MONTCLAIR STATE UNIVERSITY Fall 2010

CSAM NEWSLETTER

COLLEGE OF SCIENCE AND MATHEMATICS *A Spectrum of Possibilities*

The Fourth Passaic River Symposium

by Kirk Barrett, Passaic River Institute

The Passaic River Institute, a unit within the College of Science and Mathematics, hosted more than 300 educators, environmentalists, scientists, legislators, and industry representatives at the Fourth Passaic River Symposium on June 22nd. The symposium has become the most important forum for discussing projects and addressing the environmental issues surrounding the Passaic River.

A highlight of the event was the presentation of the "Robert J. DeVita Passaic Basin Environmental Champion Award" to Verona resident and Worall newspaper columnist Kurt Landsberger. The award's namesake, Mr. DeVita, a resident of West Orange, was the long-time leader of the Passaic Valley Sewerage Commissioners Passaic River Restoration Program. Mr. Landsberger was given the award in recognition of his efforts to preserve the Hilltop Reservation in Verona, Cedar Grove and North Caldwell, NJ as well as his philanthropic support of environmental education programs by at the Essex County Environmental Center and the Passaic River Institute.

Featured speakers at the symposium included Judith Enck, Region 2 administrator, U.S. Environmental Protection Agency (pictured left), Bob Martin, commissioner of the New Jersey Department of Environmental Protection, Congressman Bill Pascrell, and Colonel John R. Boulé II, Commander, U.S. Army Corps of Engineers, New York District. Many others served as presenters or discussion moderators during the breakout sessions. The presentations are available at the Institute's web site www.primsu.org

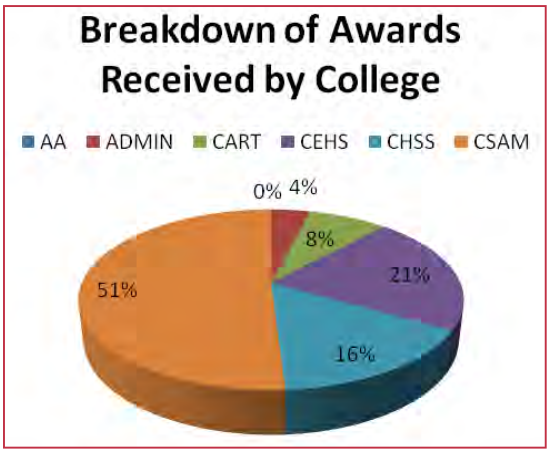
"The great response to our symposia underscores the widespread interest in the Passaic River," said Kirk Barrett, director of the Passaic River Institute and organizer of the symposium. "The future of the Passaic River is a concern to everyone in northern New Jersey, and the Passaic River Institute is working to positively influence that future."

Discussion of the cleanup and restoration efforts on the lower Passaic River was a major topic at the symposium with representatives of agencies involved in the projects reporting on their progress and future plans. These discussions were followed by breakout sessions under three main categories or tracks: Lower Passaic "Phase 1 Removal Action" and Community Perspectives, Lower Passaic Sediment Geochemistry, and Water Quality. ♦

In this issue

From Dean Prezant -

While MSU and CSAM continue to face dwindling State support, our faculty and program Directors have worked hard to insure our students and their scholarship stays current and usually ahead of the curve. This is only done through external support, winning competitive grants for outstanding scholarship and programs. This past academic year has been an outstanding one in terms of external awards coming into the College of Science and Mathematics. Annual competitive grants for the entire Montclair State University campus reached over $9M; CSAM alone accounted for 65% of proposals submitted and received 51% of all grants awarded for over $4.2M (46% of the dollars awarded to date). Grants were received from the National Science Foundation, US Geological Survey, US Environmental Protection Agency, Barnegat Bay National Estuary, National Institutes of Health, National Aeronautic & Space Administration, Consortium for Ocean Leadership, US Department of Education, and NJ Department of Education. The awards will allow our faculty and students to pursue studies ranging from assessment of sea nettles in Barnegat Bay to genetics of corn, from impact of salinization on New Jersey amphibians to computer visioning, and from mapping shrubs in the Arctic tundra to modeling the spread of infectious diseases. Grants allow development or continuation of important programs for our students, including the MARC program (Minority Access to Research Careers) and AMPS program (Alliance for Minority Participation in the Sciences) to a Research Academy for Undergraduates and a GK-12 Fellows program that continues to bring K-12 teachers together with our science and math graduate students. Grants have also allowed CSAM to purchase new equipment including a high performance computer cluster and a spinner magnetometer. And PRISM (Professional Resources in Science and Mathematics alone brought in about $700,000 to support outstanding programs in STEM teacher training and K-12 partnerships. These grants will be wonderful boosts for our students, our research, our programs, our facilities and our State. As a hint of things to come...since July 1, 2010, CSAM faculty have already brought in over $3.2M in awards...it's going to be a good year. Kudos to all in extending the spectrum of CSAM possibilities! ♦



SHIP Ahoy!

by Robert Prezant, Dean, College of Science and Mathematics

With the start of the Fall 2010 academic year, and through generous grants totaling $280,000 from Roche and from Merck, the College of Science and Mathematics initiated a new undergraduate Science Honors Innovation Program (SHIP). A small cadre of Junior-Senior year CSAM students have been brought onboard to participate in this two-year science honors program that will focus on research and innovation and help prepare students for post-baccalaureate degree programs. A CSAM faculty member will mentor each SHIP student and guide them in creating serious research proposals. SHIP students will then use that proposal to guide their research using individual $5000 budgets supplied by the program. The research will culminate in an undergraduate research thesis and presentations at national or international scientific conferences (with travel covered by the grant). A $3000 stipend will also help students focus on their research during the summer between their junior and senior years. SHIP students will attend regular and special seminars and have the opportunity for small group meetings with outstanding leaders in the sciences as well as from relevant industries. A capstone course will bring all senior SHIP students together for a unique interdisciplinary experience that will allow honing of their undergraduate thesis into a manuscript for submission to a peer reviewed journal as well as refining their professional presentation skills. SHIP students will be encouraged to apply, as appropriate, for national and international awards and scholarships such as the Fulbright, Goldwater, or Wilson Scholarships as well as NSF and DOE Graduate Fellowships. Dr. Phil Yecko, Department of Mathematical Sciences, has agreed to serve as the founding Director of this exciting new program. We're looking forward to this recently launched program reflecting the many opportunities available within CSAM. ♦

A Growing CSAM: CELS

Come September 2012 Montclair State University is looking to open a new 100,000 square-foot science building to create a transdisciplinary, collaborative facility for faculty and student research with a focus on environmental, sustainability, and pharmaceutical sciences. CSAM's Center for Environmental and Life Sciences (CELS) will reflect the needs of the state and nation and help solidify and facilitate partnerships with a growing number of institutions and industries through collaborative research and on-site incubators.

