DID YOU KNOW?

The Pulitzer Prize winner James Truslow Adams, class of 1898, coined the phrase “The American Dream” in his 1931 book *The Epic of America.*
[3] **NYU-Poly in the News**

- Undergrad Forum on Invention, Innovation and Entrepreneurship (i2e)
- Expanding Our Global Footprint
- NYU Abu Dhabi Opens Doors to Downtown Campus

[7] **CSAW**

Cyber Sleuths Shine at CSAW Awards

[11] **Cover Story**

The Patenting of Human Genes: A Cautionary Tale

[15] **Thought Leadership**

Engineers at NYU-Poly Join the Fight Against Cancer

[17] **Faculty News and Notes**

- New Faculty Appointments
- Faculty Promotions
- Faculty Notes

[23] **Campus Buzz**

- Lynford Lecture
- Jin Ryoun Kim 2009 Wechsler Recipient
- Career Fair
- Fuel for Thought
- Student Leader in the Spotlight

[25] **PolyGiving**

- NYU-Poly Celebrates & Recognizes Donors
- Giving Back to the Future

[26] **Alumni News**

- Letter from the Alumni President
- Class Notes
- NYU-Poly Remembers Martin Bloom
- In Memoriam
- Alumni Events
How does a university introduce a cutting-edge academic model, one based on invention, innovation and entrepreneurship?

By rolling blogging together with lectures by real-time industry leaders (and required attendance) — all in a first-year forum unlike anything other universities have ever attempted.

“It’s a manifestation of the school’s changing ideology,” says Kshitij Sood ’13PH. “It’s gearing students to be the change-makers of tomorrow and when better to do it than in their first year...”

Polytechnic Institute of New York University’s newest undergraduate course presents 465 first-year students to the joys and rigors of creative thinking in its Innovation and Technology Forum. The forum is the latest entrée in the Institute’s mission to educate the next generation of global innovators. Other institutions offer graduate courses in entrepreneurship, but NYU-Poly’s forum is the first designed specifically for the entire class of first-year students. It is also one of the first to supplement in-class discussions with online learning for such a large number of students.

By introducing students immediately to the curriculum that NYU-Poly calls i2e—innovation, invention and entrepreneurship—students become totally immersed in and comfortable with thinking creatively in the fields of science, mathematics and engineering. “It’s a manifestation of the school’s changing ideology,” says Kshitij Sood ’13PH. “It’s gearing students to be the change-makers of tomorrow and when better to do it than in their first year, when they are most eager and willing to learn with an open mind.”

The forum is also unusual because undergrads elsewhere rarely have the opportunity to meet and work with the leading inventors, journalists, scientists, business executives and entrepreneurs who are scheduled to be guest lecturers.

“The experience brings i2e to the forefront of our students’ educational experience, introduces them to a rigorous multidisciplinary approach that will guide them in the coming years, encourages scholarly interaction with their peers and faculty and gives them insight into the strategies of successful inventors and entrepreneurs,” says Iraj Kalkhoran, associate provost of undergraduate academics. “A start like this gives our students an incalculable advantage over their entire college career and beyond.”

By Kathleen Hamilton
Said David Lefer, visiting assistant professor and director of the Innovation and Technology Forum: “A growing body of research indicates that economic growth depends more on technology and innovation than on almost any other factor. In the face of the worst financial crisis since the Great Depression, fostering the study of science and engineering takes on special urgency.”

The entire class attends weekly lectures on hot-button issues such as green technology and biotechnology, hearing stories along the way of the trials and successes of scientists, mathematicians and entrepreneurs.

**Guest lecturers include:**

- Kevin Maney, former chief technology columnist, *USA Today* and the author of several books on innovation;
- Vivian Lee, vice-dean for science, senior vice-president and chief scientific officer for New York University;
- Tom Rolander, one of the founders of the personal computer industry in Silicon Valley;
- Namrita Kapur, social entrepreneur, micro-financier and environmental advocate; and
- Juan Enriquez, chairman and CEO of the Boston-based research and investment firm, Biotechonomy LLC, and founding director of the Harvard Business School Life Sciences Project. Enriquez has been profiled in *Fortune* as “Mr. Gene;” *Seed* selected him as one of 50 individuals whose ideas “shaped our identity, our culture and the world as we know it,” and *Time* asked him to co-organize the Life Sciences Summit commemorating the 50th anniversary of DNA.

The class is divided into 13 multidisciplinary blogging teams in which students discuss the lectures, selected readings and other course material that is accessible online. Each team is divided into mini groups—five groups of seven students—that compete against each other in innovation tournaments. Grades are based on blog postings, class participation and presentations.

Lefer noted that the presentations may be the most difficult part of the course for some students accustomed to the more traditional testing in science, math and engineering curricula. “This non-traditional approach acknowledges that good oral communication skills are essential to doing well in a competitive environment,” he said.

“Our new Innovation and Technology Forum is a breakthrough in higher education,” said Jerry Hultin, NYU-Poly president. “Our faculty is trying to assure that all of our new undergraduates see how creativity—combined with a solid understanding of science and technology—can meet and solve the world’s challenges in the 21st century. It’s a powerful statement about the power of invention, innovation and entrepreneurship, and I expect it will shape the direction of many of our students’ careers after they graduate from NYU-Poly.”

That expectation is already being shared by some of the students. “I’ve learned that an innovation does not have to be something big,” says Sood. “It can be something small that improves everyday living...a way of doing something better, with greater ease and efficiency. I’ve learned I am an innovator.”
During a multi-destination, week-long visit to India, President Jerry Hultin spoke on a panel at the Higher Education Summit in New Delhi hosted by the Federation of Indian Chambers of Commerce and Industry (FICCI). He discussed ways in which America’s model for fruitful collaboration among government, university and industry sectors could be applied to India. Among the more recent examples he spoke about was that of NYU-Poly’s success in building its New York City-sponsored incubator at 160 Varick Street where start-ups can grow into stable, profitable companies.

Hultin and Meera Kumar, vice president of Marketing and Communications, who accompanied him to India, visited Delhi Technological University and Birla Institute of Technology and Science in Pilani where they met with senior faculty, the vice chancellors and students to learn about some of their aspirations for developing research and industry partnerships that could enrich education and spark economic activity.

