ABSTRACTS

PHOTO: ALLA SHUMKO

The new telescope will facilitate research into solar phenomena such as magnetic storms that can damage satellites and disrupt telecommunications and power grids on earth.

A BRIGHTER FUTURE AT BIG BEAR

The future of solar research is much brighter now that the new telescope at NJIT's Big Bear Solar Observatory (BBSO) is operational. A celebratory dedication was held in October, with more than 120 alumni and their guests, NJIT trustees and overseers, and members of the international scientific community gathering for the event at BBSO in California.

Distinguished Professor of Physics Philip R. Goode spoke about the capabilities of the new telescope and what they signify for advancing solar astronomy. Goode – director of BBSO and the NJIT Center for Solar-Terrestrial Research – led the five-year project to build the instrument, which is the world's largest ground-based telescope dedicated to solar research. As Goode explained, the telescope has three times the resolution of the one it replaced. Along with additional improvements, this power will facilitate research into solar phenomena such as magnetic storms that can damage satellites and disrupt telecommunications and power grids on earth.

NJIT President Robert A. Altenkirch and Interim Provost and Senior Vice President for Research and Development Donald H. Sebastian also spoke. They were joined by Jeffrey R. Kuhn, associate director of the University of Hawaii's Institute for Astronomy, who helped Goode design key optical systems for the telescope; Buddy Martin of the Steward Observatory Mirror Laboratory at the University of Arizona, who directed mirror polishing; Thomas Rimmele, solar adaptive optics expert; and Ian Huss of DFM Engineering, Inc., who led construction of the telescope's support structure.

For more about BBSO see "At the Edge in Solar Research" online at http://magazine.njit.edu/2008/fall/big-bear.pdf. ■

"BEST BUSINESS SCHOOL" AGAIN

The Princeton Review has once again featured NJIT's School of Management (SOM) in its 2010 edition of *The Best 301 Business Schools* (Random House). SOM is cited as being part of a "solid engineering school" at the edge in technology and related fields, offering affordable undergraduate and graduate degrees. NJIT students characterized SOM as providing solid preparation in accounting, general management, teamwork, and communication skills. They also pointed out the school's proximity to major business and financial centers, which allows it to draw outstanding faculty. Also noted were excellent counseling and placement services. ■

There's much more on the Web – visit *NJIT Magazine* online at http://magazine.njit.edu for links to more information about topics in this issue.

FACULTY, ALUMS HONORED AS INNOVATORS

Two NJIT faculty members were recognized in October with Innovator Awards from the New Jersey Inventors Hall of Fame. Also honored were two recent doctoral graduates.

Distinguished Professor of Chemical Engineering Kamalesh Sirkar added this latest award to the long list of honors he has received during his career as an educator and researcher, most notably in the field of membrane separation technology. Ali Abdi, associate professor in the department of electrical and computer engineering, was honored for his interdisciplinary engineering work in biology. He shared the award with Effat S. Emamian, MD, founder and CEO of Advanced Technologies for Novel Therapeutics, a start-up company based at NJIT's Enterprise Development Center. Alumni Chuan-Bi Lin '08 and Ziqian Dong '08 were recognized for their inventive electrical engineering research. Dong received the prestigious Hashimoto Prize at NJIT's 2009 commencement ceremony. ■

A RISING UNIVERSITY STAR

President Robert A. Altenkirch (front, third from left), Joel Bloom (second from left), senior vice president for academic and student services and dean of Albert Dorman Honors College, and Tony Howell (top, far right), EOP executive director, represented the university at the 2009 awards dinner of the National Action Council for Minorities in Engineering, held at New York's Waldorf Astoria Hotel. NJIT received a Rising University Star Award for its commitment to educational opportunity for groups underrepresented among engineers and scientists. *Diverse Issues in Higher Education* ranked NJIT 11th in the nation in 2009 for graduating minority engineers. ■

The ten-week iPhone app course offers the training needed to share in "The iPhone Gold Rush."

WANTED: iPHONE APPS AND SOFT SKILLS

Gaining new knowledge and skills is one of the best ways to keep a sharp competitive edge in today's challenging job market. At NJIT, there's a growing catalog of degrees and certificates that can be completed with part-time evening and weekend study, or entirely online. Two new programs, both online, have been launched to meet the fast-growing demand for iPhone applications and engineering soft skills.

The ten-week iPhone app course offers the training needed to share in what *The New York Times* recently dubbed "The iPhone Gold Rush," a current $1 billion market projected to grow to $4 billion by 2012. The twelve-credit graduate credential in Engineering Soft skills rounds out a technical degree with essential knowledge of business, law, global marketing, finance, management, new media-based communication and sustainability. It's knowledge that makes technical experts stand out among their peers when it comes to a successful job search and professional advancement.