The building will comprise a comprehensive array of laboratories, seminar rooms, classrooms, and other facilities that will enable collaborative transdisciplinary research in the environmental and pharmaceutical life sciences. It will rise on the site of McEachern Hall and join our three existing science buildings in creating a "learning and discovery landscape" and produce a Science Quad on campus. Research laboratory configurations are being designed to foster interdisciplinarity and collaboration. They will also boast in-lab "break-out" spaces, student "homes" within the research community, and comfortable communication spaces. The facility is being designed specifically to eliminate the historic "silos" between disciplines. It will be a LEED® Silver –certified building, including a green roof area, with design development led by the S/L/A/M Collaborative, a national architectural firm with strong experience in designing science research centers.

The ground floor will be devoted to a state-of-the-art electron microscopy suite, a geographic information systems laboratory, existing and new CSAM centers and institutes, the facility's primary lecture hall, and its largest seminar room. The two story ground floor atrium will house high level video capabilities allowing visitors to share in the excitement of ongoing research - often in real-time from our research laboratories.

The second floor will have four major environmental teaching laboratories. This dedicated space reflects the growing and critical needs of this discipline for our increasingly threatened globe and for our newly emerging economy. Environmental research laboratories will be concentrated on the third floor and will feature four major research facilities connected by open support areas designed to house shared equipment. In addition, and to support the transdisciplinary focus, a computational research laboratory will be adjacent to these "wet labs" and will focus on informatics, genomics, and modeling.

Life sciences and pharmaceutical science laboratories will be concentrated on the fourth floor with four major research laboratories connected by open support areas designed to enhance shared studies. The fourth floor will also house a series of laboratories designed to be highly flexible and will be the home of various environmental and pharmaceutical start-up companies (incubators).

This column is designed to give you updates in each upcoming Newsletter as we anxiously await September 2012 and CELS opening day. CELS will be an essential addition to MSU and CSAM as our College has outgrown its current facilities, especially in terms of research capacity. Montclair State University has continued to offer our students the very best education and opportunities in spite of ever dwindling support from the State. A state-of-the-art science facility is expensive and CELS will be no exception as we seek to create an outstanding environment for our students and faculty to pursue science. We will soon be in fund-raising mode with hopes of generating support that will allow us to not just put up a spectacular building but that will insure we are able to keep offering our students a *full spectrum of possibilities* for their education and future growth. Keep your eyes on this column or our CSAM website to learn how you can help secure the future our students deserve as we watch CELS rise. ♦

Advisory Council — Member Profile

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

Meme Omogbai joined the staff of the Newark Museum in May 1995 and served as Deputy Director for Finance and Administration until her appointment as Chief Operating Officer in 2001. As a trustee on the Board of Trustees of The Newark Museum Association, she has been the Assistant Treasurer since October 1995. Before her appointment at The Newark Museum, she was Senior Educational Policy Advisor to the New Jersey State Treasurer, an assignment that she took on after serving as Deputy Assistant Chancellor, in the New Jersey Department of Higher Education. Concurrent with her position as Deputy Assistant Chancellor, she served as Chief Operating Officer of the NJ Higher Education Assistance Authority as well as the Student Assistance Board, with responsibility for over $6.5 billion in assets. Although Omogbai started out in public accounting as a staff auditor with Arthur Young & Company, she continues her nonprofit sector stewardship serving on the Boards of several entities including, The New Jersey Historic Trust, American Association of Museums where she serves in many capacities, including serving as co-chair for their ground-breaking Strategic Plan, the Advisory Board of Montclair State University where she serves as Chair of the Governance Committee, St. Vincent Academy, The Newark Regional Business Partnership and Committees of the New York State Society of CPAs. In 2009, she was a finalist at the inaugural NJBIZ CFO of the Years Awards under the community service category. In March 2010, she was honored as one of the 25 Influential Black Women in Business by The Network Journal. Most recently, she served as an Arts and Culture funding panelist for the State of Florida. Mrs. Omogbai received an M.B.A. in Finance and Management Consultancy from Rutgers University, Newark, New Jersey. A Leadership New Jersey alumnus, Mrs. Omogbai is a graduate of the Harvard University Executive Management Program and a Certified Public Accountant, licensed in New York State. ♦

The Fourth Annual Student Research Symposium

by Diana Thomas, Mathematical Sciences

Undergraduate and graduate students scholarly work was showcased at the Fourth Annual Student Research Symposium held on April 23, 2010 in University Hall. Through 80 poster and 50 oral presentations, students displayed results of work conducted as part of an independent or thesis research. The presentations covered a wide range of topics from investigating school lunch programs to researching sediment characteristics in Antarctica. Participants were MSU students from numerous departments including Computer Science, Biology and Molecular Biology, Chemistry and Biochemistry, Mathematics and Physics, Earth and Environmental Studies, French, Educational Foundation, Philosophy and Religion, English, Political Science and Law and others. In addition, several student presenters from Ramapo College participated this year. Some students were mentored by faculty from two or three different departments indicating cross-collaborative research teams and transdisciplinary investigations. This event was again co-hosted by CSAM and CHSS. Next year this important event will go university-wide. ♦

EAES on Arctic Expedition… Something is Happening Out There

by Rocio Duchesne, Environmental Management PhD candidate

This summer I had the opportunity to participate in a 21-day expedition to the Arctic: the vast tundra of the North Slope of Alaska. The trip was part of a research project funded by NASA directed by principal investigator Dr. Mark Chopping (Department of Earth and Environmental Studies). The goal was to collect ground data to calibrate and test canopy reflectance models that will allow tracking of trends in shrub abundance and biomass in arctic tundra from the year 2000 using multiangle reflectance data from NASA's Earth Observing System sensors that orbit the planet.

The trip was truly awe-inspiring – and epic: we visited 14 study sites located along the Chandler and Coldville Rivers. Our team had only three people: Ken, a PhD student at the University of Alaska, Fairbanks and experienced arctic traveler (his book *The Changing Arctic Landscape* was published recently); Jesse our assistant; and, myself. Our journey demanded physical stamina as it involved a lot of boating and hiking. Every other day, we would boat for about five hours to reach the next site, set up camp, and then go sampling (at these high latitudes there are about 11 hours of sunlight in the summer). In one day we would hike 4 to 5 miles, This does not sound like much but on tussock tundra the average walking speed is 1 (one) mph! Suffice to say, tussock tundra is not a homogeneous terrain but has gaps between the tussocks: some people say it is like walking on footballs. We collected structural and multispectral information of the vegetation under any weather condition, rain or shine, with or without mosquitoes (mostly with). From morning to evening our days were full of shrubs: knee height, breast height, or even three meters tall. In Alaskan tundra, shrubs are able to proliferate rapidly – unlike trees.

