

University Facts and Figures

- *U.S. News and World Report* ranked **NJIT** among top national universities.
- *Princeton Review* named **NJIT** a best college and best North-eastern college.
- **NJIT** ranks among the top 200 American research universities in an annual study by The Center at the University of Florida.
- The university placed among the NSF top 50 colleges without a medical school for research expenditures.
- In a study by Academic Analytics, **NJIT** was tenth among research universities specializing in science, technology, engineering and math based on faculty scholarly productivity.
- *Princeton Review* ranked **NJIT** among the 25 Most Connected Campuses in the nation.
- **NJIT** was seventh among national universities in the *U.S. News* ranking of campus diversity.
- The university also ranked as a national leader in graduating African-American, Asian-American and Hispanic engineers and computer scientists, according to *Diverse Issues in Higher Education*. Among these rankings, **NJIT** was third in the nation in graduating African-American students with master's degrees in engineering, and 10th in the nation in engineering master's degrees awarded to students of all minority groups.
- **NJIT** is a *U.S. News* top 100 engineering program at a doctoral university.
- The university was tenth in the nation in mathematics and ninth in information systems based on faculty scholarly productivity in a study by Academic Analytics.
- **NJIT's** College of Computing Sciences was ranked among the top 56 graduate schools of information technology in the "Schools to Watch" special report by *Computerworld*.

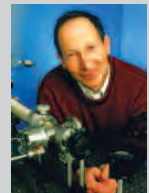
Educational Programs

- Middle States Commission on Higher Education reaffirmed **NJIT's** accreditation with the next evaluation visit scheduled for 2011-2012. The reviewers expressed a very favorable opinion of **NJIT**, its fiscal management, academic programs, research and development activities, and planning and assessment efforts.
- The TECHS-NJ program, a collaboration with Rutgers-Newark, the Newark Public Schools, and the Newark Museum funded by an NSF grant, provides scholarships to **NJIT** and Rutgers-Newark students who earn a teaching certificate along with their undergraduate degree in science or mathematics and agree to teach in New Jersey's high-needs schools after graduation. The program, directed at **NJIT** by **Bruce Bukiet**, associate professor of mathematics, has enrolled seven students, four of whom will begin their teaching careers in 2009.
- Career Development Services sponsors a variety of experiential learning programs:
 - 1,013 students participated in community service projects.
 - 556 students were placed in co-ops and internships.
 - Students earned nearly \$5 million through co-op, work-study, and community service placements.



New Grants and Patents

- University researchers gained 12 U.S. patents in 2007-2008:
 - **Yehekel Bar-ness**, distinguished professor of electrical and computer engineering and director of Center for Communications and Signal Processing Research, received five patents for various advances in fourth-generation wireless telecommunications. He also received two South Korean patents for technologies in development with Samsung. (*Story on page 5.*)
 - **Timothy Chang**, professor of electrical and computer engineering, received a patent for a film-based pressure sensor.
 - **Atam Dhawan**, distinguished professor and chair of electrical and computer engineering, received a patent for an Internet security system.
 - **Haim Grebel**, professor of electrical engineering, obtained a patent for an antenna array for an ultra-wide-band communications system.
 - **Yun-Qing Shi**, professor of electrical and computer engineering, received a patent for a method of hiding data within an image.
 - **Kamalesh K. Sirkar**, distinguished professor of chemical engineering, received a patent for a new method of separating a gas from a gaseous mixture that can be used in fuel cell and battery applications.
 - **Daniel J. Watts**, Panasonic Endowed Chair of Sustainability, was the lead on a patent for active coatings. (*Story on page 22.*)



- **Edgardo Farinas**, assistant professor of chemistry and environmental science, received a



prestigious NSF Faculty Early Career Development Award to support his research in the development of methodologies and “rules” for enzyme design, and the application of these methods efficiently to create novel and practical biocatalysts.

- The Iowa Corn Promotion Board (ICPB), NJIT and University of Sao Paulo undertook a joint agreement for licensing four pending patents on a safe, building block chemical derived from corn known as isosorbide to chemists. The **NJIT** research



team, lead by **Michael Jaffe** (center, with research team members **George Collins** and **Zohar Ophir**), research professor of biomedical engineering, has been working to identify and assess potential polymer applications for the corn sugar derivative.



Daniel J. Watts (left) with members of the Smart Coatings team from Picatinny Arsenal, Nelson Colon '89, Joseph Argento and Laura Battista '96, '97.

