



DEAN'S CORNER

Welcome to the New Academic Year

Let me start by welcoming you all to a new academic year and to wish you well in your research efforts throughout this year. There have been some recent changes in the CUNY Research Office as we seek to provide the infrastructure for supporting ongoing, and promoting new research initiatives. In March of this year we welcomed Mr. Jake Maslow to CUNY as the new Director of Technology Commercialization. Now I am pleased to welcome Dr. **Stella Manne** to a newly created position; Deputy to the University Dean for Research.



Dr. Manne joins CUNY from New York Medical College, where she established the Office of Industry Sponsored Research and

Technology Development. Dr. Manne worked with faculty to secure funding from the bio-pharmaceutical industry as well as government programs supporting science-based economic development. She organized numerous events in collaboration with state and regional government to foster collaboration and enhance the College's research visibility. *(Continued on page 3)*

OFFICE OF RESEARCH CONDUCT

OHRP Director Speaks at Annual IRB Symposium



The Office of Research Conduct presented its annual, full-day symposium for all IRB Members and Staff on Friday, September 8, at the Newman Center of Baruch College. The symposium is designed to enhance the knowledge base of IRB members and staff and focus on current issues facing the CUNY IRB community. Dr. **Bernard Schwetz**, Director of the U.S. Department of Health and Human Services Office of Human Research Protections (OHRP), was the Keynote Speaker in this annual CUNY event. Dr. Schwetz offered valuable insights on the direction towards which OHRP and human subjects protections are headed, and thereby provided a rare opportunity for the symposium attendees to get a glimpse of the future.

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FACULTY SPOTLIGHT

Theodore Joyce

For over twenty years, Dr. **Theodore Joyce**, Professor of Economics and Finance at Baruch College, has been investigating the relationship between health care policies and their outcome on the public. Dr. Joyce recently received much media exposure, including an interview on ABC's World News Tonight as well as an extended interview on NPR's Leonard Lopate show for his work that examined the relationship between parental involvement laws for under-age abortion and pregnancy outcomes.

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FACULTY SPOTLIGHT

Steven Penrod

How accurate and reliable is eyewitness testimony? How often do witnesses merely guess? What factors in police line-up and photo-array procedures influence the decision-making process of eyewitnesses? Answers to such questions have important implications for the legal process, for example, in deciding whether jurors should be informed about the tendencies of eyewitnesses to guess and make errors. Dr. **Steven Penrod**, Distinguished Professor of Psychology at John Jay College, has been investigating questions surrounding juries and eyewitnesses with 25 years of nearly continuous funding from the Law and Social Sciences Division of the NSF.

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Theodore Joyce (Continued from page 1)

Instituted six years ago, the Texas parental notification law requires physicians to inform parents of minors who are seeking abortions at least 48 hours prior to the procedure. Data appeared to indicate that birth rates declined in response to this law. In a study funded by a grant from the NIH and published in the *New England Journal of Medicine*¹, Dr. Joyce and colleagues found, however, that this was an erroneous inference based on misclassification of the data. In all previous studies, researchers had measured a teen's age at the time of the abortion or birth. However, three-fourths of all minors who conceive as 17-year olds give birth when they are 18 years of age. Thus, a pregnant 17-year old who carries to term because of a parental involvement law, will mostly likely give birth as an 18-year old. Since the age of the mother is measured at the time of delivery and not at the point of conception, births to 18-year olds who may have been affected by the law during pregnancy will be not be counted if comparisons are between 17 year olds in different states. In the *New England Journal of Medicine* article, Dr. Joyce and colleagues showed that if one measures a minor's age at conception, the point at which exposure to the law begins, and if one uses a proper comparison group, then the Texas's parental notification law is actually associated with a fall in abortions and rise, not a decline, in births.



Examining the impact of policies surrounding abortion (such as mandatory waiting periods, parental notification and cut-off of Medicaid funds) on reproductive outcomes has been a major area of research of Dr. Joyce's since his doctoral dissertation in 1985. He has twice testified in federal court on the impact of abortion restrictions. Much of the testimony focuses on a study that Dr. Joyce and his colleagues published in the *Journal of American Medical Association (JAMA)*² in September of 1997. In the study, Dr. Joyce and colleagues showed that the Mississippi's Mandatory Delay law,

for women seeking an abortion, lowered abortion rates by 12 percent and increased the proportion of second trimester abortion by 40 percent. This was the first study to show the potential impact of such laws in states where the availability of abortion services is limited.

Dr. Joyce began his career at CUNY as a graduate student in economics at the Graduate Center, concentrating in the areas of Labor and Health. Upon receiving his Ph.D in 1985, he spent one year as an assistant professor of economics at Iona College in New Rochelle before returning to CUNY's Baruch College to begin a tenure-track position in the Department of Health Care Administration. He became an associate professor in 1990. From 1991-1993, he held an appointment as an associate professor in the department of economics and finance at Baruch, and was promoted to full professor in 1994. Since 1987, Dr. Joyce has been a research associate in the Health Economics section at the National Bureau of Economic Research (NBER), a non-profit association of academic economists centered in Cambridge, MA. Since 1998, he has been serving as the academic director of the Baruch/Mt. Sinai MBA program in Health Care Administration.