In addition, Hultin and Kumar met with research directors for corporations, state education ministers, business leaders and national government advisors. Many of the visits were the kind of informal information exchanges that are increasingly important as the globe shrinks and collaborations across continents take root. The universities Hultin and Kumar visited have extensive corporate internship programs, executive education and engineering programs that would compare favorably with what U.S. universities have to offer. The corporations also have well-articulated research programs, relationships with local universities and share an interest in expanding the quality of education and research.

MOU Signed with FICCI

On November 23, NYU-Poly and FICCI signed a Memorandum of Understanding (MOU) in Washington, DC that will generate events and more formalized activities wherein NYU-Poly can share some of its best practices and lessons learned in the cultivation of innovation with India’s education, industry and government organizations.

Under the MOU, the two organizations have agreed to harness their respective strengths to meet India’s growing demand for world-class research and development facilities that will attract global talent. NYU-Poly will showcase the successes of American models of private-public partnerships in India and the U.S. FICCI, which encourages free enterprise in India and empowers its businesses to increase their competitiveness and global reach, will engage educational, research, government and business entities to cultivate these partnerships.
NYU Abu Dhabi Opens Doors to Downtown Campus

Excerpted from the press release issued by New York University Office of Public Affairs

NYU Abu Dhabi, the first comprehensive liberal arts campus, officially opened the doors to its downtown campus on December 8, 2009 in a dedication ceremony that featured His Highness Mohamed bin Zayed Al Nahyan, crown prince of Abu Dhabi; His Excellency Khaldoon Al Mubarak, chairman of the Abu Dhabi Executive Affairs Authority; NYU President John Sexton; and Alfred Bloom, vice chancellor of NYU Abu Dhabi.

The downtown campus will house all major academic and cultural activities for NYU Abu Dhabi during its inaugural years, until the residential campus on Saadiyat Island is completed in 2014.

His Excellency Khaldoon Al Mubarak said: “The opening of the downtown campus today represents a major milestone in the establishment of NYU Abu Dhabi. Alongside other new and existing institutions, NYU Abu Dhabi will contribute to the development of the Emirate’s education system, the diversification of the local economy and the establishment of Abu Dhabi as one of the world’s true cultural capitals.”

The campus features a combination of academic and gathering spaces for NYUAD students, faculty and staff. State-of-the-art classrooms equipped with voice, video and data capabilities allow multi-media teaching. Videoconferencing in common spaces and classrooms will connect NYU Abu Dhabi directly to NYU’s campus in Washington Square and other NYU global sites. “The vibrant connection between NYU Abu Dhabi and NYU New York will provide the foundation for the world’s first truly global university and is perfectly aligned with Abu Dhabi’s vision for becoming one of the world’s next great idea capitals,” said John Sexton, president of NYU.

The downtown campus will also serve as the primary location for the NYU Abu Dhabi Institute, a cutting-edge research center that hosts academic conferences, workshops, film series, lectures and other programming to unite local and global scholarly communities for educational and cultural enrichment.

Twenty world-class academics with specialties ranging from particle physics to urban planning have joined the standing faculty. In addition, more than 15 members of NYU’s Washington Square faculty will be teaching in Abu Dhabi during its inaugural year as members of NYUAD’s affiliated faculty.

The inaugural undergraduate class of 100 students, drawn from top high school students around the world, will enter NYUAD in August 2010. NYU Abu Dhabi’s undergraduate curriculum will expose students to challenging ideas, bodies of knowledge, cultural traditions, and transformative achievements across the liberal arts, sciences and engineering.
Superstitions were no match for Polytechnic Institute of NYU’s CSAW competition on Friday, November 13, when undergraduate, graduate and high school students from across the country claimed top spots in the 6th Annual Cyber Security Awareness Week, a.k.a. “CSAW.”
More than 100 participants could count themselves among the fortunate, having risen to the finals of CSAW’s cyber security competitions—an accomplishment that put them ahead of the nearly 725 computer science students from the U.S. and Europe who registered for the preliminary online rounds of CSAW’s Application Security, Cyber Forensics, Embedded Systems, Research Award and Security Awareness Poster competitions. (Quiz Tournament teams met their competitors for the first time at the CSAW competition, going head-to-head in four elimination rounds and a tense tiebreaker final.) “For the students who participated,” said Amanda Galante, “it was a home run.”

Galante teaches at New Jersey’s Red Bank High School, where teens can take cyber security classes, but she finds she doesn’t often have the time or background to develop real-life scenarios that allow students to apply their school lessons. So when she heard about CSAW’s cyber forensics challenge—this was the first year CSAW organizers designed a challenge specifically for high schoolers—Galante asked her students if they would like to compete. Their reaction was immediate. “I swear they did more research for this than anything I’ve ever assigned them,” she said.

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Cyber security’s exponential growth

According to the Bureau of Labor Statistics, cyber security will be one of the fastest growing industries between now and 2016.

That prediction may explain CSAW’s appeal for cyber security professionals. Event sponsors, who included representatives from AT&T, Cisco, BAE Systems, L-3 Communications and SANS Institute, among others, joined staff from other agencies with cyber security interests, such as the Department of Homeland Security and the Department of Defense. Representing the latter and a judge for the research competition, Mark Althouse had nothing but praise for CSAW: “it’s one of the highlights of my year to come up and watch this stuff and see what’s going on.”

Althouse underscored the event’s value for job seekers: “If somebody had a résumé that said, ‘I placed at this competition at CSAW,’ then that means something.”

Grady Summers, General Electric’s chief information security officer, made an appeal to participants to go deeper into their cyber security studies and research. In his keynote presentation, “Three Challenges to Winning in Cyber Security,” he delivered a compelling account of how increased security threats from an ever-growing and ever-more sophisticated pool of cyber criminals will all but guarantee job opportunities for talented cyber security professionals.
A different type of cyber competition

Other competitions like CSAW exist, but according to Professor Nasir Memon, CSAW creator and director of NYU-Poly’s National Science Foundation-funded Information Systems and Internet Security (ISIS) laboratory, none is as all-encompassing, either in content or in outreach. “A student may have a talent in forensics analysis rather than in finding vulnerabilities,” he explained. “We span all these different areas of strength in security, whereas others are centered on one challenge and are either regional or online. Students don’t get together and meet.”

Perhaps that’s why Tom Anderson, a manager for Idaho National Laboratory’s Cyber Security Research and Development Department, described CSAW as “the biggest, best one I know of so far.”