One evening, as we were boating, it suddenly started misting and a very strong headwind picked up. We were rowing very hard but barely making any progress. Just in time – before it started raining – we decided to stop and camp on a sand bar. For two days, it had rained continually, something not common according to my Alaskan colleagues. We all pitched our tents a little apart from each other and went to bed. Next morning when I woke up, I saw Jesse's tent right next to mine and all the equipment piled up near to us. The water was only five feet from us, and we were in a kind of island. The river had risen overnight and was about 10 meters closer! They later told me that Jesse had woken up at 3 a.m. and seen that the water had risen right up to his tent. They had called me but I didn't answer. Coincidentally, that night I had decided to use ear plugs to isolate all sounds. Luckily for me, my tent was on a higher spot and did not get flooded. After that, no more ear plugs.

Something is happening out there. During our trip, Ken and Jesse, two seasoned Alaskans, were very surprised that there were two very sunny, hot days where the air temperature was around 80° F. They even had to put on sun-block! Although one year or season cannot tell us anything about climate – even with the extremes of heat and precipitation we have seen – there is a consistent warming trend over decades. We were eyewitness to some of the changes happening in the tundra and our goal is to know at what pace these changes are happening. If shrubs expand their range and abundance rapidly over the next decade or two, it will reduce the albedo (brightness) of the tundra as the leaves of shrubs are darker than tussock grasses and lichen, making the surface absorb more sunlight and thus warmer. Shrubs also increase evapotranspiration, so arctic hydrology would be affected. Clearly, the arctic is changing but the rate and extent cannot yet be assessed on the ground. Our NASA-supported research will help us map this shrub expansion over huge areas from space. ♦

Internships: From Classroom to Career

by Gennae Hinson, CSAM Career Services

There are many benefits as to why college students should consider an internship. An internship is a great way to develop hands-on work experience that will provide students with practical knowledge related to their major that can enhance and complement classroom learning. Experience gained through an internship can help students synthesize career occupations, leverage employment opportunities, develop employer contacts, and gain practical experience that give them an edge in a competitive marketplace.

Employers hiring recent college graduates want to see applicable work experience and qualifications to fulfill their needs. An internship provides resume building skills and experiences that can expand learning from the classroom to the career. Students benefit by gaining "hands-on" experience in the field and internship employers receive valuable assistance with projects. Interns contribute cutting edge skills, offer new ideas to the company, while testing out occupations. Whether the internship includes a shadow opportunity or specialized research project, the internship will provide an introduction to the career that can help students make valuable decisions about their career choices and goals.

According to the National Association of Colleges and Employers (NACE) Job Outlook 2010, employers will be hiring 5.3% more new college graduates in 2010 than they did in 2009. It is expected that new college graduate hires will increase; therefore, college students should not wait to take advantage of resume building opportunities that can help give them an extra edge on their competitors. NACE (2010) pointed out that, on average, more than 3 out of 5 college hires had internship experience and, in most cases, more than half of all students were offered a full-time job after completing their internship. This demonstrates value that employers place on hiring interns. If the intern is a good fit for the company, there is no need to search further for the right candidate.

Consequently, completing an internship will not only help students ease their job search but will allow them to hone skills that are marketable. Skills that students develop during the internship such as communication, analytical, problem-solving, and leadership will impress potential employers and are essential to the students finding the job they want after college. Learning these skills will also allow students to become more well-rounded and prepared for the workplace. These skills, coupled with a successful internship, are not the only benefits of an internship.

An internship also allows students to develop employer references and expand their professional network. Networking can leave a great impression with professional contacts and future employers. Employer references can support an intern's candidacy for future employment offers by providing beneficial recommendations and mentor opportunities.

Finally, students should look for an internship that offers them the opportunity to apply their classroom learning and develop tangible skills so that they are ready to confidently and effectively lead in their future careers.

To learn more about internship and career building opportunities, students are strongly encouraged to attend workshops, stop at the office (RI 236) or visit the website at csam.montclair.edu/careerservices/♦

Physics and Art Exhibit

by Ashwin Vaidya, Mathematical Sciences

The first annual Physics and Art Student Photo Exhibition was held on April 23, 2010 at MSU University. The event showcased photographs taken by students in CSAM. The photos had to be creative and artistically done on a physics-related theme, and the students were asked to identify and elaborate on the science behind the art. Thirty entries were received from students in different disciplines. Two prizes were awarded upon by a jury comprising of faculty from Physics, Photography, English, and Philosophy. Some of the entries are now archived on the Creative Research Center website (www-dev.montclair.edu/creativeresearch/studentcenter/photoexhibition.html). The photo exhibition was also accompanied by two lectures: Dr. Jun Zhang, NYU Department of Physics, spoke on the theme of *Art and Physics* and discussed his experiments in fluid dynamics and flow visualization. Dr. Mary Lou West from the Depart-ment of Mathematical Sciences at MSU spoke on her collaborative art installation on campus near Sprague Library inspired by *The Ophiuchus Constellation.* ♦

Convocation 2010

The College of Science and Mathematics held its annual Convocation ceremony on Sunday, May 16 at the University's Amphitheater.

Dr. Richard Axel, University Professor and Professor of Biochemistry and Molecular Biophysics and of Pathology at Columbia University College of Physicians and Surgeons (pictured left) received an Honorary Doctor of Science Degree. Associate Dean Jinan Jaber served as master of Ceremonies and remarks were made by President Susan A. Cole and Dean Robert S. Prezant.

Outstanding Students Awards were given to graduating seniors from each of CSAM's academic majors. The selection is based on academic performance, involvement in research, service and leadership.

This year's recipients are:
Allyson Bress, Biochemistry
Diane Vig, Biology
Mark DeMilio, Chemistry
Zareta Gochiyaeva, Computer Science
Neil Kumar Joshi, Geography
Andrew James Temples, Geoscience
Justin Towe, Information Technology
Jonathan David Ballone, Mathematics
Laura Simone, Molecular Biology
Wesley Wan, Physics

Katie Gaskill was also named Outstanding Student Conducting Undergraduate Research and Jennifer Mari (pictured right) represented the graduates as Student Speaker. ♦

CSAM Annual Awards

CSAM held its annual awards ceremony on April 28, 2010. Graduate students, faculty and staff were recognized for their service, teaching and research. Congratulations to the following:

Outstanding Master's Students
Katie Elizabeth Vasquez, Biology
Barbara D. Soares, Molecular Biology
Tomasz Kurcon, Chemistry
Shreya Achar, Computer Science
Faith K. Justus, Environmental Studies
Nicole M. Bujalski, Geocience
Steven Spero, Statistics
Gina-Louise Santamaria, Mathematics
Elyssa J. Sawyer, Teaching Middle Grades Mathematics

Margaret and Herman Sokol Awards
Faculty/Student Research Award
Philip Yecko/Joy Prescod, Mathematical Sciences
Aihua Li/Emel Dimerel, Mathematical Sciences
Carlos Molina/Ethan Sebasco and Marni Crow, Biology and Molecular Biology

Margaret and Herman Sokol Faculty Fellow
Stefanie Brachfeld, Earth and Environmental Sciences