Dr. Joyce also has engaged in a protracted exchange with Dr. Steven Levitt, the author of *Feakonomics*. Dr. Joyce has challenged Dr. Levitt's highly publicized study that suggested legalized abortion was responsible for over 50 percent of the decrease in crime in the 1990s. Dr. Joyce's formal response to Dr. Levitt and his co-author, John Donohue III of Yale, was published in the *Journal of Human Resources*³. Drs. Levitt and Donohue published a reply to Dr. Joyce in the same issue. But the debate continues. In March of this year Dr. Joyce debated John Donohue III at the American Enterprise Institute in Washington D.C. and then two day later debated Dr. Levitt at the Department of Economics at the University of Rochester. Dr. Joyce expects to publish additional work on this topic in the near future. Dr. Joyce's research has been funded by numerous federal and private foundation grants, including multiple grants from NICHD and NIDA, the Medical and Health Association of New York City, the Agency for Health Care Policy and Research, David and Lucile Packard Foundation, the Rockefeller Foundation and the Henry J. Kaiser Family Foundation. In addition to his research activities, he is on the doctoral faculty at the Graduate Center is presently serving as Chair of two doctoral dissertations. At Baruch, his commitment to excellence in both teaching and research has won him Presidential Awards for Distinguished Research as well as for Teaching, and most recently the Sidney Lirtzman Award for excellence in Teaching, Research and Service.

¹ *New England Journal of Medicine* 354(10): 1031-1038 (2006).

² *JAMA* 278:653-658 (1997).

³ *Journal of Human Resources* 39(1): 1-28 (2004).

RESEARCH EQUIPMENT GRANT PROGRAM

Round 4 Deadline: November 17, 2006

The Office of Academic Affairs is pleased to announce the fourth round of the Research Equipment Grant Program that was initiated in 2002. This initiative has helped investigators purchase an item of laboratory equipment that will strengthen their research program, and thus assist them in applications for external research funding in the near future. Grant proposals may request an amount up to \$40,000 and require a match of funds from your college. The minimum match is 50% and maximum is 100%.



Proposals must involve at least two faculty from one college, or among CUNY colleges. Only full-time faculty at the CUNY campuses who have not received an equipment grant in the previous round ('04-'05) are eligible to apply. A faculty member may submit only one proposal for the present round. Guidelines and application forms can be found at: cuny.edu/research.



SUBMIT RESEARCH RELATED NEWS ITEMS FROM YOUR CAMPUS BY
EMAILING THEM TO OAARESEARCH@MAIL.CUNY.EDU

Welcome to the New Academic Year

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Prior to her appointment at New York Medical College, Dr. Manne served as Director of Research Administration at Stevens Institute of Technology, where she had responsibility for pre-award development and post-award administration of all extramural funding. At Stevens, Dr. Manne was responsible for contract administration, she also worked with the Center's Technical Director to build linkages between laboratories and with industry. Dr. Manne received a Ph.D from Columbia University in experimental social psychology and has taught a variety of psychology courses at CUNY as well as other senior colleges. I hope you will join me in welcoming her to CUNY where she will be leading our efforts to foster and obtain external funding for collaborative research projects.



On the other hand, it is with much regret that I let you know that Dr. **Mahmud Farooque** will be leaving CUNY at the end of this month. Mahmud has been a member of the Research Office for almost two years, during which time he has interacted with many of you and has played a leadership role in

several of our research initiatives. Mahmud will be greatly missed and we wish him well in his new position as Associate Director of Research and Development for the Physical Sciences and Engineering at Northwestern University.

As part of our efforts to assist both new and existing faculty in initiating and maintaining externally funded research programs we will be inviting officials from various funding agencies to visit CUNY and provide insights into best practices for writing and submitting grant proposals to respective agencies. Two dates to save:

- On Wednesday, September 27th Dr. **John Cherniavsky** from the National Science Foundation (NSF) will visit CUNY. His first talk will focus on NSF Organizational Structure, Funding Instruments, and Proposal Preparation. In this talk, the NSF organizational structure, the NSF FY 2006 budget, funding mechanisms, and proposal preparation guidelines will be presented. In his second talk, on NSF Initiatives, Dr. Cherniavsky will discuss selected NSF initiatives including Cyber-infrastructure, the Global Environment for Network Innovations initiatives, Education and Human Resource Initiatives, Computer and Information Science and Engineering crosscutting initiatives, and the Major Research Instrumentation program.
- On Thursday, November 2nd Dr. **Ronald Kohansky**, Program Officer, Biology of Aging at the National Institutes of Health will provide an insight into best grant writing practices for NIH initiatives and will also talk about NIH infrastructure.

I hope to see many of you at these events that will be held at the CUNY Graduate School.

Annual IRB Symposium

(Continued from page 1)

The symposium featured a panel session on issues in international research given the recent increase in research conducted outside of the US. When reviewing a protocol for international research, it is important for the IRB to be aware of cultural considerations in the region where the research will be conducted. A question asked in the U.S. that might be considered benign could be a question that would put an international subject at risk. One of the speakers who spoke about different cultures was Executive Vice Chancellor, Dr. **Selma Botman**, an expert in Middle



Eastern studies. Drawing from her experience conducting research on political organizations in Egypt, Dr. Botman spoke about culturally and politically sensitive topics and questions. The President of Baruch College, Dr. **Kathleen Waldron**, shared her experiences as a graduate student conducting research in Venezuela.

