District of the US Army Corps of Engineers, Aniello L. Tortora, and the Commissioner of the NJ Department of Environmental Protection, Lisa P. Jackson. Information and registration can be found at <http://pages.csam.montclair.edu/pri/symposium2008>. ♦

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Send your comments and news to CSAM at addisont@mail.montclair.edu

A Long and Winding Road

by Alyssa Calabro, BS 2008

I began my college career at Montclair State six years ago with only a vague idea about what I wanted to do with my life. I had always excelled in school, especially in science, and so I decided to enroll with a safe and easy major, biochemistry! In truth, I knew that I was bound to change my mind with regards to a career several times during college, but with a general science degree I could go on to medical school, pharmaceuticals, education or research among others; it left my options open.

What had sold me on Montclair State was a visit to the campus with my high school AP Biology class. We toured Science Hall, visited the scanning electron microscope as well as four other labs in which we got to participate in small experiments. I really liked the facility and the environment, as well as the fact that it wasn't an enormous school where I would be just another face in the crowd.

My first semester taught me one of the greatest life lessons that I've learned from CSAM and MSU: success requires hard work no matter how smart you are (or think you are). I was the type of student who flew through elementary and high school with good grades and very little effort. However, this simply does not work in college. After a few grades well below what I knew I was capable of, I realized that I needed to apply myself much more if I was really going to get an education, and not just go to classes. It was at this point, during my year of organic chemistry, that I went from being a C student to an A student.

Academics were not my only struggle during my time at Montclair State. As I mentioned earlier, I spent six years, not four, pursuing my degree. This was not by choice, but by necessity. I was paying my own way through school and moved out on my own during sophomore year. I had to take two semesters off in order to work full-time and save money for school. When I was able to come back, I was a part-time student for a year while I worked full-time. It was during these times that I had the most doubts, asking myself the question I'm sure every CSAM student has asked at some point, "What am I DOING? Why couldn't I pick something easy to study, say underwater basket weaving?"

What got me through the doubtful times was not only my passion for science and for learning, but also the faculty of CSAM. There were a few professors, especially Dr. Delaney, who reached out to me even during those semesters when I wasn't enrolled in classes. This is something that I knew I wouldn't be able to find at another, larger univer-

sity and it reaffirmed my decision to attend Montclair State.

As graduation drew nearer, I knew it was time to make some decisions about my future. Having already spent six years in pursuit of my undergraduate degree, I knew that I did not want to immediately attend graduate school. More and more over my last few semesters I considered teaching high school chemistry, but at this point, it was too late to go back and take education courses. I was looking into the alternate route program when my molecular biology professor, Dr. Vega, brought to my attention an internship opportunity developed by the Dean's Office with the Bergen County Academies, a magnet high school for science and technology. They were looking for cell biologists to aid in a summer research program for their students. I was a little nervous about applying, being a biochemistry major and not having much experience in cell biology. But, in the end I didn't have much to lose and the experience of working in a high school would be invaluable to me, in pursuit of a teaching career. It was a good thing that I took the chance because it landed me the position. However, before I even spent a minute in the internship, I was offered a full-time position at the Academies. I am now



Alyssa, center, supervising students at the Academies

helping students with their research on the school's scanning electron microscope, including a breast cancer research project, as well as being responsible for equipment in the school's stem cell and biotechnology laboratories. It is a fun and exciting job that I look forward to every day. I consider myself very lucky to have found such a rewarding job only weeks after graduation, and I owe a lot of it to Montclair State, Dean Prezant and the CSAM faculty. ♦

Activities at the Forest

by Peggy Edgerley, NJ School of Conservation

The summer of 2008 was, as usual, a busy one at the New Jersey School of Conservation. In addition to the traditional two-week Music Camp, the School played host to two new and exciting programs.

The Stokes Forest Music Camp was held at NJSOC July 6-19, 2008. The 2 week camp is run through the Preparatory Center for the Arts, a division within the John J. Cali School Music in the College of the Arts at Montclair State University and offers a unique camping experience fusing the best of two worlds: music and nature. For more information you may visit their website at <http://www.stokesmusiccamp.com>.