The recent accolades, showered on the competition, show the amazing developments since CSAW’s modest beginning in 2003, when fewer than 100 students participated in the week-long event. “We just did it because we wanted to create a buzz about security,” said Memon. “We wanted everybody on campus to say, ‘Hey, we have a great security program,’ and to come and play with us.”

That week-long event has grown tremendously in its six-year history. Students are now encouraged to register months in advance and spend weeks preparing their challenge submissions. And while it has and always will be at its heart an event run by graduate student members of the ISIS lab, NYU-Poly departments from University Relations to Marketing and Communications to Admissions play an increased role in promoting and organizing CSAW.
Serious fun and games

NYU-Poly President Jerry Hultin gave special remarks at the CSAW competition luncheon, putting the event in context with larger educational goals. "Today is an invention and innovation day in the sense that we’re using competition to really improve your learning and the products and services you’ll create," he told attendees.

Memon expanded on Hultin’s remarks. “This may sound like a cliché, but we’re trying to build tomorrow’s leaders,” he said. “I would be very, very happy if this leads to people forming some sort of community where they get together and learn from each other and create relationships that they take with them.”

Memon may already have his wish. “I still talk to last year’s finalists,” said Sevinç Bayram, a fourth-year PhD candidate who has lead CSAW’s Research Award competition since 2005.

“If I go into academia, these people will be my colleagues, right?” she continued. “I can collaborate with them. I get to know a lot of people. I become friends with them.”

After the competition, Bayram planned on going out with others who had participated in CSAW’s festivities. It was precisely the kind of conclusion Althouse described wistfully: “I wish that back in my student days there had been something like this to get involved in, because it looks like a hell of a lot of fun.”


“I would be very, very happy if this leads to people forming some sort of community where they get together and learn from each other and create relationships that they take with them.”

-Professor Nasir Memon
Nearly 25 years ago, Wallace Steinberg, who at the time was the director of HealthCare Investment Corporation of New Jersey, made a rather astute, if not a tad optimistic, prediction as a health-care entrepreneur. “By the year 2000, [all] drug companies in the world will use genomic data as their Rosetta stone for the development of new drugs and diagnostic procedures. No science will be more important to the future of medicine than genomic research.” The patenting of human genes and its relevance to our health-care system have been major topics in the news recently. Myriad Genetics’ patents of the BRCA (breast cancer) 1 and 2 genes are currently being challenged by the American Civil Liberties Union. Similarly, the patenting of the CCR5 gene has become emblematic both of how intellectual property law has changed the conduct and content of scientific knowledge as well as the social, political and ethical implications of such a metamorphosis.

The patenting of genes is governed predominantly by chemical intellectual property law. This has lead to a number of problems, which were unforeseen some 25 years ago. Although DNA is a chemical, it is also a purveyor of information. The history of the chemical industry that culminated in the codification of chemical intellectual property is littered with examples of how companies attempted to invent around a patent by creating either a slightly different method of synthesis or a minor variation of the patented (or natural) substance. Inventing around a patent often leads to further innovation. The same is impossible with genes. One cannot invent around a gene, potentially allowing patent holders to enjoy a monopoly, thereby hampering further downstream diagnostic and therapeutic research.

A number of leading biomedical researchers have argued compellingly that creativity and innovation are anathema to the patenting of human genes. Human Genome Sciences (HGS)’s patenting of the CCR (chemokine receptor) 5 gene is a case in point. In June 1995, Yi Li and Steven M. Ruben of HGS filed for a patent on a new gene sequence, which coded for a protein comprised of 352 amino acids. Neither Li nor Ruben ran the standard biochemical assays to determine the gene product’s function. Rather, in the age of computers comparing DNA sequences with those that code for proteins with known functions, they merely deduced the function by sequence homology. It turned out that their sequence was homologous to another sequence, which coded for a chemokine receptor that bound to chemokine MCP-1 (or monocyte chemotactic protein-1). Li and Ruben concluded with confidence that their sequence coded for another chemokine receptor.

“That would be like saying, ‘I found a fungus, therefore I should get credit for penicillin.’”

-Robert Gallo

Chemokines are proteins that act as messengers among cells of the immune system. Ever since the mid-1980s, they have been the subject of both intense scrutiny by immunologists and molecular biologists and immense interest to biotech
companies. By June 1995, chemokines were known to play an important role in wound healing, allergies, asthma and arthritis. HGS’s patent application simply summarized what was known about the role of chemokines; it did not disclose the specific function of the particular protein coded for by that gene. It was an extremely broad utility patent lacking any specificity, citing the product of its gene as a tool for screening for receptor agonists (i.e., eliciting a biological response) and antagonists (i.e., blocking or dampening a response).

HGS sat back and waited until its patent was approved. Nearly five years later, on February 16, 2000, HGS President William Haseltine announced that his company’s patent application had been approved. The announcement made headline news in major U.S. newspapers. Why would anyone care? Much had transpired in those five years. Six laboratories, five in the United States and one in Belgium, had independently identified that sequence as coding for the receptor, which HIV recognizes when infecting T4 cells. Haseltine made it clear that despite not mentioning HIV in HGS’s application, any company using this receptor for drug treatment programs after February 15, 2000 without paying HGS royalties would be fined “not just damages, but double and triple damages.”

Many scientists were incensed. Renowned National Institute of Health scientist Robert Gallo protested, “If the patent office awards a patent to someone who clones a gene, even though they have no notion of its function and no real idea of its use, that would be like saying, ‘I found a fungus, therefore I should get credit for penicillin.’” Dan Littman of the NYU School of Medicine, one of the scientists who determined that HIV recognizes CCR5 as a co-receptor, was equally dismayed. “Now you have companies coming from a completely different direction and not even trying to understand the function before seeking patents. […] The patent office does not reward perspiration. They reward priority. They don’t care if someone spent 20 years to find [!] an invention, or 20 minutes.” He continued by insisting: “We did real biology.”