- **Neil Maher**, associate professor of history, received a three-year research grant from NASA History Division and NASA's Science Mission Directorate in the area of History of the Scientific Exploration of Earth and Space (HSEES). The grant supports his research for his next book, tentatively titled *Ground Control: An Environmental History of NASA and the Space Race*.

- Provost **Priscilla Nelson** received NSF funding to support a workshop on Women, Engineering and Higher Education addressing the continuing difficulty of recruiting women into undergraduate and graduate engineering education programs.

- **Gareth Russell**, assistant professor of mathematical sciences, received an NSF grant to develop a real-time identification and monitoring instrument for reef fish communities.

- **Kamalesh K. Sirkar**, distinguished professor of chemical engineering, has a new grant from the Office of Naval Research to study novel desalination technology, and another from General Motors Corp. to study bio-inspired onboard membrane separations.

- **Trevor Tyson**, professor of physics, has an NSF major research instrumentation grant to develop and build a silicon detector for synchrotron-based x-ray spectroscopy, x-ray holography and materials education. The technology could be used to probe atomic and electronic properties of a variety of materials.

- **Carol Venanzi**, distinguished professor of chemistry and environmental science, was awarded a two-year grant from the National Institutes of Health for the study of “3D-QSAR Modeling of the Kappa and Mu Opioid Receptor Affinity and Selectivity of Salvinorin A Analogs.” The goal of the research is the design of



non-addictive opioid analgesics with limited side effects.

- **Jason Wang**, professor of computer science, received NSF



funding for his research in RNA data mining.

Faculty and Staff Honors and Awards

- **NJIT** received the New Jersey Alliance for Technological Literacy (NJTEA) Impact Award for its exceptional support of technology education in New Jersey.

- **Soha Abdeljaber**, university lecturer in mathematics, was named one of the top 50 professors on RateMyProfessors.com



— a website where students from across the country comment on their teachers.

- **NJIT President Robert A. Altenkirch** received the 2008 Ellis Island Medal of Honor in a ceremony held May 10, 2008 on Ellis Island. The medals are awarded annually to a group of distinguished American citizens who exemplify a life dedicated to community service.



- **Black Enterprise** magazine has named **Treena Livingston Arinzeh**, associate professor of biomedical engineering, one of “40 under 40” to watch in 2008. The only engineer named to the list, Arinzeh holds a prestigious presidential Early Career Award for Scientists and Engi-



neers for her work in tissue engineering and adult stem cells. Her current research includes ways to repair cartilage, using nanofiber scaffolding and a new therapy for treating spinal cord injuries.

- **Tara Alvarez**, associate profes-



sor of biomedical engineering, was named an Outstanding Woman of Science by the New Jersey Association of Biomedical Research.

- **Joel S. Bloom**, vice president for academic and student services, was selected by the College Board's Middle States Regional Assembly to receive the William



U. Harris Award for 2008. He was recognized for “excellence and professionalism” in his contributions to students, the College Board and the field of education in general.

- **Bruce Bukiet**, associate professor of mathematical sciences, received the 2008 Mathematics Association of America – New Jersey Section Award for Distinguished College or University Teaching of Mathematics.

■ **John Carpinelli**, professor of electrical and computer engineering and director of the Center for Pre-College Programs, received the 2007 Recognition Award from the International Network for Engineering Education and Research (iNEER) for his leadership and international contributions to engineering education.

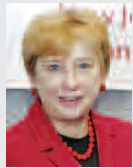


■ **Timothy Chang**, professor of electrical and computer engineering, along with his collaborator, Peter Toliás, executive director, Institute of Genomic Medicine at UMDNJ-New Jersey Medical School, received the Thomas Alva Edison Patent Award from the Research and Development Council of New Jersey, for the invention of the SmartPin, a device designed to deliver metered amounts of liquid that can be used in genetic screening.

■ **Osama Eljabiri**, a senior university lecturer who founded, taught and continues to develop the senior project capstone course program in NJIT's College of Computing Sciences, was named 2007 New Jersey Professor of the Year by the Carnegie Foundation for the Advancement of Teaching. He was recognized for his diligence and dedication for promoting this new type of learning.



■ Provost **Priscilla P. Nelson** was elected a fellow of the American Rock Mechanics Association. She also received the Kenneth Andrew Roe Award from the American Association of Engineering Societies in recognition of her service to the engineering community in promoting unity among the engineering societies. She was also honored by the Executive Women of New Jersey (EWNJ) at their Salute to the Policy Makers.