North Carolina State University in coordination with the Swamp School held Session 1 at NJSOC on July 21-25, 2008. Attendees learned all of the skills necessary to per-

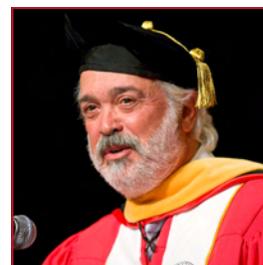
form wetland delineations in this ideal and remote setting. This 38-hour course involves both classroom and field workshops and meets the training requirements for several State wetland certification programs. Session 2 classes are scheduled for September 29 - October 3, 2008. For more information you may visit their website at <http://swampschool.org/camp>.

Girls' Leadership Camp was held at NJSOC August 3-10, 2008. This was an exciting new program for Philadelphia girls, ages 15-17, with a focus on team building, leadership development, appreciation of the natural environment and creative arts. The goal of the program is to help girls be strong, confident leaders who reach for their own dreams and are committed to making a positive impact on the world around them. ♦

Convocation 2008

The College of Science and Mathematics held its annual Convocation and Awards Ceremony on May 16. Despite the rain, over 900 students, family, friends and faculty filled Memorial Auditorium to celebrate our undergraduate students' achievements.

Ronald Califre an alumnus of Montclair State ('72 BS Biology) and currently Senior Vice President Senior Vice President and Head of Research and Development Operations at Novartis Pharmaceuticals Corporation received an honorary degree and delivered this year's keynote address (pictured right).



Outstanding Undergraduate Student Awards were given to a student, selected by his/her respective academic programs as outstanding based on his/her academic performance, as indicated by their Grade Point Average, as well as in their involvement in research, service and leadership.

This year's recipients are:

- Rojita Sharma, Biochemistry:
- Joseph Nacheff, Biology
- Tomasz Kurcon, Chemistry
- Martina Sturdikova, Computer Science
- Becky S. West, Geography
- Elyse K. Peterson, Geoscience
- John Mailolli, Information Technology
- Michael Wilson, Mathematics
- Bijin Joseph Vadasserril, Molecular Biology
- Christine L. Vadovszki, Physics
- Shekerah Primus, Science Informatics



David Hauptvogel was named Outstanding Student for carrying undergraduate research and Ms. Sharma represented the graduates as the Student Speaker. ♦

New Faculty and Staff Join CSAM

CSAM welcomes new faculty and staff as members of our community.

Dr. **Lynn F. Schneemeyer** joins CSAM as Interim Associate Dean for Academic Affairs. Dr. Schneemeyer most recent position was as Vice Provost for Research and Graduate Education and Professor of Chemistry at Rutgers University – Newark Campus. She was responsible for the research office, the animal care facility and the graduate school.

Dr. Schneemeyer is a distinguished chemist specializing in the design, synthesis and characterization of new materials, specifically in the fields of superconducting, magnetic, electronic, and optical material and devices. In 22 years at Bell Laboratories, she gained experience managing multimillion dollar research collaborations among diverse corporate partners and was involved in technology licensing for a Fortune 100 company. She subsequently joined the National Science Foundation as program officer, where she was responsible for peer review of proposals and programs supporting multidisciplinary research for the chemical sciences. She has authored more than 260 scientific publications presented more than 85 invited talks and is the holder of 21 issued and pending patents. She is ranked as the 18th most cited physicist between 1981 and 1997. Immediately upon completion of her doctorate, Dr. Schneemeyer served as a post-doctoral fellow at the Massachusetts Institute of Technology. She has been a member of the Board on Chemical Sciences and Technology at the National Academy of Science and is a Fellow of the American Physical Society, Division of Condensed Matter Physics. In addition, Lynn sits on the Board of Directors for the Kessler Institute and was co-organizer of the World of Science Lectures (targeting high school students).