Summer Graduate Student Research Fellowship
Melissa Hansen, Earth & Environmental Studies
Scott W. Buchanan, Biology and Molecular Biology

Graduate Fellowship in Science
Stephanie Barros, Chemistry and Biochemistry

CSAM Awards of Excellence
Faculty Service—Dirk Vanderklein
Faculty Research—Charles Du
Faculty Teaching—Sandra Adams
Administrative Assistant—Barbara De Beus
Professional Staff—Dennis Stachura

Special Recognitions
Barbara De Beus, Retirement

CSAM Student Assists in Gulf Oil Spill Cleanup—First Hard Report

by Michael Pawlish, Doctoral Student Environmental Management

Greetings from Venice, Louisiana located in the furthest southeast corner of the state, and at the mouth of the Mississippi River. I am currently stationed on the BP oil spill. The day starts at 05:30, and while the days are long, it feels good helping the wildlife and also being in the field. I was given two days notice to be deployed to the oil spill, and I began field work on Monday the 7th of June. We spend our days working with the US Fish and Wildlife Service, USFWS, working on small vessels around 20 foot boats captained by local fishermen. Our primary goal is to catch oiled birds, mostly Brown Pelicans (pictured right) that are usually the size of a large turkey. We work in teams of two boats to cover large areas. I have been issued a life vest, GPS unit, radio, knee high rubber boots, and hazmat gear including white Tyvek suit that we wear during recovery efforts of these birds. You quickly get very warm in the hot sun while wearing these suits; thus, we have been limiting our time in them when oiled birds are not around. The weather has been in the mid-90s and it is quite humid; however, when the boat is running, experience get a nice breeze.

My co-workers come from all over the US and are an interesting group of scientists. It has been very interesting getting to know the locals, many of who many of them have been fishing these waters with their fathers and grandfathers since they were children. Most of them fish for shrimp or oysters with a few captains providing recreational guiding services. I am amazed at how well the locals know the waters since to me it all appears as a confusing series of cane, canals, sandbars, and oil rigs that I would quickly get lost in. The maps on the GPS units are sometimes useless due to Katrina's effects which changed the landscape.

Our team has captured around 10 to 20 birds a day; however, the numbers appear to be dropping. We have been chasing numerous such birds for up to five days because it takes this period of time for them to sufficiently tire to be catchable! For those of us who are not bird experts, we have been field trained on catching and handling birds, and I am always teamed up with a USFWS employee. Communication has been the key to capturing these wary birds. We have been working with helicopters who report the GPS coordinates of an oiled bird. Yesterday was a depressing day since another boat found nine dead pelicans.

There is a fair amount of paper work to complete since the oil spill is being treated as a criminal case, and each of the dead birds needs to be marked as evidence. We use a large fishing net to scoop live birds. After we capture a bird, we need to be gentle, but firm while handling it. We wear eye protection since birds, I am told, will try to peck out your eyes! We usually hold the large beak while grasping the body as we transfer the bird into pet carriers. After the bird is caged, and the proper paperwork completed, including the GPS coordinates, it is transferred to a bird cleaning and banding area.

While we are usually off the water by 16:30, we feel quite drained from being in the sun the entire day. The accommodations down here are quite nice. I am living on a barge with about 30 people that is located 45 minutes by boat from Venice. Dinner is at 17:00, and since I am used to a bachelor's diet, there is plenty of good food (I think I am gaining weight). We have a cook and two stewards who prepare a lot of gumbo, jambalaya, catfish, steak, and of course, fried food. There is plenty of dessert and the chocolate pecan pie with vanilla ice-cream hits the spot. We have a de-briefing meeting at 18:00 that usually lasts at least an hour to an hour and a half, and afterwards we write up reports to complete a 15 hour day. I usually go to bed at 21:30 after trying to read a little or check email, if the Internet is working. While the job is depressing seeing the oiled birds, and knowing that the livelihood of the families of fisherman and tourism will be destroyed for a number of years, I feel that I am doing a good thing. As for the duration of my stay, I am not sure at this time how long I will be here. My next assignment will be working in Gulfport, Mississippi, and I have not been told yet when or what my job detail will be. ♦

CSAM New Hires

A heartfelt welcome to our new faculty and visiting researchers who have joined CSAM this year. They are:

Yang Deng, Assistant Professor, Department of Earth and Environmental Studies
Eric Forgoston, Assistant Professor, Department of Mathematical Sciences
Emily Hill, Assistant Professor, Department of Computer Science
Jennifer Krumins, Assistant Professor, Department of Biology and Molecular Biology
Soo Jin Lee, Assistant Professor, Department of Mathematical Sciences
Michael Oudshoorn, Professor and Chair, Department of Computer Science
David Talaga, Associate Professor, Department of Chemistry and Biochemistry
Patrick Truitt, Assistant Professor, Department of Mathematical Sciences
Corey Michael Webel, Assistant Professor, Department of Mathematical Sciences
Ming Yang, Assistant Professor, Department of Computer Science
Yingkai Xu, Post Doc Research Fellow (Schelvis research group), Department of Chemistry and Biochemistry
Debdas Ray, Fulbright-Nehru Fellow (Sarkar research group), Department of Earth and Environmental Studies
Antonio Caporale, Pre-doctoral Visiting Fellow (Sarkar research group), Department of Earth and Environmental Studies ♦

Scholarships Awarded

This year's incoming first year undergraduate **Verizon Scholars** are:

- Christian Campise, Galloway, NJ, Computer Science
- Mathew Bosque, Paterson, NJ, Computer Science
- Kimberly Parla, Abderdeen, NJ, Computer Science
- Spencer Kordecki, Branchville, NJ, Computer Science

Each will receive a $1,000 scholarship towards tuition.

The following first year undergraduates have been selected as **Sokol Chemistry Scholars**:

- Danna Krayem - Saddle Brook, NJ - Biochemistry
- Marc Soojian - Little Ferry, NJ - Chemistry
- Craig Waitt - Fairfield, NJ - Chemistry
- Carolyn Mathieu - Jersey City, NJ - Chemistry
- Rabia Shah - Clifton, NJ - Biochemistry
- Luis Lopez Gomez - Brick, NJ - Chemistry
- Emma Hess - Ocean Gate, NJ - Chemistry

Each of these students will receive $2,000 towards tuition and fees for their first year of study.

The $3000 **PharmFest Scholarship** has been renewed for Mark Haverick of Belleville and Agnieszka Zieba of Clifton, NJ. Both students are pursuing the master's degree in the Department of Chemistry and Biochemistry .

And, Aline de Oliveira (pictured right with Ron Califre, Senior Vice President, Head of U.S. Operations Research and Development, Novartis Corporation and Dean Prezant, CSAM) is continuing her graduate studies in Biology as a **Novartis Scholar**. This scholarship covers full tuition and fees and provides a stipend of $10,000 per year. Aline also undertook a fulltime summer internship at Novartis as part of the scholarship award.