■ **Stephen Pemberton**, assistant professor of history, received the History of Science award given by the Association of American Publishers for his book (co-authored by Keith Wailoo), *The Troubled Dream of Genetic Medicine: Ethnicity and Innovation in Tay-Sachs, Cystic Fibrosis, and Sickle Cell Disease*.



■ Management Professor **Hindy Lauer Schachter** was selected for an Emerald Literati Network Award for excellence based on her contributions as a reviewer in 2007 to the *Journal of Management History*.

■ **Richard Sher**, distinguished professor of history, won two prestigious prizes for his book, *The Enlightenment and the Book: Scottish Authors and Their Publishers in Eighteenth-Century Britain, Ireland, and America*. He received the 2007 Leo Gershoy Award for "the most outstanding work in English on any aspect of the field of 17th- and 18th-century western European history," awarded by the American Historical Association, and the 2007 Frank Watson Prize for the best book on Scottish History over a two-year period, awarded by the University of Guelph, Ontario, Canada.



■ **Anthony Schuman**, associate professor of architecture, received a medal from the Newark Municipal Council for his efforts in leading a two-day celebration of the Newark Eagles, the Negro National League baseball team that played in Newark from 1926-1948.

■ **Kamalesh K. Sirkar**, distinguished professor of chemical engineering, received the Clarence G. Gerhold Award presented by the American Institute of Chemical Engineers for outstanding contribution in research, development, or in the application of chemical separations technology.

■ **Nancy Steffen-Fluhr**, associate professor of humanities and the director of NJIT's Murray Center for Women in Technology, received the University Change Agent Award from the Women in Engineering ProActive Network (WEPAN). The award recognizes and honors an individual who has driven positive change at his/her institution with regard to the climate for women in science, technology, engineering and mathematics (STEM) fields, with an emphasis on engineering.



■ **Nicholas Tworischuk**, associate treasurer, was named a 2008 Risk & Insurance Innovator in the Higher Education category

by *Risk & Insurance* magazine for his work with the New Jersey President's Council homeland security efforts.

■ **David Ullman**, associate provost for information services and technology and chief information officer at NJIT, has been named New Jersey Technology Council 2008 CIO of the Year in the nonprofit category. The award recognizes a chief information officer or an executive in an equivalent position for his/her innovation and creativity in planning and deploying their enterprise systems, future IT goals, management philosophy and service to the industry and community.



Student Awards and Honors



Civil engineering majors on NJIT's Steel Bridge Team (*above*) finished first in the 2008 Metropolitan Regional Competition and 19th out of 42 teams in the national competition. **Indira Hernandez** and **Nishant Shah** were 2008 co-captains.

Mariana Cassimiro, **Fatima Elgammal**, **Brian Emmanuel**, **Michael Lam**, **Nan Maung**, **Matthew Peragine**, and **Alex Virodov**, all NJIT mathematical sciences majors, were recognized for their poster presentations at the Garden State Undergraduate Mathematics Conference on April 12. The students, divided in three groups, were awarded three out of the first four places (including first) among all presenting four-year colleges. Math faculty **Roy**

Goodman, **David Horntrop**, and **Michael Siegel** were the students' research mentors.

Chemical Engineering students **Giuseppe DiBenedetto** and **Micaela Caramellino** (*below*, with advisor Distinguished Professor **Piero Armenante**) were, respec-



tively, the first place and second place NJIT winners of the 2008 ISPE (International Society for Pharmaceutical Engineering) Student Poster Competition. They received an all expenses paid trip to Boca Raton, FL to participate in the National ISPE Student Competition.

Student **Bill Stoddart** and members of the 2007 **NJIT DARPA Urban Challenge** team were featured in the Discovery Science Channel's *Robocars* series with their OPTIMUS driverless vehicle.



The **NJIT** team was selected as one of a few educational institutions that made it to the national semifinal site visit round.

Sean O'Malley and **Peter Bonanno**, both graduate students in physics, received "The Best Scientific Achievement Prize" last month at the Cornell High Energy Synchrotron Source (CHESS) Users' Meeting for their presentation "Jahn and Teller Play with Nano-Chessboards at CHESS." The poster explained how a $ZnMnGaO_4$ film consisting of a checkerboard of nanorods of two different spinel phases could be self-assembled, analyzed, and understood in terms of the packing between matching surfaces of the different domains.