Ms. **Ann P. Frechette** assumed the new position of Director of External Relations in March of 2008. Ms. Frechette is responsible for identifying and developing unique collaborative opportunities with industry and public sector organizations that will tangibly advance the long-term growth goals of CSAM in the areas of new facilities, faculty/student engagement, strategic research initiatives, pharmaceutical life sciences, and environmental management. She was previously the Executive Director of Communications and Marketing for the University. Prior to joining Montclair State in 2005, Ms. Frechette was Vice President of Global Communications for Celanese AG, a leading global chemicals and pharmaceutical concern. She also held several executive management positions in the areas of eCommerce, Supply Chain Management, Customer Service and Distribution.



Five new faculty have joined CSAM this semester. They are Dr. **Shifeng Hou**, Assistant Professor Department of Chemistry and Biochemistry; Dr. **Elena Petroff**, Assistant Professor Department of Biology and Molecular Biology; Dr. **Dibyendu Sarkar**, Professor and Director of the Doctor in Environmental Management Program - Department of Earth and Environmental Studies; Dr. **Toni M. Smith**, Assistant Professor Department of Mathematical Sciences and Dr. **Aparna Varde**, Assistant Professor Department of Computer Sciences.

Ms. **Dale Burke** joins the Department of Mathematical Sciences as secretary.

Dr. **Ronald Goldberg** joins the Sokol Institute of Pharmaceutical Life Sciences as a Research Fellow. ♦

Promotions and Tenure

Congratulations to **Stefan Robila** (Computer Science), **Stefanie Brachfeld** (Earth & Environmental Studies) and **Baojun Song** (Mathematical Sciences) upon being awarded tenure.

Drs. **Stefan Robila** (Computer Science) and **Charles Du** (Biology & Molecular Biology) were promoted to the rank of associate professor and Dr. **Duke Ophori** (Earth & Environmental Studies) to full professor. ♦

CSAM Hosts Delegation

by Aihua Li, *Mathematical Sciences*

On September 9, a delegation from Beijing Jiaotong University (NJTU) visited CSAM. The delegation, lead by Dean, consists of faculty members in the College of Science of BJTU. During their MSU/CSAM tour, the visitors had a working lunch with Dean Robert Prezant, the chairs of CSAM's five academic departments and several faculty representatives. Future development of stronger academic relationships and faculty and student exchanges between the two colleges were explored. A joint conference of NJTU and MSU best practices in science education will be planned for the near future.

The delegation also visited a class of Dr. Mary Lou Wet and her labs, the Sokol Institute for Pharmaceutical Life Sciences, some of CSAM departments, and the Sprague Library.

The six visiting members (pictured below from right to left) are:

Dr. Bofeng Qi, Professor and Dean of the College of Science and doctoral advisor

Zhengwei Cheng, Professor and chair of the Department of Physics

Liu Wu, Professor and Vice-chair of the Department of Physics

Yufeng Wang, Professor and well-known and award winning (from the Ministry of Education of China) teacher

Su Yang, Associate Professor in Physics



Carl Bredlau Retires

by Dorothy Deremer, *Computer Science*

Dr. Carl Bredlau, with a new Rutgers University mathematics Ph.D., joined MSU Mathematics Department in September 1970. In 1975 he began exploring the burgeoning new field of Computer Science. From 1978 to 2002, Dr. Bredlau was a computing consultant at Prudential. In 1998 he was one of the founding members of MSU's new Computer Science Department.



Much can be said about his impact on the University and his profession. His computing expertise for designing new curricula and his skill in inspiring different students to learn are recognized. From chairing the University many Y2K Task Force, the development of interdisciplinary programs, i.e., in Cognitive Science, and founding the local chapter of the CS national honor society, we see his imprint. His leadership in behind the scene projects i.e., in four self studies for the Accreditation Board for Engineering & Technology, is well-known.

In retirement, Dr. Bredlau plans to increase his travel and singing activities and to consult in the CS Department for special projects. ♦

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the expression of ICER within tumor cells reverses the tumor phenotype. An understanding of how the ICER Protein is regulated within tumor cells may lead to important insights as to how to target this protein for therapeutic benefit.