Dr. **David O'Brien**, Professor of Psychology at Baruch College, who has spent many years conducting research in Brazil, discussed insights gained from his experiences conducting his research abroad, as well as experiences working with CUNY and Brazilian IRBs. Professor O'Brien has developed a research ethics course that he teaches to undergraduates at Baruch. He spoke about training researchers later in the day.



Another speaker on the international panel was Ms. **Karen Hansen**, Director, Institutional Review Office, Fred Hutchinson Cancer Research Center (FHCRC) in Seattle. Ms. Hansen has been very active in training



IRB/ethics board members in South Africa, the Dominican Republic and Taiwan and shared her own experiences with problem-solving on difficult proposals. Since July 2005, CUNY has subscribed to CITI, the web-based IRB training program. As a co-founder of CITI, Ms. Hansen has been instrumental in creating the CITI international platform, which is available in four languages: Chinese, Spanish, French, and Portuguese, with Arabic soon to follow. This capability is useful to researchers whose non-English speaking "key personnel" need IRB training. Ms. Hansen spoke later in the day in a panel discussion about the CITI system.

This year, CUNY entered into a contract with BEC/IRBManager for the acquisition of the IRBManager software system. **Ari Samson** of BEC/IRBManager gave an overview of this electronic, web-based IRB tracking and submission system and answered questions from the symposium participants.

RESEARCH CONDUCT

IRBManager – Coming Soon to the Campuses

CUNY's Human Research Subjects Protections program is university-wide, with each of 18 campuses having at least one Institutional Review Board. CUNY has an additional IRB that serves a CUNY-Wide mission. Each campus and the CUNY-Wide IRB have different systems, of differing complexity, for tracking the status of IRB Protocols. To date, there has not been a system for tracking all protocols at CUNY. To fill this void, CUNY and RF have contracted with BEC/IRBManager for the acquisition of a comprehensive, web-based IRB system, known as **IRBManager**.

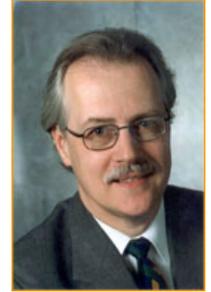
For the IRB Office, this system will track the status of every protocol submitted to every IRB, from day of submission until at least the regulatory minimum requirement of three years past the close of a protocol. For the IRB Chair and Members, the new system will provide electronic viewing privileges to all IRB members and staff, allowing them to check the status of any protocol, and to conduct their reviews on-line, if desired. For the Researcher, all CUNY IRB forms will be accessible in IRBManager, giving them the convenience of completing the forms on-line and submitting directly to the IRB. For CUNY, IRBManager will standardize all data collected from the researcher and all correspondence.

The installation of IRBManager is commencing on a campus-by-campus basis. Currently four campuses have begun training, as well as CUNY-Wide. There are three phases of training before the system goes live to researchers. The entire phase-in will take 6-12 months.

Steven Penrod *(Continued from page 1)*

His research addresses problems at the intersection of psychology and the law, where his approach is to use experimental psychological methods to study problems related to legal decision-making.

A recipient of an early-career award in applied psychology from the American Psychological Association in 1986, he is a past-President of the American Psychology-Law Society, an out-going co-editor of *Psychology, Crime and Law* (the journal of the European Association of Psychology and Law), and in-coming editor of the American Psychological Association's journal, *Psychology, Public Policy and Law*. Dr. Penrod has over 120 publications on the psychology of legal decision-making and is a co-author of books on juries, on eyewitnesses and an introductory psychology textbook and an author of a textbook in social psychology.



Dr. Penrod earned his J.D. from Harvard Law School in 1974 and his Ph.D. in psychology from Harvard University in 1979. He joined the faculty of the psychology department of the University of Wisconsin in 1979 and subsequently became a professor of law at the University of Minnesota Law School in 1988. In 1995, he became the director of the psychology-law program at the University of Nebraska-Lincoln. Dr. Penrod came to CUNY in 2001.

Erroneous eyewitness identification of defendants is the leading cause of mistaken convictions. One of Dr. Penrod's earliest studies conducted over twenty years ago was a field study that assessed whether reinstatement of context influenced eyewitness identification accuracy. In the study, a member of the



research team posed as a customer at a convenience store and enacted scenes based on a script. Later, store clerks were asked to identify the customer from a photoarray. Results showed that procedures used to reinstate context, such as simply asking the clerks to privately recall the original transaction, significantly improved accuracy of identification. Identification accuracy also depended on the presence or absence of the customer in the photo-array (Krafka & Penrod, 1985). His current research in eyewitness accuracy examines the impact of alternative identification procedures, such as the sequential array. Instead of the traditional method of presenting lineup/array members simultaneously, the sequential method presents lineup/array members one at a time and requires witnesses to identify or reject each individual. Research indicates that sequential procedures can reduce mistaken identifications, although they may come at the cost of some lost correct identifications. There are indications that the reason for the improvement is a change in the decision-making strategies employed by witnesses (a shift from a relative process in which simultaneous faces are compared to one another) to an absolute process in which array members are compared with memory for the perpetrator. He is investigating various factors that influence eyewitness accuracy, such as the effects of instructions, lineup size, knowledge of lineup size, and position of the face/person.