Congratulations to all of our students! ♦

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Robert S. Prezant, Dean
Jinan Jaber, Associate Dean & Editor
Lynn F. Schneemeyer, Associate Dean
Raquel Peterson, Administrative Assistant
Susan Brunda, Secretarial Assistant

Back issues are available at
http://csam.montclair.edu/newsarchive.php

Send your comments and news to
jaberj@mail.montclair.edu

Faculty News

Dr. **George Antoniou** (Computer Science) presented "Minimal circuit and state space realization of all-pole 2D systems with coefficient symmetry" at the IEEE Xplore, 18th Mediterranean Conference on Control and Automation.

Dr. **Paul Bologna**, (Biology and Molecular Biology) presented at the 39th Annual Benthic Ecology Meetings (1) "Eelgrass population genetics and implications for restoration", co-authored with Dr. **J. Campanella**, (2) "Assessment of *Diadema antillarum* density and size frequency from St. John's, USVI," co-authors S. Parelli, C. Barton, K. Christiansen, K. Hood, and L. Marchese, (3) "Faunal Associations with Black Sea Urchin, *Diadema antillarum,*" co-authors C. Barton, K. Christiansen, K. Hood, L. Marchese and S. Parelli; and (4) "How there is an edge effect in three separate unique environment on Hoga Island seagrass beds in Indonesia, co-author A. Suleski.

At the 55th Annual New Jersey Academy of Sciences Meeting, Dr. **Bologna** presented (1) "Faunal associations with the black sea urchin, *Diadema antillarum* co-authors C. Barton, K. Christiansen, K. Hood, L. Marchese, and S. Parelli, (2) "Seagrass community structure and faunal density in St. John's, USVI", co-authors K Christiansen, C. Barton, L. Marchese and S. Parelli, (3) "Assessment of *Diadema antillarum* density and size frequency in St. John, USVI", co-authors S. Parelli, C. Barton, K. Christiansen, K. Hood and L. Marchese, and (4) "Faunal edge effects among seagrass beds from Hoga Island, Indonesia", co-authored with A. Suleski.

Dr. **Mary G. Egan** (Biology and Molecular Biology) presented a poster at the Evolution Meeting entitled "Molecular ecological survey of blacklegged ticks *(Ixodes scapularis)* in northwestern New Jersey." And at the Association of American Geographers she presented a co-authored paper, "Environmental Change Evident by Sediment Core, Lake Wapalanne, Northwest New Jersey" with **G. Pope, M. Kruge** and **S. Passchier**.

Drs. **Huan Feng** (Earth and Environmental Studies), along with W. Zhang, L. Jia, **Michael P. Weinstein**, et. al, presented a poster entitled "Sediment dynamics study in western Bohai Bay and adjacent urban estuaries" at American Association of Geographer Annual Meeting.

Dr. **Nina Goodey** (Chemistry and Biochemistry) gave an invited talk titled "Fluorescence studies of protein motion – Two case studies" at the University of Regensburg, Germany. She presented posters on IGP synthase β1α1 loop motion during catalysis" at the Gordon Research Conference on Biomolecular Interactions and Methods in Galveston, FL and on "Conformational motion in indole-3-glycerol phosphate synthase during catalysis" at the Gordon Conference on Enzymes, Coenzymes & Metabolic Pathways. She also gave a talk on "Incorporating faculty research into the undergraduate curriculum" at the MSU University Learning and Teaching Showcase. She served as panelist to review NSF REU site proposals. And, she presented a workshop called "Chemistry Magic" for middle school students at the MSU Math and Science Day, NSF GK-12 Program.

Dr. **Dean Hamden** (Mathematical Sciences) organized "Learning for Teaching" Seminars with James Zimmerman for all CSAM faculty. Topics included dramatic classroom presentations and motivation, and these sparked good discussions.

Dr. **Lisa Hazard** (Biology and Molecular Biology) presented "Variation in behavioral aversion to road deicers in sympatric temperate zone amphibian species", co-authored with K. Kwasek, E. Koelmel and S. Gerges at the American Physiological Society Intersociety Meeting-Global Change and Global Science: Comparative Physiology in a Changing World. She also presented "Interspecific variation in behavioral aversion of amphibians to road deicers" with K. Kwasek and D. Vig as co-authors at the Society for Integrative and Comparative Biology Annual Meeting. Dr. Hazard presented an invited presentation "Dispersal and survival of juvenile and neonate desert tortoises following release from natal pens" at the American Society of Ichthyologists and at the Herpetologists Symposium. She also presented "Head-starting turtles-learning from experience."

Dr. **Lisa Hazard** has created a new web site, Vertebrates of Montclair State University (http://ontclairvertz.pbworks.com), a wiki-style site that contains student-generated content about local vertebrate species. The site lists the vertebrate species (fish, amphibians, reptiles, birds, mammals) that could potentially occur on the Montclair State University campus or at the New Jersey School of Conservation, and notes those that have been observed by members of the Department of Biology and Molecular Biology. Selected species also have detailed accounts describing their natural history; with the initial species accounts written by students in the Vertebrate Natural History course. Future classes will also contribute. The site is a work in progress, and will grow and develop in the future.

Dr. **Shifeng Hou** (Chemistry and Biochemistry) delivered a paper, "Bionanotechnology", at Jining Medical College, and "Carbon based nanomaterials" at Tai Shan Medical College, both in Shandong, China. A collaboration in bionanotechnology research was set up with these two universities . Dr. Hou served as a grant reviewer for The Petroleum Research and PRF. He also reviewed a manuscript for Industrial & Engineering Chemistry Research Dr. **Shifeng Hou** and Dr. **Marc Kasner** visited three universities in China and set up potential collaborative relations

Dr. **Mike Kruge** (Earth and Environmental Studies) and **Kevin Olsen** (Chemistry and Biochemistry), assisted by EAES graduate student **Nicole Bujalski** and Research Associate **Eric Stern**, mentored a student from Union City High School under the American Chemical Society's Project SEED. Elaine Gomez worked to characterize organic matter in the sediments of Jamaica Bay. Her efforts resulted in a 3rd place award in the environmental science category at the Intel International Science and Engineering Fair in San Jose, CA.

Dr. **Aihua Li** (Mathematical Sciences) presented a paper: "Using matrix pencils to solve discrete Sturm-Liouville problems with nonlinear boundary conditions" at the Applied Linear Algebra Conference..

Dr. **Stefan Robila** (Computer Science) completed the third REU Summer Research Experience for Undergraduates, funded by the Department of Defense, Assure Program through a National Science Foundation. Seven students from 7 universities, including MSU participated this year.

Dr. **Johannes Schelvis** (Chemistry and Biochemistry) gave an invited talk entitled "Resonance Raman characterization of the flavin radical in cryptochrome DASH" at the XXIInd International Conference on Raman Spectroscopy.