These new programs join the research efforts currently underway in HIV, malaria and other parasitic diseases in the laboratory of Dr. John Siekierka, Director of the Sokol Institute of Pharmaceutical Life Sciences. In addition to providing new opportunities for faculty, these exciting programs are providing our students with new opportunities to take part in cutting edge research. ♦

CSAM Annual Awards

The College of Science and Mathematics held its annual awards ceremony on April 23, 2008. Graduate students, faculty and staff were recognized for their service, teaching and research.



Dr. Sandra Adams (Biology & Molecular Biology) received the CSAM Award of Excellence for Service



Dr. Scott Kight (Biology & Molecular Biology) recipient of the CSAM Award of Excellence for



Outstanding Graduate S Students Joanne Wiesner, Molecular Biology (left), and Sarah Saber, Biology



Erin Marie Brennan, Outstanding Graduate Student in Statistics



Graduating senior Rojita Sharma (Biochemistry) received the Sokol Graduate Fellowship in Science

Deborah J. Katchen Outstanding Graduate Student in Geoscience



Stefanie Bryant (Biology & Molecular Biology), recipient of the CSAM Award of Excellence to a Secretarial Assistant



Winder Perez (Biology), Recipient of the Summer Graduate Research Fellowship. David Burger (Mathematics) is the recipient of the second award



Dr. Lora Billings (Mathematical Sciences), recipient of the Sokol Faculty Fellow and the CSAM Faculty Research Awards

Pictured (right) with Computer Science Chairperson Dr. D. Deremer is the Outstanding Graduate Student Brian Dugdale



Not pictured are Ms. Serena Smith, (Health Careers Program), recipient of the CSAM Award of Excellence to a Professional Staff, Outstanding Graduate Students Peggy Sanchez (Chemistry), Eric Rudin (Environmental Studies), Caroline Frackenpohl (Mathematics/Mathematics Education Concentration) and Margaret Saraco (Teaching Middle Grades Mathematics). Thomasz Kurcon and Dr. Nina Goodey (Chemistry & Biochemistry), Dr. Lisa Hazard (Biology & Molecular Biology), Venessa Espinosa and Dr. Kristen Monsen (Biology & Molecular Biology), Franklin Paulino and Dr. Johannes Schelvis (Chemistry & Biochemistry) were recipients of the CSAM Faculty/Student Research Awards. ♦

Faculty Activities

Dr. Mark Chopping (Earth & Environmental Studies) will lead a MSU/NASA/USDA field and lidar aerial remote sensing campaign in New Mexico, in support of NASA's \$750M DESDynI Mission. The campaign involves a flight carrying NASA/GSFC's Lidar Vegetation Imaging Sensor (LVIS) that will acquire data over New Mexico desert grasslands and forests. The data acquired will help determine the lower limits of the lidar's sensitivity to canopy structure and to calibrate and validate the results of our forest/shrub mapping algorithm that exploits NASA multiangle remote sensing. Joining Dr. Chopping are current and recently completed graduate students as well as scientists from NASA/GSFC, the USDA, Forest Service, the USDA, Agricultural Research Service, and the University of Maryland.

Graduate student **Rob Scherr** (Biology) and **Nicole Bujalski** (Earth & Environmental Studies) with faculty advisor Dr. **Dirk Vanderk-lein** (Biology & Molecular Biology) conducting fieldwork in Bonsal Park in Montclair by stripping leaves from Japanese knotweed plants to measure the plants' effects on streamflow.



Dr. **Greg Pope** (Earth & Environmental Studies) and colleagues from University of Delaware, Drexel University, University of Ottawa, Rutgers University, William Paterson University, and the US Geological Survey are engaged in both modern and ancient environmental studies of the New Jersey Pine Barrens. Under the direction of Dr. Walter Bien (Drexel), the team is undertaking a broad system and holistic assessment of the role of fire and fire management in the Pine Barrens. Dr. Pope is leading the team charged with assessing the roles that soils play in short-through long-term conditioning of the pine barren ecology.