Dr. Penrod is currently also investigating the impact of pretrial publicity (PTP) on juror decision-making. Pre-trial publicity poses problems by potentially causing jurors to become prejudiced against a defendant before a trial. While courts operate under the assumption that jurors are able to set aside information regarding a case obtained outside of the courtroom, research in social and cognitive psychology, as well as our own intuitions, underscore how difficult it is to ignore previously acquired information when making a decision. Using actual on-going cases and a selection of research participants in both the region that the trial takes place and in regions where a given case is much less publicized, Dr. Penrod is conducting a series of experiments that examine how various components of pre-trial publicity negatively or positively influence jurors' inferences about the defendant and how these inferences in turn affect their final judgments.

Dr. Penrod's research has led to a number of consulting research opportunities -- Dr. Penrod and his students have worked on cases involving Timothy McVeigh and Terry Nichols, John Walker Lindh, Elizabeth Grubman, Worldcom, 3M, the NCAA, VIOXX, Phen-Fen and many others. Dr. Penrod's Ph.D. students and post-docs can be found in a variety of settings, including the faculties at UC-Santa Barbara, Barnard, University of North Carolina – Charlotte, John Jay-CUNY, Florida International in Miami, California State-Northridge, St. Mary's in Canada; in applied research settings such as the Federal Judicial Center and in consulting positions.

INTERNAL PROGRAMS

Postdoctoral Program Committee Formed



A six-person committee consisting of three faculty and three postdoctoral researchers has been formed to oversee a new postdoctoral program. The three faculty members are Dr. **Ralf Peetz** (College of Staten Island), Dr. **Lynn Francesconi** (Hunter) and Dr. **Stephane Boissinot** (Queens). The three postdoctoral researchers are Dr. **Natalie Batman-Ratyosyan** (Hunter), Dr. **Armando del Rio** (City) and Dr. **Laurence Frabotta** (Queens).

The new initiative is targeted at enhancing the experience of postdoctoral fellows working in CUNY research groups. The program seeks to prepare postdoctoral fellows at CUNY for leadership positions spanning the scientific and engineering community. This will be achieved through the sponsorship of Competitive travel awards for presenting data and research findings at national conferences; Professional Development Seminars and Workshops, and Inter-campus Networking Events, and an Internet portal for sharing news and information related to professional development. The events being currently planned for Fall 2006 include launching the postdoctoral program website in mid October followed by the hosting of a Networking Event and announcement of the first round of competition for Travel Awards in early November.

CUNY COMMUNITY COLLEGE COLLABORATIVE INCENTIVE RESEARCH GRANT

12 Proposals Selected for Funding

Faculty Committee reviewing round 3 of the CUNY Community College Collaborative Incentive Research Award selected 12 out of 26 proposals that were submitted for consideration. Two internal reviewers evaluated each proposal based on its technical merit and feasibility and potential for generating external funding. A complete list of the winning proposal and participating faculty is provided in the Table below.

Proposal Title	Faculty
Dominican Oral History Project: A Study of Educational and Vocational Experience	Nelson Reynoso, BCC Sharon Utakis, BCC
CUNY's Creative Campus: The Role of Performing Arts Centers on Community, Economy and Education	Sangeeta Bishop, BMCC Katherine Kavanagh, BMCC Mahatapa Palit, BMCC
Investigation of Student Gains in an Undergraduate Research Program at a Two-Year College	Lauren Goodwyn, BMCC Sarah Salm, BMCC Patricia Molina, BMCC
Properties of polymer of environmentally-friendly polymer membranes	Vicki Flaris, BCC Ilona Kretzschmar, City
Molecular Interactions and Transformations in the Gas Phase and in Solution	Daqing Gao, QCC Paris Svoronos, QCC Sasan Karimi, QCC John Gilligan, QCC
Capacity Dimensions of Yeast Cell Population and Biofilm	Tak Cheung, QCC Raji Subramaniam, QCC
Synthesis and Characterization of Biosensors Prepared from Conducting Polymer/Enzyme Nanocomposites	David Sarno, QCC William L'Amoreaux, CSI
Analysis of Cell Migration using Fractal Measures	Regina Sullivan, QCC Patricia Schneider, QCC
Welding compatibility of biomedical materials subjected to ultrasonic vibrations	Rafael Niyazov, BMCC Ali Sadegh, City
Mathematical theory of justification	Elena Nogina, BMCC Sergei Artemov, Graduate Center
The Effectiveness of the "Do Math" Approaches - The Bridge to Close the Cognitive Gap Between Arithmetic And Algebra	Violeta Menil, HCC Olen Dias, HCC
On the completion of the space of branch coverings, and its relation to the moduli space of Riemann surfaces	Nikolaos Apostolakis, BCC Fereydoun Nouri, BCC

CUNY COLLABORATIVE INCENTIVE RESEARCH GRANT

Round 13 Draws Applicants from All Campuses

Round 13 of the CUNY Collaborative Incentive Research Grant crossed two new milestones. A total of 167 faculty participated in the application process—two more than the record reached last year. More importantly, this year's applicant pool had representations from all 18 campuses, a rare feat in the programs recorded history. Subject areas of the proposed collaborations were also extremely diverse and included a number of submissions in the area of humanities and the creative arts. After long deliberation, the faculty committee overseeing the review process selected thirteen proposals for funding, involving collaborations of 31 faculty from 9 CUNY campuses as listed in the Table below.