Six NJIT student-athletes were named Arthur Ashe Jr. Sports Scholars by *Diverse: Issues in Higher Education*. They are: **Angelica Sepulveda**, civil engineering major, soccer (second team); **Isha Toor**, business major, tennis (first team); **Robert Herrera**, architecture major, soccer (first team); **Kevin Blanco**, business major, soccer (second team); **Rodrigo Correa**, business major, volleyball; and **Leonardo Paludo**, business major, volleyball. The Sports Scholars Award honors minority undergraduate students who excel both academically and athletically.

Men's volleyball athletes **Rodrigo Correa**, **Leonardo Paludo**, **Greg Wagner** and **Eduardo Welter** were named to the Eastern Intercollegiate Volleyball Association All-Academic team for 2008.

Sheetal Rajgure, **Bharat Velagapudi** and **Neeraj Raigure**, all master's students in computer science, earned research internships to the prestigious National Institute of Informatics in Tokyo, Japan. Sheetal and Bharat are students of Associate Professor **Vincent Oria**, and Neeraj is advised by Associate Professor **Cristian Borcea**.

Two NJIT undergraduates enrolled in the Ronald E. McNair Postbaccalaureate Achievement Program received Excellence in Engineering Awards at the 11th Annual Philadelphia Alliance for Minority Participation (AMP) Research Symposium on April 5.



Silvana Ortiz (at left), a junior majoring in chemical engineering, placed second and **Gloria Portocarrero**, a senior majoring in biomedical engineering, placed third.

Women's basketball players **Jill Dickinson**, **Katie Piekieski** and **Kathryn Wighton** were named to the national NCAA Division I Independent All-Academic team for 2007-08.

Agnieszka Pregowska, **Kristy Haeckel** and **Sabrina Baby** of the **NJIT** women's volleyball team were selected to the 2007 Division I All-Independent second team while sophomore **Erica Schultz** was honored with honorable mention.

NJIT junior **Julia Doci** was selected as the 2007-08 national Division I Independent Player of the Year in women's tennis.

Freshman guard **Jessica Gerald** was selected NCAA Division I Independent Women's Basketball Newcomer of the Year.

Seon Woo Lee, doctoral student in electrical engineering, received first prize, in the Research Poster Award competition at the Fourteenth Annual Wireless and Optical Communications Conference,

held on the **NJIT** campus. She also took first prize in the graduate division at the 2008 Provost's Student Research Showcase. Professor **Haim Grebel** is her advisor.

Two students at **NJIT** – brothers majoring in electrical engineering – have been recognized nationally for their research. **Mohammad Naqvi**, who won a Goldwater



Scholarship last year for researching the sun's affects on global warming, was named to the second team of the 19th annual USA Today college academic team. His younger brother **Salman Naqvi** received Honorable Mention in the Goldwater competition for studying how the growth of cities — think concrete and asphalt replacing grass and trees — affects the global climate. Salman was awarded the National Oceanic and Atmospheric Administration (NOAA) Ernest F. Hollings Scholarship for 2008.

Sara Gatmir Motahari, a doctoral student in electrical and computer engineering at **NJIT**, was named a 2008 Google Anita Borg Memorial Scholarship finalist. The program awards academic scholarships to outstanding undergraduate and graduate women who are completing degrees in computer science and related fields and who have demonstrated a commitment to advancing women in technology.

Oscar Tapia '08, who majored in computer engineering, received a \$5,000 Hispanic College Fund



Scholarship sponsored by Google. The scholarship is given yearly to Hispanic students who have overcome obstacles and done excellent work in computer science. Winners must demonstrate a commitment to improving their community.

Appointments and Promotions

Robert English, professor of engineering technology, has been named interim dean of the School of Management. He was chair of engineering technology for nearly two decades.



Stewart D. Personick, internationally recognized pioneer in the theory and practical applications of new and emerging technologies in telecommunications systems and networks, was named Ying Wu Endowed Chair in Wireless Communications in the Department of Electrical and Computer Engineering at Newark College of Engineering.



Robert Sabattis, an attorney and former police captain, has been named director of public safety.



New Books

Fadi P. Deek, dean of the College of Science and Liberal Arts, and professor of information systems, and **James A. McHugh**, professor of computer science, are the authors of *Open Source: Technology and Policy*, published by Cambridge University Press.



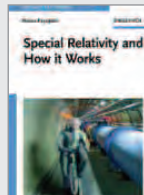
Atam P. Dhawan, distinguished professor and chair of the Department of Electrical and Computer Engineering, is the author of *Principles and Advanced Methods in Medical Imaging and Image Analysis*, published by World Scientific Publishing.