Dr. **Dibs Sarkar** (Earth and Environmental Studies) gave an invited talk "Immobilization of soil arsenic using water treatment residuals: Potential to develop into a cost-effective remediation method?" at U. Mass., Boston and "Green remediation of soil arsenic: chemical and plant-based methods" at U. of Calcutta.

Dr. **Diana Thomas** (Mathematical Sciences) presented two posters: "Kinetics of fat-free mass relative to body weight loss with short-term diet and exercise treatments: Implications for new therapy safety evaluations" and "A new practical energy-balance model for accurately predicting individual weight change in humans" and a talk entitled "A Forbes-like fat-free mass curve for use with an energy balance model" at the International Congress of Obesity in Sweden. Dr. Thomas also gave an invited presentation at the Energy Metabolism Laboratory at the Jean Mayer USDA Human Nutrition and Aging Research Center, Tufts U.

Dr. **Ashwin Vaidya** (Mathematical Sciences) presented "Vortex induced oscillations" and, with student Douglas Platt, "Fluid mechanics of the eye" at the ASME 2010 US-European Fluids Engineering Meeting. He also presented on complex networks and architectures at Prithvi Information Solutions in India.

Dr. **Mary Lou West** (Mathematical Sciences) presented "ferrofluids, projectiles, center of the universe" at Dave's Dazzling Demos (AAPT) at Rutgers. She spoke on "Mars: Beautiful, but Hostile to Life" at Rockland Astronomy Club, Montclair Retired Teachers Club and the Andrus Planetarium in Yonkers. Dr. West also continues as co-PI with **Ken Wolff** and **Mika Munakata** of the NSF GK-12 grant project *Fellows in the Middle* (csam.montclair.edu/gk12). During Spring Break nineteen members of the team traveled to Panama where they visited a middle school and did (minor) research at the rain forest and the Atlantic coast. ♦

Kudos

Congratulations to these CSAM faculty on their promotions:
Dr. **Lora Billings** to Professor
Dr. **James Dyer** to Assoc. Professor
Dr. **Bogdan Nita** to Assoc. Professor
Dr. **Sandra Passchier** to Assoc Prof.
Dr. **Quinn Vega** to Professor
Dr. **Phil Yecko** to Assoc. Professor
Dr. **Danlin Yu** to Assoc. Professor

Dr. **Kirk Barrett** (Passaic River Institute) has been awarded $52,580 by the Essex County Parks Department, with funding from the Johnette Wallerstein Institute, to construct a Woodland Garden Enclosure at the Essex County Environmental Center. The **PRI**, as subcontractor, has received $33,020 from the Gowanus Canal Sponge Park and $51,000 from the New York City Department of Environmental Protection to install a storm-water management facilities along a highway in Queens as part of the Green infrastructure retrofits in the Flushing watershed.

Dr. **Lora Billings** (Mathematical Sciences) received a $264,600 grant from the NIH as her 2nd year of study on multi-scale modeling of infectious diseases in fluctuating environments.

Dr. **Paul Bologna** (Biology and Molecular Biology) received an EPA grant of $2,669 for the Assessment of sea nettle (*Chrysaora quinquecirrha)* polyps in Barnegat Bay, NJ. Barnegat Bay Estuary.

Dr. **Stefanie Brachfeld** (Earth and Environmental Studies), was awarded $132,443 from the National Science Foundation for the acquisition of a Spinner Magnetometer and Ancillary Paleomagnetic equipment. This equipment will complement the existing rock-magnetic capabilities and allow faculty to conduct in-house paleomagnetic analyses in support of geosciences, environmental science, physics research, and laboratory research.

Dr. **Mark Chopping** (Earth and Environmental Studies) received $170,282 for the second year from the National Aeronautic & Space Administration to continue his research on Mapping Changes in Shrub Abundance and Biomass in Arctic Tundra using NASA Earth Observing System Data and Geometric -Optical Modeling.

Dr. **Evan Fuller** (Mathematical Sciences), along with Drs. J. Pablo Mejia-Ramos (PI), K. Weber (Co-PI) and J. de la Torre (Co-PI) of Rutgers University, was awarded a 3-year $443,907 NSF REESE grant entitled "Proving Styles in University Mathematics." The project's goal is to document the different ways that students approach the task of proving and to see how these approaches correlate with mathematical achievement.

Dr. **Matthew Gorring** (Earth and Environmental Studies) received an equipment grant in the amount of $28,050 from the National Science Foundation for the "Upgrade of the Optical Inductively Coupled Plasma (ICP)," a computer system that supports geochemistry research and education in the Department of Earth and Environmental Studies.

The MARC Program led by Dr. **Reginald Halaby** (Biology and Molecular Biology) received its fourth year funding of $392,050 from the National Institutes of Health.

Dr. **Lisa Hazard** (Biology and Molecular Biology) was awarded a $18,919 research grant to study the *I*mpact of salinization on New Jersey amphibian populations: A physiological approach to water quality issues by the New Jersey Water Resources Research Institute.

Dr. **Lisa Hazard** is elected as Student Support Committee member of the Society for Integrative and Comparative Biology (Jan 2010-2013).

Dr**. Aihua Li** (Mathematical Sciences) was elected co-director of the Garden State Undergraduate Mathematics Conference (GAUMC) and organized the Seventh GSUMC held at Middlesex County College.

Dr. **Dibs Sarkar** (Earth and Environmental Studies) was elected to the Board of Directors of the Hudson-Delaware Chapter of the Society of Environmental Toxicology and Chemistry for 3 years starting 2010. He was also made Graduate Faculty at University of Alabama, Michigan Technological University and University of Massachusetts at Boston. He was invited to serve on the Editorial Board of the International Journal of Environmental Science and Technology and his appointment in the Editorial Board of Environmental Pollution was extended for another term. He also serves as an Associate Editor of *Environmental Geosciences and Geosphere*.

Dr. **Diana Thomas** (Mathematical Sciences) received a grant to support an investigative workshop on "Mathematical Modeling of Metabolism and Body Weight Regulation" through the National Institute for Mathematical and Biological Synthesis. The workshop brings together researchers in physiology, nutrition, psychology and mathematics to develop and analyze methodology in obesity related issues.

Dr. **Bill Thomas** (NJSOC) has secured a $2.65M contract from the NJ Board of Public Utilities for the School of Conservation to install solar power system at the School in Stokes State Forest. The system is expected to generate power for the entire facility and produce solar renewable energy credits for sale.

Dr. **David Trubatch** (Mathematical Sciences) is the recipient of two National Science Foundation grants: MRI-R2: Acquisition of Scientific Computing Capacity for $129,372 and a Collaborative Research RUI: Dynamics of Soliton Interactions and Their Applications for $142,168.

Dr. **Dajin Wang** (Computer Science) has been appointed an Associate Editor of the prestigious IEEE Transactions on Parallel and Distributed Systems (IEEE-TPDS). The editorial board is composed of well established, well recognized scholars in the field, almost exclusively from PhD granting departments of well-known institutions.