Proposal Title	Faculty
Visualization Toolkit for 3D Photography	George Wolberg, City Ioannis Stamos, Hunter
Development of Advanced Raman Spectroscopy Methods and Databases for the Evaluation of Trace Evidence and the Examination of Questioned Documents	John Lombardi, City Maki Haberfield, John Jay Thomas Kubic, John Jay
The Quantum Project	Dennis Sullivan, Graduate Center John Terilla, Queens Thomas Tradler, NYC Tech
The Collective Group Identity Project: An Examination and Comparison of Identity Development, Cultural Mistrust, and Mental Health Issues Among Black Male College Students and Black Male First Time Offenders	Roslyn Caldwell, John Jay William Cross, Graduate Center
Asymptotics Invariants of Groups and Semigroups	Denis Osin, City Lev Sheerson, Hunter Vladimir Shpilrain, City
Workplace Flexibility in Comparative Perspective: A Multi-Method, Interdisciplinary Approach	Janet Gornick, Baruch Karen Lyness, Baruch Pamela Stone, Hunter
Synthesis of Functional Selective Ionic Liquids (ILs): Applications to Novel Microextraction Sample Preparation Methods in Forensic Toxicology Analysis	Robert Engel, Queens Yi He, John Jay
Hyperexcitability-induced Plasticity in the GABAergic System	Abdeslem El Idrissi, CSI Nilofar Haque, NYC Tech
Neural Substrates of Nodal Function and Equivalence Class Formation	Lanny Fields, Queens John Foxe, City
Single Molecule Spectroscopy of Conjugated Organic Oligomers: A Joint Experimental and Theoretical Study	Zhonghua Yu, City Seogjoo Jang, Queens
Probing the Charge/Spin Dynamics of Low-Dimensional Systems in the Frequency- and Time-Domain	Jiufeng Tu, City Yuhang Ren, Hunter
Early Childhood Environments Research Consortium	Elizabeth Matthews, Hunter David Kritt, CSI Roger Hart, Graduate Center
Emerging Contaminants as Chemical Indicators of Pathogen Contamination in Long Island Sound	Pengfei Zhang, City John Molina, BCC



Around the Campuses



CITY COLLEGE

Dr. John George's Article Featured on the Cover of *ChemComm*

A research paper by Dr. **John George** and colleagues has been published as a cover page article in the flagship journal of Royal Society of Chemistry, *Chemical Communications*. Interestingly, the Cover page is bearing a beautiful Skyline of New York City; the stack of buildings resembles the morphology of NANO materials we synthesized in Professor George's laboratory. This is the first time that the flagship journal of RSC is publishing the skyline of a city as a cover page.



Professor George and his colleagues used the hydrogels to prepare and stabilize gold nanoparticles such that after reduction, they retain their gelation properties intact. This allows the gold to entrap the gold nanoparticles in the supramolecular assemblies. The team believes that development of these materials will lead to development of nanostructured-advanced materials, resulting in applications in the field of supramolecular devices.

Science Article Discusses a Roadmap for an Alternative Energy Program

Dr. **Reuel Shinnar**, Distinguished Professor of Chemical Engineering and Director of the Clean Fuels Institute, together with his post-doctoral research associate, Dr. **Francesco Citro** published an article in the September 1st issue of *Science*.

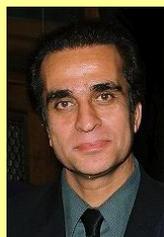


Drs. Shinnar and Citro reminds us that 85% of today's U.S. energy source is drawn from carbon-rich fossil fuels such as oil, natural gas and coal, and that existing oil reserves are said to peak within 20 years. A gradual (on the scale of 20-30 years) switch to nonfossil energy sources by using proven technologies is proposed. Implementation of mechanisms to draw from alternative energy sources, such as concentrated solar thermal (CST) energy or hydrocarbons produced from biomass (a process by which fast-growing trees, grass and agricultural waste is used to generate syngas to produce methanol or hydrocarbons) is discussed. According to Drs. Shinnar and Citro, such alternative sources could, in the next 30 years, replace 70% of fossil fuels in the U.S. at a cost of \$200 billion a year.

Dr. Shinnar's research program has been dedicated to the development of advanced design methods in chemical engineering and process design. His emphasis has been to integrate and translate the achievements of engineering science into modern design. His research currently takes three directions: an analysis of thermodynamic constraints in chemical reactor design and catalysis, development of methods for evaluating new technology, as well as a comparative evaluation of coal gasification processes and reactors.

NOAA-CREST Center Receives 5-Year Renewal for \$12.5 Million

After another round of national competition, NOAA-Cooperative Remote Sensing Science and Technology (CREST) Center has won another 5-Year \$ 12,500,000 starting October 1, 2006 till September 30, 2011. With this CREST continues to conduct extensive research in a number of nationally-significant remote sensing thrust areas such as Climate and Air Quality, Coastal Remote Sensing, and Precipitation and Water



Resources. CREST research thrusts also serves as platforms to afford access to state-of-the-art facilities, education and research opportunities to all our graduate students. CREST researchers support NOAA's prediction, analysis and disaster prevention activities in a variety of ways, he noted. The center's activities include developing algorithms for forecasting, developing sensors, calibrating satellite equipment, validating data and devising new applications and analytical techniques for satellite data. Established in 2001 through an initial \$12.5 M cooperative agreement with National Oceanic and Atmospheric Administration, NOAA-CREST is a partnership joining institutions of higher education, private industry and the federal government. Directed by Dr. **Reza Khanbilvardi**, Professor of Civil Engineering, it has three primary objectives: (1) Conduct research consistent with NOAA's missions, (2) Focus on research and training in sensor development, ground-based field measurements, satellite remote sensing, data processing and analysis, modeling and forecasting; and (3) Create a framework to recruit and train graduate students also from underrepresented minorities for professional opportunities within NOAA and related industries.