On the paleoenvironment front, Dr. Pope and graduate student **Jennifer LaPoma** (Geoscience) are teaming with noted scientists Mark Demitroff (U. Delaware) and Hugh French (U. Ottawa) to assess the Ice Age nature of the Pine Barrens. Preliminary evidence suggests that the Pine Barrens, at the height of the Wisconsin ice advance in northern New Jersey, was a wind and sand scoured hyperarid permafrost tundra. This is a departure from the accepted theory. The ongoing project will avail EAES labs and CSAM's new Electron Microscope facility to verify evidence in soils and sediments."

Drs. **Danlin Yu** and **Huan Feng** (Earth & Environmental Studies) are co-PIs on a \$5,000 New Jersey Sea Grant College Program Development for a System dynamic model development for Passaic River watershed sustainability and environmental management study.

Dr. **Danlin Yu** will continue as Faculty Advisor for the Montclair State University Campus Mapping Project and will be training three students and two staff members for GIS and cartographic operation. ♦

Kudos

MSU math major, **Elizabeth Arango**, won the "Best Speaker" award in an undergraduate research session of the national meeting "MathFest".

Dr. **Lora Billings** (Mathematical Sciences) presented "Vaccinations in Disease Models with Antibody-Dependent Enhancement" at the 2008 SIAM Conference on Life Sciences, "ADE in Multi-strain Disease Models" at the Frontiers in Applied and Computational Mathematics (FACM '08) and "Constructing almost invariant sets for multi-stable systems," at the American Physical Society March Meeting.

Dr. **Paul Bologna** (Biology & Molecular Biology) presented "Population structure and demise of bay scallops (*Argopecten irradians*) in New Jersey" at the 2008 National Shellfisheries Association Meeting. And at the 2008 Benthic Ecology Meeting, he presented "Eelgrass community structure in New Jersey: Does episodic recruitment of blue mussels dictate system structure?", "Habitat utilization by fish and decapods of exposed and protected mangroves and seagrass beds in St. John, USVI" with students **Michael Messina**, **Aiko Edrolin**, **Rodolfo Morel**, **Jennifer Nicholas** and **Marjan Poposki** and "Assessing the distribution of sea urchins and the utilization of sea urchins as biogenic habitats for fish and invertebrates with students **Susan Jankovic**, **Jami Luckhardt** and **Kathleen Cassidy**.

Mathematical Sciences master's student, **David Burger**, presented a poster, "Migration and mixing between populations in disease models," at the 2008 SIAM Conference on Life Sciences.

Dr. **Nina M. Goodey** (Chemistry & Biochemistry) presented "Domain-Domain dynamics and function in dihydrofolate reductase from *E. coli*" coauthored with V. Cao,

S. Hammes-Schiffer, G. Hammes, and S. Benkovic at the 2008 Gordon Conference on Biomolecular Interactions and Methods.

Dr. **Lisa Hazard** (Biology & Molecular Biology) along with her student coauthors **C. Lechuga** and **S. Zilinskis** presented "Control of salt gland secretion in two insectivorous lizard species" at the Society for Integrative and Comparative Biology Annual Meeting. She was a member of the Herpetological Survey Team for the Essex



Picture by Pat Crique

County South Mountain Reservation BioBlitz that surveyed key sites at the reservation for reptile and amphibian species. She also, gave a presentation on frog diversity to two Pre-K classes at the MSU Children's Center.

Dr. **David W. Konas** (Chemistry & Biochemistry) presented "Activation and regulatory mechanisms of the constitutive nitric oxide synthase flavoproteins" at the 236th ACS National Meeting and Exposition, Division of Biological Chemistry. It was coauthored with R.P. Ilgan, M. Tiso, C. Herman, R. Hille and D.J. Stuehr.

Master's student, **Marie McCrary** (Mathematical Sciences) presented "Poisson pulsed control of particle escape" at the American Physical Society March Meeting.

Dr. **Bogden Nita** (Mathematical Sciences) presented "Imaging with earthquake waves" at the Math and Science Day and "Adjoint problem for the multiscale analysis of the normal field instability in a ferrofluid" at the Ferrofluid Frontiers Meeting at MSU.