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- Dan Littman
They can just sit there and wait for others to do the research for them.”3 Haseltine was quick to defend his company’s research and financial interests. “You are rewarded for speculation. If you teach what to do and you are right, you don’t have to show it yourself. You are rewarded for intelligent and correct guesses. [...]”4

A month later the controversy intensified. Not only did HGS fail to list HIV recognition in the application, in a rush to file in the mercurial world of gene patenting, the company’s sequence was incorrect. The protein, which was coded by the HGS patented sequence, did not bind HIV to the receptor. It was a completely different protein. Haseltine, however, did not despair. HGS insisted that despite the errors, which they openly admitted, HGS was still entitled to any and all royalties from anyone using the gene for profit, particularly in the search for new treatments, such as producing monoclonal antibodies to bind the receptor, thereby blocking the virus’s entry into the cell. Haseltine and other company officials claimed that any errors in the company’s description (or sequence) and its corresponding protein were actually irrelevant. Why? Their patent referred to a copy of the gene in a living cell that HGS deposited in the American Type Culture Collection (ATCC) in Virginia. Haseltine explained, “When we file a patent, we don’t claim the sequence as the invention. The invention we claim is the gene we deposit with the ATCC. We know that our sequence and most sequences are not perfect. Anyone who wishes can go to the ATCC. It’s the same as the olden days, when inventors used to deposit a little model of their inventions.”5 So, in short, HGS did not know the precise utility of its gene product, nor did HGS have the correct sequence of the gene. Yet, HGS was still able to obtain the patent.

A month after Haseltine’s announcement of the HGS patent, 12 leading scientists from the National Advisory Council for the Human Genome Project wrote a letter to the Commissioner of Patents and Trademarks, Mark Nagumo, warning that the USPTO’s 1999 guidelines for patenting criteria fell far short of the mark. Of particular concern were broad utility claims on human-gene patents, which they argued “discouraged research” and “stifled scientific discovery.”6 After making a specific reference to the CCR5 patent, they concluded that “allowing broad, poorly substantiated claims create, de facto, an unacceptable monopoly on all fields[,] which the new gene might be found to be of use.”7

Such concerns are very real. Technology critical to the subsequent development of new diagnostics and therapies “downstream” from the patent might very well be stymied. Recent studies suggest that broad patent claims can deter innovation.8 A 2002 study did admit that “in specific areas there is evidence of problems associated with the numbers and breadth of gene patents now being issued.”9 Since a specific protein is coded for by that gene only, patent holders can, in theory, effectively block subsequent research. Moreover, the very notion that scientists constitute an open republic willing to share information has now been challenged: “For some, this trend in accepting broad utility claims stands in contrast to a long-standing norm of life sciences—to ensure the full access to the use of publicly sponsored research results by making them freely available to the public.”10 Hence, the very purpose of a patent is undermined. Many scientists have expressed concerns that permitting the patenting of a gene whose precise function is unknown at the time of patent application’s submission could preclude a product patent by some future research organization that discovers a more detailed and substantial functional role for that gene. The initial patent may interfere with subsequent research, as is the case with the BRCA (breast cancer) 1 and 2 gene patents held by Myriad Genetics.11

The rush to commercialize scientific knowledge threatens the fabric of a democratic society.
Biomedical researchers query the originality and ingenuity of patenting genes. Sequencing DNA had become so routine (and indeed automated) by the mid-1990s that many scientists felt that the procedure was now rather un inventive and could not fulfill the non-obvious criterion.12 Aaron Klug, former president of the Royal Society of Science and Bruce Alberts, former president of the National Academy of Science, called guessing at gene function by computerized searches of genomic databases “‘a trivial matter;’ Its outcome might satisfy ‘current shareholders’ interests,’ but it did not serve society well.”13 Indeed, a number of scientists have challenged the notion that gene hunting via computational techniques is sufficiently ingenious to warrant a patent. John Sulston, winner of the 2002 Nobel Prize in Physiology or Medicine, fears the consequences of conflating invention and discovery. The patenting of CCR5 was clearly on his mind: “But who took the inventive step? Was it the company that made a lucky match with the right gene? Or was it the researchers who determined that HIV-resistant individuals had a defective gene?”14

The moral of the story should be clear to those who wish to use uncritical patents as a metric for academic achievement. Often such patents are anathema to the very principles of academic research. Gene patents are hardly inventive or innovative. They can restrict further research and development. They encourage, rather than thwart, secrecy. The rush to commercialize scientific knowledge threatens the fabric of a democratic society.

Within this framework, the investigators in the laboratory for Biomembranes and Drug Delivery Systems at NYU-Poly engineer new materials with the ultimate goal of developing integrated miniature therapeutic devices to enhance human health while also advancing materials science and engineering.

Although excellent chemotherapeutic agents are available, chemotherapy is the third option after surgery and radiation, largely due to two main reasons. The first reason is the low accumulation of chemotherapeutics in the tumors relative to their accumulation in healthy organs of the patient. This non-selective accumulation translates into increased toxicities since chemotherapeutics act similarly on healthy and malignant cells. The second reason is the low “drug availability” within the cancer cells that constitute the tumors owing to the inability of the therapeutic agents to physically reach their molecular sites of action within the malignant cells. This lack of direct contact of drugs with their target at the molecular scale translates into low killing of malignant cells.

Our group investigates approaches to address these two issues of paramount importance in drug delivery of chemotherapeutics against advanced cancer. We engineer and develop a novel class of drug “delivery carriers-multi-responsive” liposomes—that not only selectively and largely accumulate into advanced cancer tumors, but in addition, release fast and effectively their chemotherapeutic contents into cancer cells while retaining their therapeutic cargo isolated from healthy tissues.

Liposomes are tiny capsules—about 1,000 times smaller than the width of the human hair—that can be loaded with therapeutic agents, and can be safely injected into the bloodstream. In particular, we use nature as an inspiration to engineer capsules designed to sense their immediate environment and to respond in an environmentally dependent way. These carriers are composed of materials identical to
Our approach, however, is unique in the sense that we recognize the multi-scale and multi-variable character of drug delivery that determines our way of thinking: searching for the globally optimum solution(s) in a multi-component problem.

Fluorescence microscopy on Giant Unilamellar Vesicles is employed for biophysical studies of phase-separated domains (diameter of 30 micrometers).

the cell membrane and are modified accordingly so as not to be identified as foreign objects by the human immune system. In this way, by exploiting certain biological cues specific to cancer, carriers selectively bind (or not) to cells, and release (or not) their therapeutic cargo while exhibiting minimal accumulation in vital organs that could be susceptible to the administered therapeutics. This is technically achieved by environmentally dependent lateral lipid phase-separation and formation of domains that affect the collective properties of liposomal membranes such as surface topography (and reactivity), membrane permeability and fusogenicity.