Attuned to employment trends and the needs of all students, NJIT's Office of Continuing Professional Education (CPE) makes enhancing personal marketability affordable and convenient. Learn about all CPE programs at http://adultlearner.njit.edu. ■

The experience of the 13 students in the course was very close to that of working in an architectural practice.

WHAT THE OCEAN SAYS

The ocean says a lot to doctoral candidate Rashi Jain, and what she has learned by listening to underwater sound led to recognition for the best paper presented by a young researcher at the 2009 annual meeting of the Acoustical Society of America. The title of the paper is "Particle Filtering Approach for Multipath Arrival Time Estimation from Acoustic Time Series."

"Sound waves traveling underwater tell a story about the environment they've been traveling through and the sources that transmitted the sound," Jain says. That story can be very significant for studying water quality,

PHOTO: JASON GOMES

sea-floor geology, and advanced sonar design. Jain has received funding for her work from the Office of Naval Research due to its importance in defense applications such as sonar. ■

PHOTO: JASON GOMES

Alexander Merlucci, recipient of the Best Project Award from Habitat Newark for his work on designs for a new townhouse development

TEAMING WITH HABITAT FOR HUMANITY

Fourth-year NJIT architecture students recently teamed with Newark homeowners to create designs for new local housing. The homeowners, all residents of city homes built by Habitat for Humanity, reviewed designs for townhouses planned by the organization, which is dedicated to building housing that low-income families can afford.

The students gained the considerable benefits of real input about everyday lifestyle needs from the homeowners. They also had to factor affordability into their concepts for the 2009 Habitat Options studio course taught by NJIT Associate Professor Darius Sollohub and alumnus Jak Inglese '80, '83. Inglese is a widely recognized expert in designing affordable housing that incorporates state-of-the-art sustainable construction.

According to Sollohub, the experience of the 13 students in the course was very close to that of working in an architectural practice – especially with respect to assessing the energy efficiency and overall cost of their designs. "Taking affordability into account is rare in architectural schools," Sollohub says.

In December, when the course concluded, Habitat Newark selected designs created by the students for special recognition and incorporation into the new townhouse development. Inglese will be the architect of record and complete plans for the project.

The organization presented awards in two categories – two Design Excellence Awards and six Awards of Recognition. For excellence of design, Alexander Merlucci* received the Best Project Award and Cara Constantino* was first runner up.

Receiving Awards of Recognition were Anthony Allocca (designing according to an extremely efficient wood framing system), Katherine Cerniglia* (investigating insulating concrete forms and geothermal technologies), Edward Lay* (incorporating rainwater collection and efficient plumbing systems), Joan Lui (researching green roofs and easily constructible solar shading systems), Ala Rustom* (researching and designing efficient rain garden systems), and Allison Termyna* (promoting affordable radiant heat flooring systems). ■

PHOTO: JASON GOMES

Habitat project instructor Darius Sollohub (left) and architecture student Daniel Chelchowski

**Dorman honors scholars*

Below: Photo of the RKO Proctor building today and Jessica Dalrymple's oil on linen interpretation
Bottom: Broad Street mural by Matthew Gosser

THE CURTAIN RISES ON A THEATRE TOWN

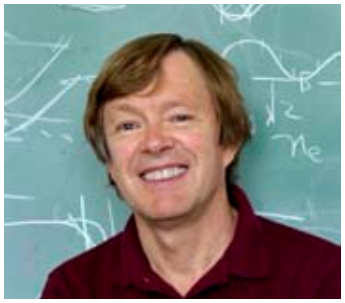
The rich history of theaters that once enlivened Newark's cultural life was the theme of the most recent exhibit organized by NJIT alumnus and special lecturer Matthew Gosser '98, MS '02. NJIT's College of Architecture and Design Gallery hosted "Theatre Town," an exhibition of photos, videos, paintings, drawings, collages, sculptures and more. The work was by some 40 contemporary artists, most from New Jersey. Co-sponsored by the Newark Arts Council, the exhibition ran through November. To complement the gallery works, Gosser created an outdoor mural on the rear wall of a building at 441 Broad Street.

Gosser graduated from NJIT with a bachelor's in architecture and later received a master's in infrastructure planning. He is a recognized practitioner of Ar+chaeology – the transformation of found artifacts from culturally significant abandoned buildings into works of art that evoke their origins. Previous exhibitions curated by Gosser focused on Newark's Pabst brewery and Westinghouse manufacturing complex. ■

END NOTES

TWO NAMED AAAS FELLOWS

Sunil Saigal



Philip R. Goode

Sunil Saigal, dean of NCE, has been elected a Fellow of the American Association for the Advancement of Science (AAAS), an honor bestowed on AAAS members by their peers. Saigal was cited for distinguished contributions to the field of computational solid mechanics, particularly for meshless analysis methods, sensitivity formulations, glass failure simulations, and mesh generation.