Congratulations to **Medhawati Persaud** of our biology department who took first place at the laboratory Robotics Interest Group 4th Annual Student Poster Contest. Medhawati received a \$500 cash prize and a few job offers. The title of her poster was "Modification of nanofibers with growth factors to create an artificial basement membrane for the culture of astrocytes."

The **Passaic River Institute** is part of a team that was recently awarded a project by the U.S. Environmental Protection Agency to educate the public on actions to restore the health and beauty of the Passaic River and its watershed. The team is lead by the Association of New Jersey Environmental Commissions (ANJEC) and includes, in addition to PRI, Future City, Inc., the Lower Passaic Watershed Alliance, and the Ramapo River Watershed Intermunicipal Council. The project partners will use the funds to develop and disseminate outreach materials tailored for municipal environmental commissioners, local officials and the public. These materials will help raise awareness of the presence and value of watershed resources and events, reduce pollution, minimize wastes, improve environmental stewardship practices within the watershed and promote healthy communities by increasing public awareness of the risks of consuming contaminated fish and shellfish. Resource guides, displays and a project Web site will be produced and workshops will be held to train environmental commissioners, local officials, businesses and others on the various federal and state watershed restoration funding resources and programs potentially available to help their communities.

Mike Messina won the AAAS best undergraduate student presentation, "Habitat utilization by fish and decapods of exposed and protected man-

groves and seagrass beds in St. John USVI" (coauthored by A. Edrolin, R. Morel, J. Nicholas, M. Poposki and P. Bologna) and **Chris Langer** won the best graduate presentation for "Assessing plant diversity utilizing underwater digital photography in Great Lameshur Bay, USVI" with coauthors J. Brummer-Jecko and P. Bologna at the 2008 New Jersey Academy of Sciences Meeting. At the same meeting, Dr. **Paul Bologna**, (Biology & Molecular Biology) presented the following papers: "Assessment of invasive plants along the upper Passaic River" with student **Susan Jankovic**; "The effects of time and habitat on the distribution of fish and decapod species in three coastal habitats in St. Johns, U.S.V.I." with students **Meghan Walsh**, **Jaclyn Fiordalisi**, **Anthony Terringo**, **Daniel Shanahan**, **Sharon Girdley** and **Chris Langer**; "A study of seagrass density, diversity, and consumption in St. John, U.S. Virgin Islands with students **Kelly Astorga**, **Judy Brummer-Jecko**, **Winsley Calip**, **Nancy Noyes**, **Lauren Shabunia** and **Monica Szewczyk**; "Assessing the distribution of sea urchins and the utilization of sea urchins as biogenic habitats for fish and invertebrates" with students **Susan Jankovic**, **Jami Luckhardt** and **Kathleen Cassidy**; "Assessing plant diversity utilizing underwater digital photography in Great Lameshur Bay, U.S.V.I." with students **Christopher Langer** and **Judy Brummer-Jecko**; "Habitat utilization by fish and decapods of exposed and protected mangroves and seagrass beds in St. John, USVI" with students **Michael Messina**, **Aiko Edrolin**, **Rodolfo Morel**, Jennifer Nicholas and **Marjan Poposki**; and "Diadema antillarum study at St. John's, United States Virgin Islands" with students **Sandra Ortega**, **Yllton Tonuzi**, **David Stout**, **AJ Suleski** and **George Meleas**.

Dean **Robert Prezant** delivered a

paper on "Interdisciplinary approaches to solving riverine environmental insults" at the Third International Conference on Interdisciplinary Social Sciences in Prato, Italy in July.

Dr. **Greg Pope** (Earth & Environmental Studies) is a member of a Steering Committee for the new MSU Center for Heritage and Archaeological Studies (CHAS). He is developing a new course in Geoarchaeology, to be jointly listed between Archaeology and EAES. A grant from CSAM will help establish a "virtual" Laboratory for Material Culture Analysis in which CSAM facilities will be employed to analyze stone tools, ceramics, bone, wood, and textiles found in archaeological contexts.

An article by **Margi Saraco** that addresses integrating women and African-American studies into the middle school mathematics classroom has been published as their lead article in the September 2008 issue of *Mathematics Teaching in the Middle School*. Margi was the 2008 recipient of the Outstanding Graduate Student in the Teaching Mathematics in the Middle Grades MA program.