The innovation in our approach to design and engineer these carriers lies in combining biophysical and translational aspects. During this process, we invent new materials and new approaches/strategies for therapy. At the same time, we advance the fundamental understanding of these new materials’ behavior and we train new engineers who share the same vision in using engineering to improve human health.

Fortunately, we are not alone in the pursuit of engineering rationally designed materials to address therapeutic aims. Our approach, however, is unique in the sense that we recognize the multi-scale and multi-variable character of drug delivery that determines our way of thinking: searching for the globally optimum solution(s) in a multi-component problem. Our approach focuses on understanding the quantitative significance of what seems to be important-variables at the micro- and nano-scale (for example, on the intra-tumoral transport and intra-cellular trafficking characteristics of therapeutic agents), and relating this information to information from the macro-scale transport (pharmacokinetics) and toxicities, i.e., from the whole body scale. We recognize that tiny structural and functional changes at the molecular and supramolecular level can have tremendous effects on the fate of these carriers in the biological milieu. This approach enables us to identify and optimize the most critical processes in a rational and quantitative way.

As engineers, we are fortunate to be part of unprecedented multidisciplinary interactions with colleagues from scientific areas ranging from fundamental materials science to clinical oncology.

Our research accomplishments have been recognized with a Career Catalyst Award from the Susan G. Komen Breast Cancer Foundation, the J.D. Watson Award from New York State Foundation for Science, Technology and Innovation (NYSTAR) and the Young Investigator Award from the Coulter Foundation. Biophysical studies on giant unilamellar vesicles are funded by New York University-Materials Research Science and Engineering Centers (NYU-MRSEC). We have applied for two international patents to protect our technologies, which would not have been possible without the support and guidance of NYU-Poly’s Brooklyn Enterprise on Science and Technology.
NYU-Poly Adds Faculty, Includes First Faculty Appointments for NYU Abu Dhabi Campus

As part of its expansion resulting from affiliation with New York University, Polytechnic Institute of New York University appointed new members to its faculty and administration. Among the four new faculty members to join NYU-Poly is a professor who is spending one year at NYU-Poly’s Brooklyn campus before moving to Abu Dhabi to launch the engineering school of NYU. The appointments include:

Rémi Dingreville
Assistant Professor of Mechanical Engineering

Rémi Dingreville joins NYU-Poly as an assistant professor of mechanical engineering. He previously served as a postdoctoral fellow at Sandia National Laboratories in Albuquerque, New Mexico. He holds a doctorate in mechanical engineering from the Georgia Institute of Technology and a master’s degree in mechanical engineering with honors from Université de Rennes 1. At Sandia, Dingreville’s research combined computational and experimental strategies for modeling fatigue of metal. While at the Georgia Institute of Technology, he served as a graduate research assistant, carrying out methodologies to combine continuum mechanics and atomistic simulation for modeling structure-property relationships of nanostructured materials. His experience in materials design, nanotechnology and mechanics of materials will help NYU-Poly better integrate the emerging science of nanotechnology into its mechanical engineering curriculum.
Joo H. Kim
Assistant Professor of Mechanical Engineering

Joo H. Kim joins NYU-Poly as an assistant professor of mechanical engineering. Kim was previously an adjunct assistant professor in the Department of Mechanical and Industrial Engineering at the University of Iowa. He was also a postdoctoral research scholar at the University’s U.S. Army’s Center for Computer-Aided Design.

Kim’s postdoctoral and doctoral research focused on dynamics, control and optimization of multi-body systems with a particular concentration on robotic/human manipulation, balance and locomotion. In addition to his individual research, he has collaborated in developing a number of software packages for projects that are being used and tested by the U.S. Army and a number of major U.S. corporations. This research has been recognized by numerous industrial organizations and government entities including the State of Iowa, which selected this research for its Top Government Technology of the Year Award in 2007.

Kim holds a doctorate in mechanical engineering as well as master’s degrees in mathematics, mechanical engineering and biomedical engineering from the University of Iowa. He has published a number of professional journal articles and authored several conference papers and technical reports, in addition to being a frequent presenter at conferences and seminars.

Ramesh Jagannathan
Professor of Practice in Chemical Engineering, NYU Abu Dhabi

Ramesh Jagannathan is a tenure-track professor of practice in chemical engineering at New York University Abu Dhabi. He will spend the 2009-2010 academic year in New York with New York University and Polytechnic Institute of New York University faculty before moving to NYU Abu Dhabi.

Jagannathan holds a doctorate in chemical engineering from Clarkson University and brings more than 15 years of international project leadership experience with emphasis on new product development, process engineering and lean manufacturing. Among his many successes, he rose at the Eastman Kodak Company to become senior technical associate, which is the highest level of achievement for an individual contributor within that company. He is also the holder of 42 patents, many of them already commercialized. Jagannathan has published in 19 peer-reviewed publications, and his technical contributions have been incorporated into standard textbooks on crystal growth.

Hai Li
Assistant Professor of Electrical and Computer Engineering

Hai (Helen) Li has been appointed assistant professor of electrical engineering. She comes from private industry, where she focused on low-power devices for nanoscale computing and storage systems.

Most recently, Li was senior staff engineer at Seagate Technology, where she utilized novel spin-torque memory devices that promise to carry VLSI (Very-Large-Scale Integration) technology beyond conventional CMOS (Complementary Metal–Oxide–Semiconductor) devices. Her ability to work both as a computer architect and low-level circuit design engineer was further demonstrated in her work as a senior design engineer at Intel Corporation, where she was an Intel Penryn Project Award winner for her contribution to power reduction methodology, and at Qualcomm Inc., where she earned a Qualcomm Qualstar Award for her contribution to 65 nanometer chip design methodology.

Li holds a doctorate in electrical and computer engineering from Purdue University, along with a master’s degree in micro-electronics from Tsinghua University in Beijing. Li has 47 U.S. patents pending. She has co-authored two book chapters and a number of journal articles.
Faculty Promotions

Iraj Kalkhoran
Associate Provost, Undergraduate Academics

Iraj Kalkhoran assumes his new position, associate provost of undergraduate academics, after serving as dean of undergraduate academics since March 2007. During his tenure as dean, Kalkhoran successfully led the completion of a new freshman year curriculum, expanded and broadened the undergraduate research program and improved the advisory and academic support services for students. He is credited with leading the formation of NYU-Poly’s new Honors Program.