Dr. **Jacalyn Willis** (PRISM) received $592,000 for a 3-year grant for the project "CUSP: Creative University-School Partnerships – Mathematics & Science Partnership", funded by the New Jersey Department of Education. CUSP will increase the academic achievement of students in

Student News

math and science by enhancing the content knowledge and teaching skills of classroom teachers. MSU is partnering with 25 school districts to address multiple challenges to teaching and learning by retooling the teacher workforce. Grant-funded activities will impact 135 teachers and an estimated 9,000 students.

The GK-12 Fellows in the Middle has been awarded $470,687 for Year 5 by the National Science Foundation with Dr. **Kenneth Wolf** (Mathematical Sciences) as PI.

Dr. **Mike Weinstein** (PSEG Institute for Sustainability Studies) has been invited by National University of Singapore to serve as a SDWA half-term scientific assessment reviewer.

Dr. **Meiyin Wu** (Biology and Molecular Biology) brought in approximately $400,000 of a $673,530 grant from the US EPA to develop and test an environmentally-sound ultrasound technology that could prevent the introduction of non-native species through discharge of ballast water.

Dr. **Philip Yecko** (Mathematical Sciences) received a multi-disciplinary NSF grant, "Multi-scale Modeling of Interfacial Flows of Magnetic Fluids with Microchain Aggregates," to develop, validate and apply a multi-scale code for the numerical simulation of interfacial flows of magnetic fluids. This research will involve students from a wide range of scientific preparations. The grant is for $77,807 for the first year. ♦

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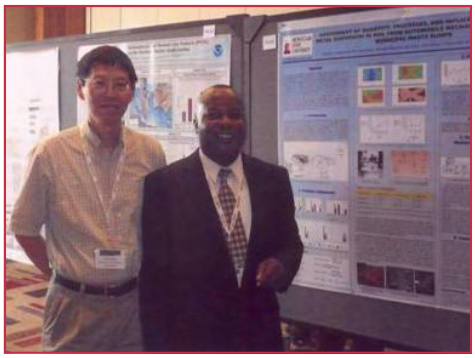
Biology and Molecular Biology student, **Scott Buchanan**, presented a poster entitled "Movement ecology and habitat utilization by the Eastern Hognose Snake (*Heterodon platirhinos*)" at Cape Cod National Seashore Joint Meeting of Ichthyologists and Herpetologists, Providence, RI.

Padmini Das, a Ph.D. student in the Environmental Management Program of the Department of Earth and Environmental Studies, won first prize of $300 for her poster entitled "Urea Catalyzed Phytoremediation of 2, 4, 6 Trinitrotoluene (TNT) Contaminated Water by Vetiver grass (*Vetiveria zizanioides L.*) and Wheat (*Triticum aestivum L.*)" in the graduate student poster competition at the New Jersey Water Environment Association (NJWEA) 94th annual meeting held in Atlantic City, NJ.

Physics students **Dawn Haider** and **Oscar Patterson** participated in the summer REU program at Hope College and Arizona State University, respectively.

Graduate student **Daniel Hauptvogel** (Earth and Environmental Studies) presented his M.S. thesis research at the ANDRILL Southern McMurdo Sound Project Science Integration Workshop in Erice, Italy,

Michael Nwachukwu who recently graduated with a Ph.D. in Environmental Management Program in August 2010, attended the Urban Environmental Pollution Conference in Boston and presented a poster, entitled "Assessment of quantity, processes, and implications of trace metal dispersion in soil from automobile mechanic villages and municipal waste dumps" (along with his advisor, Dr. Huan Feng). He also presented "Integrated study for automobile wastes management plan and environmental friendly me-



chanic villages in Nigeria" at the 25th International Conference on Solid Waste Technology and Management. Philadelphia, PA. And along with his advisor Dr. Huan Feng and J. Alinnor, Nwachukwu presented a paper entitled "Analytical and geophysical assessments of heavy metals dispersion from an automobile mechanic village and its pollution prevention" at The Symposium on the Application of Geophysics to Environmental and Engineering Problems (SAGEEP), Keystone, CO.

Pravin Punamiya, a 2nd year doctoral student under the supervision of Dr. Dibyendu Sarkar in the Environmental Management program was awarded a $5000 grant for his research proposal entitled "*Green Remediation of Tetracyclines in Soil -Water Systems*" by the New Jersey Water Resources Research Institute (NJWRRI) under national-competitive grant. Proposals are selected for their relevance to New Jersey's water resources and for the scientific merit and the promise of future productivity.

Each May, the Mid-Atlantic Chapter of the Laboratory Robotics Interest Group holds a technology exposition and vendor show. As part of the meeting the chapter sponsors a poster contest for high school stu-

dents. Four MSU graduate students, **Pravin Punamiya** (Environmental Management), **Padmini Das** (Environmental Management), **Lisa Cummins** (Biology), and **Michelle Hernandez** (Biology) served as judges for the 34 posters.

Biology students **Jairo Sierra**, **Harriet Terodemos** and **Luisa Caro** presented on the "Hormonal control of ion secretion by the nasal salt glands of two desert lizard species" at the New Jersey Academy of Sciences Annual Meeting, Union, NJ.

Several physics students presented their projects at the May meeting of the North Jersey Astronomical Group. Their topics were Laboratory Models of Folding in Geology: **Deepa Shah**, The Trojan Asteroids: **Alex Cali**, Galaxy Collisions: **Dawn Haider** and **Craig Lapierre**, Variations in Quasar Colors Over Time: **Garrett Nieddu**, The Hubble Diagram: **Oscar Patterson**, and The Blinker, A Model of the Eye: **Paul McLaughlin**.

As last year, outreach activity involved physics students performing *Exciting Physics Demos* for the GK-12 middle school Math/Science Day This year's participants were **Alex Cali**, **Michael Cohrs**, **Kaitlyn Murphy**, and **Deepa Shah**.

The Richard Hodson Award for most outstanding physics graduating senior was won by **Wesley Wan**, and the Ben Minor Award for most promising physics student went to **Brian Roller**. Each carries $400. award.

Graduate student **Ben Witherell,** Drs. Huan Feng and Danlin Yu (Earth and Environmental Studies) presented a paper on the "Spatial analysis and systems modeling for watershed management: a New Jersey case study" at American Association of Geographer Annual Meeting in Washington, DC. ♦

Mark your calendars for the upcoming

International Symposium on Sustainability Science: The Emerging Paradigm and the Urban Environment

PSEG Institute for Sustainability Studies
Montclair State University • Montclair, NJ

25-27 October 2010

General information and registration available at
http://csam.montclair.edu/sustainabilitystudies/

Publications

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Andra, S., R. Datta, **D. Sarkar,** S. Bach, and C. Mullen (2010). "Synthesis of phytochelatins in vetiver grass upon lead exposure in the presence of phosphorus." *Plant and Soil,* 326:1-2, pp. 171-185.