New Engineering Center to Transform Sensor Technology

City College is one of the core partners of a National Science Foundation (NSF) funded multi-million dollar Engineering Research Center based at Princeton University. Dubbed MIRTHE, for Mid-Infrared Technologies for Health and the Environment, the center is expected to revolutionize sensor technology, yielding devices that have a unique ability to detect minute amounts of chemicals found in the atmosphere, emitted from factories, or exhaled in human breath.

The goal of the research is to produce devices that are so low in cost and so easy to use that they transform aspects of the way doctors care for patients, states monitor air quality, governments guard against attack and scientists understand the evolution of greenhouse gases in the atmosphere.

MIRTHE will combine the work of about 40 faculty members, 30 graduate students, and 30 undergraduates from its six core partner institutions: Princeton, CCNY, the University of Maryland-Baltimore County, Rice University, The Johns Hopkins University and Texas A&M University. The center is also collaborating with dozens of industrial partners to commercialize the technology and working with several educational outreach partners to use the research as a vehicle for improving science and engineering education.



Another mission of MIRTHE is to help ensure a competitive U.S. workforce by educating a new generation of leaders who will carry forward the center's knowledge to industry, government and academia. The center will incorporate extensive efforts to engage college and K-12 students in hands-on science and engineering projects, with major outreach programs taking place at CCNY, University of Maryland-Baltimore County and Princeton.

Dr. **Joseph Barba**, Dean of the Grove School of Engineering, called MIRTHE "an excellent example of the multidisciplinary approach at CCNY that capitalizes on existing strengths to successfully build cutting edge academic programs."



Highlighting City College's contribution to the new center, Dr. **Fred Moshary**, Professor of Electrical Engineering and Deputy Director of the National Oceanic and Atmospheric Administration Cooperative Remote Sensing Science and Technology Center (NOAA-CREST) based at City College, observed: "through CCNY, MIRTHE research will contribute to ongoing national and regional/local environmental efforts. This includes, for example, MIRTHE's impact on our research focus on urban and regional air quality monitoring and modeling with our partners at NOAA, NASA, EPA and New York State Department of Environmental Conservation (DEC).

"Our research programs have a strong focus on recruitment and training of traditionally underrepresented minorities in science and engineering, and the undergraduate student body at CCNY would provide MIRTHE with a great pool of students for outreach and recruitment."

"Easy access to CCNY and Princeton campuses from New York City will allow for a meaningful involvement of students from CUNY campuses in year-round MIRTHE activities, making MIRTHE research experience an integral part of their education," he noted.

MIRTHE is the latest of several NSF interdisciplinary centers located at universities across the United States. The centers are among the foundation's largest and most prestigious grants. The NSF has agreed to provide \$15 million in funding over five years, with the possibility of renewal for another five years. Through additional funding from corporate partners and other sources, the center is expected to conduct more than \$40 million in research and educational activities over 10 years.



Professor's Species Modeling Technique Ranked Among the Best

Biology Professor Dr. **Robert Anderson** specializes in the use of geographic information systems to model the probable distribution of animal and plant species. The ability to predict species distributions is central to many applications in ecology, evolution and conservation science. In a recent study comparing 16 methods for performing this work, a technique developed by Dr. Anderson and computer scientists from AT&T and Princeton University known as maximum entropy, or Maxent, ranked among the top two for discriminating between suitable and unsuitable habitats. The findings appear in the April edition of the journal *Ecography* and were the subject of a research highlight brief in the May 18 edition of *Nature*. The Maxent technique relies upon occurrence records from known habitats and computerized maps of environmental data for modeling, and is based upon a simple and precise mathematical model.

The paper referred to is 'Novel methods improve prediction of species' distributions from occurrence data.', J. Elith, C. H. Graham and the NCEAS Species Distribution Modelling Group, *Ecography*, 29:2, page 129-151 – April 2006.

BROOKLYN

NEH Summer Stipend for Dr. Jillian Cavanaugh

Dr. **Jillian R. Cavanaugh**, Assistant Professor in the Department of Anthropology and Archaeology, has been awarded a Summer Stipend from the National Endowment from the Humanities for 2006. She will be using the award to work on her book manuscript, "Speaking of Modern Values: Language Ideologies and Social Aesthetics in Northern Italy." The manuscript is based on ethnographic and sociolinguistic research in Bergamo, Italy, carried out 1999-2005. The research conducted in the summer 2005 was supported by a PSC-CUNY Research

Foundation grant and a Tow Faculty Research Fellowship; earlier research phases were supported by Wenner-Gren, the National Science Foundation, the Council for European Studies, the Graduate School of Arts and Sciences at New York University, and the Social Science Research Council.