Research Associate **Eric A. Stern** (Earth & Environmental Studies) presented "Sustainable Urban and Environmental Management Restoration Applications Using Sediment Treatment Systems with Beneficial Use," coauthored with K.W. Jones, **M.A. Kruge**, **H.E. Feng** and L.A. Baron, at the 5th International SedNet Conference.

In May 2008, Dr. **Danlin Yu** (Earth & Environmental Studies) was an invited speaker on "Spatial econometric analysis of geographic data: spatial regression, geographically weighted regression and the extension to panel data" by The Institute of Geographical Science and Natural Resources Research, Chinese Academy of Sciences. He also presented "Understanding regional development mechanisms in Greater Beijing Area, China, 1995 – 2001, from a spatial-temporal perspective" at the 2008 GeoInformatics and Joint Conference on GIS & Built Environment in China. Other presentations included "Improvement of china's regional economic efficiency under the Gradient Development Strategy: A spatial econometric perspective" and "Measurement of provincial total factor productivity and its contribution to economic growth: Application of geographically weighted regression from a spatial temporal perspective" at the 55th North American Regional Science Association International (RSAI) Annual Conference. Both papers were coauthored with B. Lv. ♦



Publications

Billings, L. and I.B. Schwartz (2008). "Identifying almost invariant sets in stochastic dynamical systems." *CHAOS*, 18, article number 023122.

Corcoran, K.E., A. Malhotra, **C.A. Molina** and P. Rameshwar (2008). "Stromal-derived factor-1 α induces a non-canonical pathway to activate endocrine-linked *Tac1* gene in non-tumorigenic breast cells." *Journal of Molecular Endocrinology*, 40, pp. 113-123.

Du, C.G., J. Caronna, L. He and H.K. Dooner (2008). "Computational prediction and molecular confirmation of helitron transposons in the maize genome." *BMC Genomics*, 9:51, doi:10.1186/1471-2164-9-51.

Eisenberg, A.S. and **J.P.M. Schelvis** (2008). "Contributions of the 8-methyl group to the vibrational normal modes of flavin mononucleotide and its 5-methyl semiquinone radical." *Journal of Physical Chemistry A*, 112, pp. 6179-6189.

Galster, J.C., F.J. Pazzaglia and D. Germanoski (2008). "Measuring the impact of urbanization on two watersheds using historic aerial photographs and modern surveys." *Journal of the American Water Resources Association*, 44, pp. 948-960.

Goodey, N.M. and S.J. Benkovic (2008). "Allosteric regulation and catalysis emerge via a common route." *Nature Chemical Biology*, 4:8, pp. 474-482.

Feng, H., D. Yu and W. Zhang (2008). "Coastal sustainability study and environmental management." In Wagner, L.N. (ed.). *Urbanization: 21st Century Issues and Challenges*. Hauppauge, NY: Nova Science Publishers, Inc., pp. 155-173.

Ilagan, R.P., M. Tiso, **D.W. Konas**, C. Hemann, D. Durra, R. Hille and D.J. Stuehr (2008). "Differences in a conformational equilibrium distinguish catalysis by the endothelial and neuronal nitric-oxide synthase flavoproteins." *Journal of Biological Chemistry*, 283:28, pp. 19603-19615.

Kontos, C. and **P. Bologna** (2008). Assessment of Fish and Decapod use of Mangrove and Seagrass Habitats in St. John, U.S.V.I. *Bull. NJ Academy of Sciences*, 52: 7-11.

Korlie, M.S., A. Mukherjee, B.N. Nita, J.G. Stevens, A.D. Trubatch and **P. Yecko** (2008). "Analysis of flows of ferrofluids under simple shear." *Magneto hydrodynamics*, 44:1, pp.

51-60.

Korlie, M.S., A. Mukherjee, B.N. Nita, J.G. Stevens, A.D. Trubatch and P. Yecko (2008). "Modeling bubbles and drop lets in magnetic fluids." *Journal of Physics: Condensed Matter*, 20, pp. 204143.