Andra, S., **D. Sarkar,** S. Saminathan, and R. Datta (2010). "Predicting potentially plant-available lead in contaminated residential sites." *Environmental Monitoring and Assessment.* DOI 10.1007/s10661-010-1559-4 (E-publication).

Andra, S., **D. Sarkar,** S. Saminathan, and R. Datta (2010). "Chelant-assisted phytostabilization of paint-contaminated residential sites." *CLEAN - Soil, Air, Water*. DOI 10.1002/clen.200900218 *(E-publication.*

Campanella, J., **P. Bologna,** S. Smith, E., Rosenzweig and J. Smalley (2010). "Population structure of *Zostera marina* (Eelgrass) on the Western Atlantic Coast is characterized by poor connectivity and inbreeding." *Journal of Hereditary,* 101, pp. 61-70.

Campanella, J., **P. Bologna**, S. Smith, E. Rosenzweig and J. Smalley (2010). "*Zostera marina* population genetics in Barnegat Bay, New Jersey and implications for grass bed restoration." *Population Ecology*, 52: 181-190. DOI 10.1007/s10144-009-0170-4.

Chopping, M. (2010). "CANAPI: Canopy analysis with panchromatic imagery." *Remote Sensing Letters*, 2:1, pp. 21-29. http://dx.doi.org/10.1080/01431161.2010.486805.

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with high electrocatalytic activity for methanol and ethanol oxidation." *Carbon*, 48, pp. 781 –787. **Feng H.**, W. Zhang, L. Jia, **M.P. Weinstein**, Q. Zhang, D. Yuan, J. Tao, L. Yu (2010). "Short- and long-term sediment dynamics in western Bohai Bay and coastal areas." *Chinese Journal of Oceanology and Limnology,* 28:3, pp. 583-592.

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Hazard, L., C. Lechuga and S. Zilinskis (2010). "Secretion by the nasal salt glands of two insectivorous lizard species is initiated by an ecologically relevant dietary ion, chloride." *Journal of Experimental Zoology*, 313A:7, pp. 442-451. doi: 10.1002/jez.614

Hou, S., R.D. Cuellari, N. Hakimi, K. Patel, P. Shah, **M. Gorring** and **S. Brachfeld** (2010). "Amino terminated polyethylene glycol functionalized graphene and its water solubility Material Research Society Symposium Proceedings, 1205E, Warrendale, PA, 205-L02-09.

Kollikkathara N., H. Feng, **D. Yu** (2010). "A system dynamic modeling approach for evaluating municipal solid waste management issues." *Waste Management,* doi.org/10.016/j.wasman.05.012.

Li, A. and Q. Wu (2010). "Interlace Polynomial of Ladder Graphs." *Journal of Combinatorics, Information, and System Science*, 35:1-2, pp. 261–273.

Makris, K., **D. Sarkar,** J. Salazar, P. Punamiya and R. Datta (2010). "Alternative amendment for soluble phosphorus removal from poultry litter." *Environmental Science and Pollution Research,* 17:1, pp. 195-202.

Nagar, R., **D. Sarkar,** K. Makris and R. Datta (2010). "Effect of solution chemistry on arsenic sorption by Fe- and Al-based drinking-water treatment residuals." *Chemosphere,* 78:8, pp. 1028-1035.

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Zhang X., W. Fei, D. Qin and **A. Li** (2010). "Construction and Applications of Multivariate Separators" (in Chinese). *Acata Mathematica Applicatae Sinica*, 33:2, pp. 281-289.

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Appointments to the NJ DEP

CSAM expertise has always extended beyond the immediate community. This year, especially, many of our faculty and staff are sought as experts in areas that affect our lives and the environment.

The New Jersey Department of Environmental Protection, in particular, has added the following to its committees: Dr. Robert Prezant, Dean of Montclair State University's College of Science and Mathematics is named to a seven-member state Advisory Commission directed to recommend solutions to chronic flooding in the Passaic River basin. Other appointments include Drs. Michael Weinstein and Paul Bologna to the Ecological Process Committee, Drs. Mark Chopping and Gregg Pope to the Climate and Atmospheric Sciences Committee, Dr. Kirk Barrett on the Water Quality and Quality Committee and Dr. Dibs Sarkar to the Emerging Contaminants Committee.

Furthermore, President Susan A. Cole has been appointed to the eight-member advisory commission for the Great Falls National Historical Park. The advisory commission's primary duty is to work with the park's project director to develop a general management plan that will guide the design of the park and its historical interpretation.

Pictured above President Cole is Congressman Bill Pascrell, Jr. (third from right), sponsor of the legislation that established the park, and the members of the advisory commission. ♦

Calendar of Events

October 13, 2010
CSAM Career Services Professional Speaker Series
Mr. Terrence Gunning, COO, Medical Lab Diagnostics
6:30 p.m. Dickson Hall, Cohen Lounge

October 25 - 27, 2010
International Symposium on Sustainability Science: *The Emerging Paradigm and the Urban Environment*
University Conference Center

October 26, 2010
Margaret & Herman Sokol Science Lecture
"The Arctic in a Warmer World" with Bob Reiss
8:00p.m. Kasser Theater

November 11, 2010
CSAM Career Services Professional Speaker Series
Get that job!
Cheryl Maiello, Manager, Staffing, Novartis
3:00 p.m. Dickson Hall, Cohen Lounge

December 1 - 2, 2010
8th Annual NJ Water Monitoring Summit
University Conference Center co-sponsored by the Passaic River Institute

Sustainability Seminar Series:
4:00 p.m. - Sokol Seminar Room - SH-102

Oct. 12	Mr. Brad Campbell, Bradley L. Campbell, LLC
Oct. 19	Dr. Mark Zdepski, JMZ Geology
Oct. 26	Dr. Kevin Farley, Manhattan College
Nov. 9	Mr. Kenneth Armellino, Covanta Energy
Nov. 16	Dr. Debdas Ray, Fulbright Fellow, U. of Calcutta
Nov. 23	Ms. Peg McBrien, The Louis Berger Group
Nov. 30	Dr. Peter Ashley, US Dept. of Housing and Urban Development
Dec. 7	Dr. Francisco Artigas, Meadowlands Environmental Research Institute

CSAM Career Services Workshops
3:00 p.m. Sokol Seminar Room

Oct. 7	Interviewing Basics for Science Majors
Oct. 12	The Internship Connection
Oct. 19	From Classroom to Industry for Science Majors
Nov. 2	The Internship Connection
Nov. 4	Making the Most out of Career Fairs
Nov. 9	The Internship Connection
Nov.11	Guest Speaker - Cheryl Maiello, Global Development Staffing Manager, Novartis
Nov. 16	Networking for Science Majors
Nov.18	Interviewing Basics for Science Majors
Dec. 2	Career Portfolios for Science Majors
Dec. 7	The Internship Connection