Before his appointment as dean, Kalkhoran was associate professor in NYU-Poly’s Department of Mechanical and Aerospace Engineering. His research interests are in the areas of gas dynamics, high-speed flows, supersonic aerodynamics, wind-tunnel testing and shock tubes. He received his bachelor’s, master’s and doctorate in aerospace engineering from University of Texas at Arlington.

Bharat Rao
Department Head, Technology Management

Bharat Rao has been appointed head of the Department of Technology Management. He joined NYU-Poly in 1997 as an associate professor of technology management and directs the department’s doctoral program.

Rao’s research has examined the impact of information and communications technologies on multiple industries, and he has been widely published in journals, book chapters and business case studies. His current research focuses on the diffusion of emerging technologies, business model evolution and global innovation strategy. Rao earned his doctorate in marketing and strategic management from the University of Georgia and received a bachelor’s degree in electrical and electronics engineering from the National Institute of Technology in Calcutta, India.

Lawrence Chiarelli
Interim Department Head, Civil Engineering

Lawrence Chiarelli will serve as interim department head of Civil Engineering, effective September 1, 2009. Chiarelli joined NYU-Poly in 2004 and has worked with faculty to restructure the undergraduate and graduate curricula in construction management.

As an industry professor, Chiarelli continues to be an active member of the professional engineering and construction community, serving as special counsel in the Construction Group at the international law firm Duane Morris LLP. He has been active with the American Society of Civil Engineers for more than 30 years and is a founding member of BIMplex, a center for training, education and research in building information modeling at NYU-Poly.

Chiarelli earned his juris doctor from Brooklyn Law School and his master of engineering and bachelor of engineering from The Cooper Union.
ANNOUNCING THE GRADUATE SCHOOL STIMULUS PACKAGE FOR POLYTECHNIC ALUMNI

There’s never been a better time to reinvent yourself, and our graduate degree programs and advanced certificates can provide the gateway to enhanced credentials or entirely new fields. The Graduate School at NYU-Poly invites you to take advantage of our exclusive alumni scholarships for graduate study.

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George Bugliarello, president emeritus and institute professor, Civil Engineering, delivered the keynote address for the University of Minnesota’s Department of Civil Engineering’s centennial celebration. He also participated in a joint international conference titled “Technologically Modified Environment–Environmentally Modified Technology” in Karlsruhe, Germany. Bugliarello traveled to Beijing and Changsha, China to discuss the possibility of collaboration and to attend the National Academy of Engineering’s 2009 China-America Frontiers of Engineering Symposium.


David C. Chang, chancellor, was appointed chair of Mayor Michael Bloomberg’s panel for Education Policy.

Emeric Deutsch, professor (retired), Mathematics, co-authored the following papers “Equidistribution of Descents, Adjacent Pairs and Place-value Pairs on Permutations” in the Journal of Integer Sequences and “Production Matrices and Riordan Arrays” in Annals of Combinatorics.

Mark Green, professor of organic chemistry, Chemical and Biological Sciences, presented an invited lecture on October 23 at NYU about his novel teaching approach which can be applied to high school students. The invitation came from the Chemistry Teachers’ Club of New York, the Physics Teachers Club, the American Chemical Society New York Section Topical Group, the United Federation of Teachers Science Committee and the Columbia University Scientific Literacy Seminar. His latest book, still in manuscript form, Learning Organic Chemistry Backwards: A Storytelling Historical Approach, is being used at NYU-Poly during the current academic year.

Green will travel to Tokyo, Japan to present a lecture on chirality, the study of molecular mirror-image relationships. He is scheduled to receive a collaborative grant from NYU to support research he will conduct with NYU Chemistry Professors Bart Kahr and Michael Ward on the search for a chiral analogy in crystals to ferroelectric behavior.

In December, he went to the Netherlands to evaluate the doctoral thesis of a student who performed research that is an extension of Green’s research at NYU-Poly.

His essay titled “Homochirality in Life: Two Equal Runners, One Tripped,” will be published in Origins of Life and Evolution of Biospheres in early 2010. The essay supports the possibility that early life may have existed in mirror-image forms and that our side of the mirror won out in the resulting competition. Green begins his fifth year of writing a monthly newspaper column. He also writes a blog under the heading “Science from Away,” explaining scientific matters for the general public.


He also made a presentation on “Nanocomposite Coatings for Structural Health Monitoring of Materials” at the TMS Annual Meeting in San Francisco, California.

He has been invited to co-chair a workshop for the Combined 48th IEEE Conference on Decision and Control and the 28th Chinese Control Conference in Shanghai. He also served as co-chair for the 2009 Asian Control Conference in Hong Kong last August.

Ramesh Karri, associate professor, Electrical and Computer Engineering, is the principal investigator in breakthrough research that speeds and secures Internet voice traffic. The project joins Cisco with NYU-Poly’s Center for Advanced Technology in Telecommunications and Distributed Information Systems to commercialize cutting-edge security technology developed by scientists at Columbia University and Verizon Laboratories. This is the first step toward protecting the next generation of routers used by telecom service providers and large enterprises.

Harold G. Kaufman, professor and academic director of the Organizational Behavior Program, Technology Management, was quoted in an article on the emotional impact of long-term unemployment. To read the complete article, visit www.mcclatchydc.com/economy/story/74727.html.

Jin Ryoun Kim, assistant professor, Chemical and Biological Engineering, has been awarded an $80,000 grant from the Alzheimer’s Association to perform disease-related research over the next two years.

Noel Kriftcher, industry professor of humanities and executive director of the David Packard Center for Technology and Educational Alliances, Humanities and Social Sciences, joined three NYU-Poly grad students—Nicole Abaid, Pavel Khazron, and Keeshan Williams—at the College Board’s Forum 2009. Kriftcher and the students made a presentation titled “Engineering Partnership to Enrich STEM Education.” The grad students are all Applying Mechatronics to Promote Science/Central Brooklyn Robotics Initiative Fellows in the National Science Foundation’s-funded program that is supported by the Brooklyn Community Foundation, JP Morgan Chase and the Motorola Foundation.

Kalle Levon, professor, Chemical and Biological Sciences, presented a lecture, “Selective Potentiometric Detection of Macromolecular Ions,” on October 26 as part of the New Jersey Science and Technology University’s Fall 2009 Otto H. York Department of Chemical, Biological, and Pharmaceutical Engineering Graduate Seminar Series.