Gabrielle Esperdy, associate professor of architecture, is the author of *Modernizing Main Street: Architecture and Consumer Culture in the New Deal*, published by University of Chicago Press.

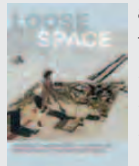


Senior University Lecturer



John Wiley and Sons, Inc.

Karen Franck, professor of architecture, is the editor of *Loose Space: Possibility and Diversity in Urban Life*, published by Routledge.



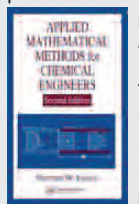
Christopher Funkhouser, associate professor of humanities, is the author of *Prehistoric Digital Poetry: An Anthology of Forms*, published by the University of Alabama Press.



Narain Gehani, dean of the College of Computing Sciences and professor of computer science, is the author of *The Database Book: Principles and Practices Using MySQLm* published by Silicon Press.



Norman Loney, associate professor of chemical engineering, is the author of *Applied Mathematical Methods for Chemical Engineers*, published by CRC/Taylor and Francis.



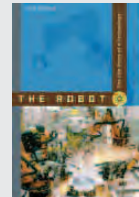
Neil Maher, associate professor of history and NJIT chair of history, is the author of *Nature's New Deal: Franklin Roosevelt's Civilian Conservation Corps and the Roots of the American Environmental Movement*, published by Oxford University Press.



Rajiv Mehta, associate professor in the School of Management, is the author of *Sales Management: Building Customer Relationships and Partnerships* (with Joseph F. Hair, Rolph E. Anderson, Barry J. Babin), published by South-Western College Publishing.



Lisa Nocks, university lecturer in history, is the author of *The Robot: The Life Story of a Technology*, published by Greenwood Press. The book was named 2007 Outstanding Academic Title by *Choice* magazine.

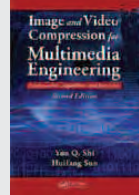


David Rothenberg, professor of humanities, released a new CD, entitled *Whale Music*. The CD is designed to complement his new book, *Thousand Mile Song, Whale Music in a Sea of Sound*, published by Basic Books. His previous book, *Why Birds Sing*, has been published in Spanish, Chinese, Korean, and German.



Norman Tobias, associate professor of humanities, is the author of *Basil I, Founder of the Macedonian Dynasty: A Study of the Political and Military History of the Byzantine Empire in the Ninth Century*, published by Edward Mellen press.

Yun Shi, professor of electrical and computer engineering, is the author (with H. Sun) of *Image and Video Compression for Multimedia Engineering: Fundamentals, Algorithms and Standards*, published by CRC Press.



Frank Y. Shih, professor of computer science, is the author of *Digital Watermarking and Steganography: Fundamentals and Techniques*, published by CRC Press.



Professional Activities

Ali Akansu, professor of electrical and computer engineering, has been elected a fellow of the Institute of Electrical and Electronics Engineers (IEEE) for his notable contributions in the field of signal processing.



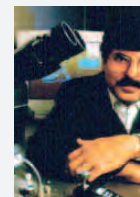
Karl Schweizer, professor of history, was elected a fellow in the prestigious Royal Society of Arts in London.

Nancy W. Coppola, professor of humanities, has been named Associate Editor of *IEEE Transactions on Professional Communication*. A senior member of IEEE, Dr. Coppola's editorial domain is technology transfer and innovation.

Starr Roxanne Hiltz, distinguished professor emerita, was named a Fulbright-University of Salzburg Distinguished Chair in Communications and Media. She will lecture in Salzburg on transnational virtual teams and social software.



Durga Misra, professor of electrical and computer engineering, was named a fellow of the Electrochemical Society



and was elected to chair the Dielectric Society's Science and Technology Division. He also received the 2008 Leadership Award from IEEE Princeton Central Jersey Section for serving as general co-chair of the 2008 IEEE Sarnoff Symposium.

Ronald H. Rockland, professor and interim chair of engineering technology, was elected as an Engineering Technology Council (ETC) Director by the engineering technology members of the American Society of Engineering Educators (ASEE). The ETC of ASEE is the national organization that speaks for engineering technology education and is committed to promoting quality education and creative endeavors in engineering technology.

Pushpendra Singh, professor of mechanical engineering, has been elected as a fellow of the American Physical Society. Singh was recognized for his outstanding contributions to the development of efficient algorithms for the direct numerical simulations of multiphase fluids.

Nikki Stiller, associate professor of humanities, published a poem, "Blanche Running Bear," in the prestigious journal *LILITH*.