Philip R. Goode, distinguished professor of physics, is also a new AAAS Fellow. He was recognized for research in helioseismology and climate, and for his role in building the world's most capable solar telescope and the country's largest academic solar physics program.

James Dart AIA, university lecturer in the College of Architecture and Design, was a contributor at a national conference – "New Orleans Under Reconstruction: The Crisis of Planning" – held in October at Tulane University.

Somenath Mitra, professor of chemistry and environmental science, is a co-author of an article published in *BMC Cancer* that describes a new strategy for combating an aggressive form of breast cancer using carbon nanotubes and antibodies. The title of the article is "Anti-HER2 IgY antibody-functionalized single-walled carbon nanotubes for detection and selective destruction of breast cancer cells."

Farzan Nadim, professor of mathematical sciences, gave an invited lecture on "Determining Phase and Stability in Central Pattern Generators" at the Ninth Annual Society of Neuroscientists of Africa Conference in Sharm El-Sheikh, Egypt.

Gale Tenen Spak, associate vice president of the Division of Continuing and Distance Education, was a panelist at the 122nd Annual Meeting of the Association of Public and Land-Grant Universities (APLU) in Washington, DC. The topic discussed was "Testing the APLU Institutional Assessment Tool to Enhance Regional Innovation and Prosperity: Three Case Studies from NJIT, Virginia Tech and the University of Missouri."

Sotirios G. Ziavras served as program chair of the 21st IEEE International Conference on Tools with Artificial Intelligence. Ziavras is a professor in the Department of Electrical and Computer Engineering and director of the Computer Architecture and Parallel Processing Laboratory at NJIT.

BOOK SHELF

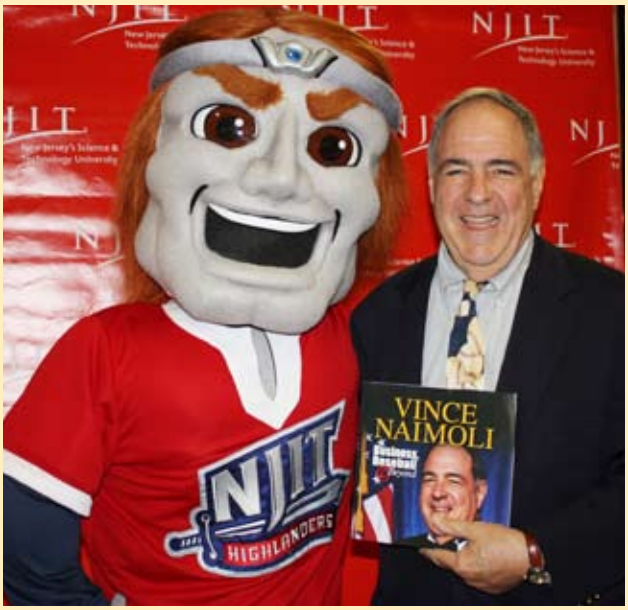


PHOTO: CHRISTINA CROVETTO

The NJIT Highlander and author Vincent Naimoli at the book signing for Business, Baseball & Beyond *on campus in December*

Vincent J. Naimoli MS '62, chairman emeritus and founder of the Tampa Bay Rays, entered the national spotlight in fall 2008 when the team he had nurtured for almost a decade played in the World Series. In *Business, Baseball & Beyond* (StarGroup International, 2009), Naimoli writes about his roots in a working-class neighborhood in Paterson, New Jersey, the creation of a Fortune 500 business empire, and his foray into the world of professional sports.

Over the years, Naimoli has been dedicated to baseball's overall welfare as well as to building the success of the Rays franchise. In addition to serving on Major League Baseball's committees for international relations, legislative affairs and equal opportunity, he was named to a blue ribbon task force on baseball economics in 1999.

As chief executive officer of Anchor Industries International, Naimoli was voted 1995 Florida Entrepreneur of the Year in the turnaround category. In 1999, he received the Ellis Island Medal of Honor from the National Ethnic Coalition of Organizations, and in 2004 he was inducted into the National Italian-American Sports Hall of Fame. In recognition of his exceptional career as an entrepreneur, philanthropist, business and civic leader and for service as an NJIT Overseer, the university conferred an honorary doctorate on Naimoli at the 2009 commencement ceremony.

Business, Baseball & Beyond can be ordered from the online Alumni Store at www.njit.edu/alumni/store.