Philip Maymin, assistant professor, Finance and Risk Engineering, authored an op-ed piece for the Hartford Advocate which analyses definitions and implications of freedom, titled “The Right to Remain Loud.”

Bharat Rao, department head and associate professor, Technology Management, was featured on EcoSalon commenting on the environmentally friendly features of the new Apple Macbook laptop and desktop computer.
Frances Allen, second from left, was the invited presenter at the 12th Annual Lynford Lecture in the Pfizer Auditorium on November 19. Allen, the IBM Fellow Emerita at the T.J. Watson Research Laboratory and the first woman recipient of the A.M. Turing Award for her scientific and technological contributions to high-performance computers, delivered a lecture on "The Challenge of the Multicores." In her lecture, Allen encouraged the exploration of new approaches to the use of multicore systems. The Lynford Lecture, held annually at NYU-Poly, is sponsored by Jeffrey and Tondra Lynford and the Institute for Mathematics and Advanced Supercomputing (IMAS) to present the wisdom of outstanding scientists and mathematicians to a wide audience.

Joining Allen are, right to left, Tondra Lynford, David and Gregory Chudnovsky, industry professors, IMAS, and Jeffrey Lynford, chairman, Reis, Inc. and trustee, NYU-Poly and NYU.

Jin Ryoun Kim 2009 Wechsler Recipient

Jin Ryoun Kim, the Joseph J. and Violet J. Jacobs Assistant Professor of Chemical Engineering, Chemical and Biological Engineering, second from left, was named the 2009 recipient of the Wechsler Award for Excellence. The award recognizes and supports excellence in research among NYU-Poly faculty in the early stages of their careers. Pictured with Kim are, from right, Dianne Rekow, provost, Walter Zurawsky, associate professor and head, Chemical and Biological Engineering, and Richard Thorsen, vice president for academic affairs and associate professor, Mechanical and Aerospace Engineering.

The Wechsler Award for Excellence was established by Dr. Harry C. Wechsler ’48Chem, a noted chemist, business executive and former trustee. Wechsler Award recipients receive $25,000 for a two-year term.
Career Fair >

Students gathered around company representatives during NYU-Poly’s 33rd Annual Fall Career Fair in October. Representatives from 58 companies spoke with students, collected resumes and fielded questions about their companies. Start-up companies from NYU-Poly’s BEST Center incubator were also on hand.

< Student Leader in the Spotlight

Sumit Pal ’13CpE was named the 2009 recipient of the Junior Achievement of New York (JANY) Student Leader of the Year Award for outstanding peer leadership, personal and academic growth and service and passion for enterprise. The presentation was made at JANY’s annual gala on October 14, 2009 at the Winter Garden in the World Financial Center. Pal was a JANY Student Ambassador while enrolled at the Information Technology High School in Queens. JANY’s three key content areas focus on entrepreneurship, financial literacy and work readiness—what the organization calls “The Three Pillars of Success.”

Sumit Pal, center, is pictured with Jinn Camille Lopez, fellow JANY student ambassador, left, and the evening’s host, Maurice DuBois, co-anchor of WCBS2’s News This Morning. (photo credit: Roberto Falck)

Fuel For Thought >

Dr. Franklin Chang-Díaz, center, inventor of the variable specific impulse magnetoplasm rocket, known as the VASIMR® engine, delivered a lecture on his extraordinary career and his latest advancement in propulsion technology on December 2 in the Pfizer Auditorium. VASIMR® shortens the length of time it will take to travel to Mars from 180-270 days to 39 days. Chang-Díaz has flown aboard seven space missions and has 25 years of service with NASA. He is the chairman and CEO of Ad Astra Rocket Company, which he founded to deploy and test VASIMR® in space on the International Space Station.

Joining Chang-Díaz are Andres Donoso ’12ME, left, president of the Society of Hispanic Professional Engineers, which sponsored the event, and Charles Camarda ’74AE, right, Distinguished Engineer in Residence.
NYU-Poly Celebrates & Recognizes Donors

NYU-Poly students hail from every part of the globe and are often the first generation in their families to earn a college degree. That achievement is a dream realized.

It is rare that someone you have never met is totally committed to making that dream come true for no other reason than the pleasure of giving. Oftentimes, students never have an opportunity to express their gratitude face-to-face and to meet the person who played such an important role in their lives. That meeting took place on October 20, 2009 at the Donor Recognition and Promise Fund Kick-off event at The New York Marriott at the Brooklyn Bridge.

The first-of-its-kind event brought together individual benefactors, representatives of corporations and foundations that support NYU-Poly students and donors. In his remarks, President Jerry Hultin said, “We trust that, as you all meet and share stories, donors will leave here tonight with a clearer picture of what it’s like to be an NYU-Poly student in 2009, and scholarship recipients will leave with a first-hand view of the generous nature at work behind the scholarships that allow them to work towards their dreams.”

These dreams were succinctly articulated in a video featuring a diverse group scholarship recipients—Linda Smetanova ’11CBS, Michael Hailemariam ’10CBE, Kyle Hicks ’10CBE, Frances Vicioso ’10CS, Akira Nakano ’13CS, and Radu Iliescu ’12CBS. Hicks, the William Friend Family Scholar, is interested in renewable energy and hopes to start a company that will provide this service to developing countries and emerging markets. Vicioso, the Mark Ronald Promise Scholar, wants a master’s in cyber security on the way to a PhD and teaching. Hailemariam hopes to one day create state-of-the-art medical devices. All of these aspirations that seemed so far away are now within reach.

As the video concluded, Aarti Dalal the Verizon Promise Scholar introduced President Hultin. The president asked donors and scholars to raise hands, pair up, introduce themselves and begin a conversation. This opportunity allowed recipients to thank those who had a direct impact on their future.
Giving Back to the Future

Charles A. DeBenedittis, Senior Managing Director of Tishman Speyer Properties, Inc. donated $5,000 in 2009. “While recently observing ratings of colleges, I noted that Polytechnic was ranked among the top 10 engineering schools nationally. It was in high esteem when I graduated and now, more than 50 years later, it is more so. The increased international interest that Poly will receive through its association with NYU and through the first of its satellites starting up in Abu Dhabi next year will give our alma mater much greater visibility and serve as a geographically wider source of enrollment. This recognition together with a continuation of its high collegiate rating should certainly serve to open the doors of industry even wider to its graduates. Then, as always, it is what the individual does going forward that will carry him or her to fulfillment in their chosen field. For me, I’ve had an interesting and rewarding career in the design and construction of high-rise buildings and other structures throughout the world. May our current graduates enjoy the same satisfaction after receiving the Polytechnic degree. There are many wonderful opportunities ahead.”