Dr. Cavanaugh's project addresses the meaning of contemporary everyday language use in this Northern Italian community. Since the time of Dante, the "questione della lingua," or language issue in Italy, has stood for complex notions about power, politics, aesthetics, class, and social identity, reappearing in different guises at moments of flux and conflict. Dr. Cavanaugh's research in Bergamo demonstrates that although members of this community symbolically associate Bergamasco and Italian with potentially conflicting values and norms as well as a shifting sociolinguistic hierarchy, most local people use both languages in their everyday lives.

Dr. **Thomas Head**, professor of history at Hunter, was the other CUNY faculty receiving a Summer Stipend from the NEH this year. Dr. Head will use the award to work on his project entitled, "The Peace of God and Conflict Resolution in France, c. 970- c. 1040."

QUEENS

Rohm & Haas Science Fair Winner Mentored by Queens Professor

Amy Ramirez from Roslyn High School won second place at 2006 Rohm & Haas Electronic Materials Invitational Science Fair. This competition attracted over 350 high school students from Long Island. Amy's research project entitled "Effects of Light on Diluted Magnetic Semiconductors for Spintronic Applications" was mentored by Dr. **Igor Kuskovsky**, Assistant Professor of Physics. Amy studied magnetic properties of the diluted magnetic semiconductor (GaMnAs) over a wide temperature range. She demonstrated that the temperature of the paramagnetic-ferromagnetic transition in this material can be increased by light illumination, making GaMnAs a promising material for novel spintronic devices.



BARUCH

Psychology Professor Honored for Contributions

Dr. **Edwin P. Hollander**, Distinguished Professor of Psychology (Emeritus) at Baruch College, was honored with an Award for Distinguished Scientific Contributions to the International Advancement of Applied Psychology (IAAP) at the 36th International Congress of Applied Psychology.

The award was presented to Dr. Hollander by the IAAP at the Opening Ceremony on July 16 in Athens, Greece. The President of Greece and the Undersecretary of the United Nations were featured speakers at the ceremony. The theme of the Congress emphasizes contributions of Psychology to problems of the individual and society.

"I very much appreciate the honor and especially the recognition of inclusive leadership research that takes account of followers," said Dr. Hollander.

Dr. Hollander has been CUNY Distinguished Professor of Psychology at Baruch College and the Graduate Center since 1989. A trailblazer who has provided insights and innovative conceptions about leadership for over fifty years, Dr. Hollander's research has focused on group and organizational leadership, innovation, and autonomy, and his current work is directed toward understanding followers' expectations and



perceptions of leaders. He also is author of several books as well as many chapters and papers on leadership. In 2004, he was the recipient of the New York Academy of Science's Helmut E. Adler Award for his life-time contributions to psychology, and the Walter F. Ulmer, Jr. Applied Research Award from the Center for Creative Leadership for his "outstanding, career-long contributions to leadership study."

"The IAAP Awards Committee was enthusiastically unanimous in choosing Dr. Hollander for this well deserved honor," noted IAAP Chairman Edwin Fleishman.

VISIT CUNY.EDU/RESEARCHNEWS TO BROWSE PAST ISSUES OF THE OAA RESEARCH NEWSLETTER

36 Students Participate in ACS Undergraduate Research Symposium

The 54th Undergraduate Research Symposium of the American Chemical Society, N.Y. section was held at St. John's University on Saturday morning of April 29, 2006. Queensborough Community College was the first ever community college to be invited to run the conference in 2004. As part of the symposium, Queensborough Community College hosted Nobel laureate, Dr. **John Fenn** (2002), to address the student audience, marking the first occasion for the college to host a Nobel laureate. This year, Alliance for Minority Participation (AMP), was asked to have all students CUNY student grant awardees in chemistry present their research. 136 students participated in this year's symposium, and 260 attendees including 53 faculty members. With 36 students participating, QCC had the highest number in participation by a single college.



GRADUATE CENTER

Science on Stage: Creating an Audience for Scientific Subjects through the Arts

Bringing science out of the laboratory and into the performance hall, this program, funded by the National Science Foundation, is communicating the excitement of science to wide audiences. "Science as Performance: A Proactive Strategy to Communicate and Educate through Theater, Music and Dance," led by principal investigator Dr. **Brian Schwartz**, Professor of Physics and Vice President for Research and Sponsored Programs at the Graduate Center, seeks to accentuate the ways in which science and the performing arts can combine to advance knowledge and understanding of both fields.



Building on the success of the Science & the Arts series, which has brought to life scientific themes and content for "non-science" audiences through a series of annual concerts, films, and plays, at The Graduate Center, this project is expanding programming to reach an even wider swath of the general public.

There are plans to present performances at meetings of professional science and teacher societies, and at meetings of national laboratories, to which local educational institutions will be invited.

Another objective of the program is to introduce young people from junior high school age and up—including minority students and girls—to science in new and creative ways that will encourage scientific literacy, and, it is hoped, attract more of these students into scientific fields. This year, the first of the three-year project, "Science as Performance" is working with highly creative educators, scientists, and artists at Middlebury College, the University of Wisconsin, and colleges, theater companies, and playwrights throughout the city of Atlanta. This program is bringing science and the arts to vibrant communities, general audiences, and future scientists across the nation.