Kowalski, L. (2008). *Hell on earth: Brutality and violence under the Stalinist Regime*. KY: Wasteland Press.

Lancaster, L., **L.C. Hazard**, J. Clobert and B. Sinervo (2008). "Endocrine perturbation reveals the hierarchical organization of reproductive trade-offs in r-selected and K-selected females." *Journal of Evolutionary Biology*, 21, pp. 556-565.

Olsen, K. (2008). *A Great Convenience – A Maritime History of the Passaic River, Hackensack River and Newark Bay*. American History Imprints.

Passchier, S. and L.A. Krissek (2008). "Oligocene–Miocene Antarctic continental weathering record and paleoclimatic implications, Cape Roberts drilling Project, Ross Sea, Antarctica." *Palaeogeography, Palaeoclimatology, Palaeoecology*, 260, pp. 30-40.

Siebert, M.J., P. Barrett, R. DeConto, R. Dunbar, C. ÓCofaigh, **S. Passchier** and T. Naish (2008). "Recent advances in understanding Antarctic climate evolution." *Antarctic Science*, 20:4, pp. 313-325.

Shishido, T., C-H. Woo, B. Ding, C. McClain, **C.A. Molina**, C. Yan, J. Yang and J. Abe (2008). "Effect of MEK5/ERK5 association on small ubiquitin-related modification of ERK5:

Implications for diabetic ventricular dysfunction after myocardial infarction." *Circulation Research*, 102, pp. 416-425.

Singh, H. (2007). "Managing Water" in the Journal of Man And Environment, 29:3, pp. 71-80.

Xeflide, S.K. and D.U. Ophori (2008). "Return period analysis as a tool for urban flood prediction in the Accra Plains, Southern Ghana." *Journal of Environmental Hydrology*, 16: Paper 15, pp. 1-8.

Yidana, S.M., D.U. Ophori and B. Banoeng-Yakubo (2008). "Hydrogeological and hydrochemical characterization of the Voltaian Basin: The Afram Plains Area, Ghana." *Environmental Geology*, 53, pp. 1213-1223.

Yidana, S.M., D.U. Ophori and B. Banoeng-Yakubo (2008). "Groundwater quality evaluation for productive uses – The Afram Plains Area, Ghana." *Journal of Irrigation and Drainage Engineering, American Society of Civil Engineers*, 134:2, pp. 222-227.

Yidana, S.M., D.U. Ophori and B. Banoeng-Yakubo (2008). "Hydrochemical evaluation of the Volta Basin: The Afram Plains Area, Ghana." *Journal of Environmental Management*, 88, pp. 697-707.

Yidana, S.M. and D.U. Ophori (2008). "Groundwater resources management in the Afram Plains Area, Ghana." *KSCE Journal of Civil Engineering*, 12:5, pp. 339-347.

Yu, D. and D.Y. Wei (2008). "GIS and spatial data analysis of regional development in greater Beijing, China." *Regional Science*, 87, pp. 97-117. ♦

Calendar of Events

October 2, 2008

CSAM Seminar in Biology & Molecular Biology
Dr. Rene Hen, Columbia University
4:00 p.m. - Sokol Seminar Room, Science Hall

October 9, 2008

CSAM Seminar in Computer Science
Dr. Wei Fan, IBM T.J. Watson Research
4:00 p.m.—Sokol Room, Science Hall

October 13, 2008

Neurotrauma Symposium
8:00 a.m. - Memorial Auditorium

October 16, 2008

Passaic River Symposium
9:00 a.m. - Conference Center, University Hall

November 1, 2008

Metropolitan Association of College and University Biologists (MACUB)
8:30 a.m. - Conference Center, University Hall

November 5, 2008

Science Professionals Speaker Series
Marc Delorenzo, Genomics / Discovery Technologies
6:30 p.m. - Sokol Seminar Room, Science Hall

April 7, 2009

Margaret & Herman Sokol Science Lecture
8:00 p.m. - Kasser Theater

April 30, 2009

Third Annual Student Research Symposium
4:00 p.m. - Conference Center, University Hall