One copy is $20.00, two copies $35.00, plus applicable sales tax and shipping. These prices for *Business, Baseball & Beyond* are below list thanks to the generosity of author Vincent Naimoli, who is donating all proceeds from sales to support scholarships at NJIT. ■

POINT BY POINT

The latest news about NJIT sports:
www.njithighlanders.com

ALL PHOTOS: LARRY LEVANTI

NEW NAME FOR NJIT'S HOME SOCCER VENUE

NJIT has renamed its home soccer venue Lubetkin Field at J. Malcolm Simon Stadium in honor of Mal Simon's service to the university as coach, director of athletics, and director and professor of physical education. Since 1990, the facility has been known as Dorothy and William Lubetkin Athletic Field, following a generous gift from their sons, Seymour '47, Bernard '49, Charles '53 and Alvin.

The addition of Mal's name was recognized at a ceremony held in September at the Campus Center. Those present in the large turnout included Mal's wife, Diane, his children, Stephanie, Melanie and Kenneth, and his five grandchildren. Also attending was his mentor, Lou Peragallo, who coached the soccer team at Panzer College, where Mal graduated in 1954 before earning his master's from Columbia in 1956.

Mal (right) and Bernie Lubetkin

Mal's career began at NCE in the 1950s and spanned nearly four decades until his retirement in 1993. In addition to soccer, he coached freshman basketball and volleyball. A widely published writer on coaching and soccer, Mal was inducted into the NJIT Athletics Hall of Fame in 1994.

Many of Mal's former players were on hand to offer their congratulations. Speaking on behalf of his players was Edward Cruz '63, a four-year soccer star and Athletics Hall of Fame honoree who is now president and CEO of E.E. Cruz & Company, one of the region's largest engineering and construction firms. President Robert A. Altenkirch, Vice President for University Advancement Charles R. Dees, Jr., and Athletics Director Lenny Kaplan spoke on behalf of NJIT. The common theme expressed was that, beyond all the wins and championships and personal awards, Mal positively influenced the lives of countless young people in his service to the university. ■

First Highlander wins Division I Academic All-America laurels

WOMEN GARNER GREAT WEST HONORS

Three members of the women's basketball team were accorded Great West Conference preseason honors. Junior guard Jessica Gerald was named to the Preseason First-Team All-Great West Conference Team, with twin sisters Taiwo Oyelola and Kehinde Oyelola recognized as Honorable Mention selectees. Gerald led the team in points scored (318) and points per game (16.7) while scoring double-figures in 16 out of 19 games, with eight 20-point games. Returning seven letter-winners, NJIT is playing its first season as an active full member of NCAA Division I.

In soccer, NJIT's junior goalkeeper Sadie Mele was named 2009 Defensive Player of the Year in the Great West Conference East Division. She was joined on the all-conference team by Cielianna Pasiciel, a sophomore named one of three defenders on the East Division team and by sophomore Piper Lunan, one of three forwards honored in voting by East Division coaches. Mele, who has played every minute of every game from the start of her nearly three-year career, backstopped NJIT to a first-place East Division finish in the inaugural season of Great West Conference play. ■

Jessica Gerald

Sadie Mele

SABRINA BABY ON ACADEMIC ALL-AMERICA TEAM

Senior Sabrina Baby was named to the *ESPN The Magazine* Academic All-America Third-Team, as selected by the College Sports Information Directors of America (CoSIDA). Playing libero in volleyball (a position specializing in defensive play), she is the NCAA Division I national individual leader with 6.27 digs per set (608 digs, 97 sets). Baby, enrolled in the School of Management, becomes the first Highlander in any sport to receive Academic All-America laurels at the Division I level.

Also named Great West Conference Defensive Player of the Year, Baby started all 27 matches this past season for the Highlanders, recording double figures in each contest. She earned Great West Conference Defensive Player of the Week honors three times for the season.

Baby holds the NJIT Division I school record for digs in a four-set match (45) and digs in a five-set match (42). To close out her career, she holds the NJIT Division I school records for career digs (2,284), digs posted in a season (2008; 795), career service aces (189) and service aces in a season (2008; 71). ■

CHRISTIAN BAUMBACH FIRST IN IC4A RACE

Sophomore Christian Baumbach* gained the most prestigious cross-country crown in school history in November, winning the season-ending 8-kilometer race at the 101st annual IC4A Cross Country Championships at New York City's Van Cortlandt Park. Baumbach's time was 25:36.8, 6.3 seconds ahead of the next runner.

Baumbach paced the Highlanders to the highest IC4A race-team finish in the NJIT program's history – 11th. NJIT finished 21st in the same race in 2008. NJIT, in its first year of Division I championship eligibility, finished ahead of such long-established Division I programs as those at Fordham, Manhattan, Fairfield, Sacred Heart, Loyola, Monmouth, Holy Cross, Hofstra, and Seton Hall. ■

**Dorman honors scholar*