Doctoral Student Joins Nobel Laureates at Lindau Conference

Ms. **Claudette Davis**, a CUNY Graduate Center Ph.D. student in biology, was chosen to attend the 2006 Meeting of Nobel Laureates in Lindau, Germany, from June 25 to 30. Each year since 1951, some of the most promising young scientific minds from around the world have been brought to Lindau to attend several days of lectures and discussions with past winners of the Nobel Prize in a particular discipline.

Ms. Davis was nominated by Dr. **Jerry Guyden**, Professor of Biology at City College, and was then selected to take part in this prestigious gathering from among thousands of international graduate-student applicants, joining an American delegation numbering 60. The conference, held on Lake Constance in Bavaria, seeks to foster a community among top scientific minds of both the present and the future by offering them an informal and personal setting in which to discuss ideas. The experience promises to have an ongoing impact on Ms. Davis's studies in the field of Molecular, Cellular and Developmental Biology.

Ms. Davis has spent her entire academic career within the CUNY system. Born in Queens, she completed her BS at York College before beginning work on her Ph.D. Among other support, she has received an AGEP (Alliance for Graduate Education and the Professoriate) award, which is funded by the National Science Foundation to support minority doctoral students in the sciences, technology, engineering, and mathematics.

CUNY/AMNH Astrophysics and Earth and Planetary Sciences 2006 Summer Program

The CUNY/American Museum of Natural History (AMNH) REU Site in Astrophysics and Earth and Planetary Sciences, funded by the National Science Foundation, recently completed its 2006 summer program in August. The program, directed by Principal Investigator Dr. **Charles Liu**, Professor of Engineering Science and Physics, brings advanced undergraduates at CUNY and across the country together to share an intensive summer research



experience at AMNH, located on Central Park West and 79th Street in Manhattan, where they are mentored by AMNH scientists and CUNY faculty with Museum connections. The Co-Principal Investigator of the grant is Dr. James Webster, Ph.D., department of Earth and Planetary Sciences, American Museum of Natural History.

"Undergraduate students, given the right guidance and tools, can conduct cutting-edge research that is every bit as significant as work done by graduate students and professors," Dr. Liu explains. "This unique NSF program combines the faculty resources of CUNY and a world-class research museum here in New York City. This gives our students the very best research opportunities available anywhere, as well as the experience of interacting immersively with a peer group of excellent students like themselves, drawn from all across the nation."

This highly competitive program attracted more than 120 applicants for just eight NSF-funded positions. Individual mentors also contributed additional funding from NASA, AMNH and other resources to bring the total number of participants to 15 undergraduates. In addition to students from Queens, City, and Hunter Colleges, students from far away (including Arizona, Florida, Massachusetts, Ohio, Texas, Vermont, and Virginia) conducted research on topics such as volcanology, meteoritics, star formation, stellar evolution, and observational cosmology. The NSF funding provides continuing support for the student researchers and their CUNY/AMNH mentors after the summer program ends, as they publish their research and present their work at scientific conferences.

HUNTER

Professor Dennis Awarded over \$800K from the NIMH

Dr. **Tracy Dennis**, Assistant Professor of Psychology, has been awarded the prestigious Mentored Research Scientist Development Award (K01 Award) from the National Institute of Mental Health. This highly sought-after honor provides for a five-year grant of \$806,560, that will allow Dr. Dennis to conduct intensive research, as well as receive advanced training and



mentorship in the area of child emotion regulation (ER), i.e., how children learn to control their behavior and emotions when upset. Emotion regulation is linked to differences in cognitive control and affective style; yet there exists sparse data to on how these factors affect emotion regulation and adjustment in children. For the past eight years, Dr. Dennis has conducted behavioral studies investigating child emotion regulation. The KO1 Award will allow her to acquire the training that is necessary for the next step in her research,

which is to use neurophysiological measures, including electroencephalography (EEG) asymmetries and event-related brain potentials (ERPs), to examine predictors of emotion regulation and to augment knowledge of emotion regulation as a mechanism in psychopathology. Dr. Dennis seeks to identify child brain activity and behavior that predict whether a child will go on to show effective or specific problems with ER. This understanding will help screen children for problems with ER and to better prevent and treat mental illness.

Dr. Dennis is a clinical psychologist who received her Ph.D. from Pennsylvania State University and a post-doctoral fellowship at the NYU School of Medicine. She and Dr. **Angela Crossman**, Assistant Professor of Psychology at John Jay College and Dr. **Nurper Gokhan**, Assistant Professor of Social Science at LaGuardia Community College, were recipients of last year's **CUNY Collaborative Research Incentive Grant**, for a project entitled Emotional self-regulation in pre-schoolers: the interplay of reactivity and control.

ONR Instrument Grant for Professor Steve Greenbaum

Dr. **Steve Greenbaum**,

Professor of Physics, received a \$250,000 instrument



grant from the Office of Naval Research to purchase a solid state nuclear magnetic resonance spectrometer.

The new instrument will forward Dr. Greenbaum's research aimed at evaluating new materials for energy storage devices including lithium batteries, fuel cells, and supercapacitors, which are devices that can store a great amount of electric charge and deliver their charge very rapidly. The award Dr. Greenbaum obtained was given under a highly competitive program, the Defense University Research Instrumentation Program, which helps academic institutions purchase state-of-the-art research equipment.