Letter from the Alumni President

Dear Fellow Alumni,

During the fall, your Polytechnic Institute Alumni Association (PIAA) leadership was hard at work organizing various committees that promote fundraising, alumni outreach and student mentoring, as well as those that determine the recipients of various awards and school donations that the PIAA sponsors every year. Our work is extremely important to our school, our alumni and our students who will soon be alumni.

As we settle into the New Year, the PIAA Scholarship Committee is reviewing essays and scheduling interviews with students graduating in 2010 to determine the winner of the Outstanding Graduate Award. The Awards Committee is reviewing several candidates for the Distinguished Alumni Award and Dedicated Alumni Award—the most prestigious awards given by the PIAA. In addition, our two ad-hoc committees—the Marketing and Communications Committee and the Continuing Education Committee—are working together with the Development and University Relations team. We are also working with Anthony Kapp, the new director of Alumni Relations and executive director of the PIAA, to revamp the alumni web page at www.poly.edu/alumni, and to promote events, projects and programs, both academic and professional, that are of interest to our valued alumni.

The PIAA’s work and partnership with the development office does not begin or end with committee work. These past few months, the PIAA leaders and members actively participated in numerous events on campus including Student Convocation for the Class of 2013, NYU-Poly Alumni Luncheon hosted by President Hultin during NYU Alumni Day, Promise Fund Kick-off Event and Donor Recognition and the inaugural Donor Thank-A-Thon.

I hope you enjoyed hearing about some of the things that the PIAA has been working on recently, and I urge you to consider supporting our efforts by participating in our programs giving us your feedback through our social media outlets, and by contributing financially to your alma mater. Your contributions will enable us to achieve even higher goals for the future of NYU-Poly. As alumni, there are various ways you can help, so please explore the alumni website to learn about ways to be involved and give back to the institution that helped shape your future.

You can also make a donation via credit card at www.poly.edu/donate or download the donation form and mail it in if you wish. Donations are also accepted over the phone by simply calling (718) 260-3855.

Please feel free to contact me at polytechalumni@gmail.com if you have any questions.

Best regards,

Christine Ianuzzi ‘87BSEE ‘94ISE
70s

Elliot J. Wiesner ’71MA has completed his first term as chairman of the New Jersey State Bar association municipal court practice section.

Rachelle Friedman ’71Chem will continue to serve on the Consumer Electronics Association Board for 2010.

Anthony J. Puglisi ’72ME is working on the 787 Program developing composite repairs and maintenance procedures.

Walter Johnston ’72EE & CS has joined a list of senior technologists who will lead the effort in developing a National Broadband plan for the Federal Communications Commission.

Shivan Subramaniam ’72OR, chairman and CEO of FM Global opened new headquarters in Johnston, RI.

Morris S. Young ’75MT is CEO of AXT, maker of compound semiconductor substrates.

Steve R. Mc Calla ’76PH is enjoying life on his 30-acre farm where he has over 450 hazelnut trees, 25 chestnut trees, 200 grapevines, and about six acres under cultivation.

Joe Binshtock ’77ChE retired from Colgate-Palmolive after 25 years of distinguished service. He joined Medicia LLC, a personal care products and OTC contract manufacturer in Dayton, NJ as vice president and general manager.

Randy Frey ’79EE, CEO of LenSar, has developed a new laser therapy that may potentially remove cataracts with more precision.

60s

Richard H. Brown ’60EE, after a successful career, retired and is happily living in Sun City, Hilton Head, SC.


Barry Fehder ’65PH discovered a new kind of force that acts between pairs of identical fermions. When two identical protons interact, the new force behaves like nuclear anti-gravity.

Stanley M. Altman ’67CS is an interim president of Baruch College.

Monte Wallenstein ’67EE had a successful career at BAE Systems for over 38 years and is proud of his children’s accomplishments.

John H. Perepezko ’67 ’68MT, a professor at the University of Wisconsin-Madison, was awarded the William Hume-Rothery Award for his outstanding contributions to the science of alloys.

Joseph A. Salgadu ’68SS is enjoying life and retirement.

Richard Leiss ’68EE retired from Lockheed Martin as senior program manager and is now working part time as senior engineer for D&R Technical Stations in NY.

50s

Henry J. Hoffman ’50EE is happy and enjoying life in Cutchogue, LI.

Robert Reiss ’59ME is a member of QUEST, a not-for-profit educational program that fosters peer learning through classes and workshops designed and conducted by its members as active participants in shared educational experiences.

Lewis S. Goodfriend ’52EE, founder of Lewis S. Goodfriend and Associates, a top acoustical engineering firm, was elected a Fellow by the Institute of Noise Control Engineering.

John Cagnetta ’54ChE is enjoying retirement and serving as a board member at a small high-tech electronics company in Connecticut.

John Sie’58EE, founder and CEO (retired) of Starz Entertainment, has proposed an economic-stimulus plan, Incentivize Success Plan, that says he will generate nearly a million new jobs, increase the national GDP by almost $600 billion in five years and return money to taxpayers in year two.

Leon Schwartzman ’58 ’63EE was elected president of the Regency of Monroe, a luxurious golf resort for active seniors.

40s

Martin Perl ’48ChE, recipient of the Nobel Prize in physics, received an honorary degree from Union College in Schenectady, NY last May.
80s

Ursula Burns '80ME, CEO of Xerox, was tapped by President Barack Obama to help lead an education initiative aimed at helping students excel in science, technology, engineering, and math as part of his “Educate to Innovate” campaign. Burns is listed among Forbes Magazine’s “The World’s 100 Most Powerful Women.” She was also listed among women executives with science degrees leading some of the world’s largest companies on Forbes.com.

Frank Robertazzi ‘80EE is now working for Merrill Lynch as a financial advisor.

Gary A. Rozmus ‘80CE was elected to serve as the first chairman of the Board of Directors for the NYC Partnership of Brownfield Practitioners.

David Dingott ‘81EE presented his new Sword Diagnostic Reader, which speeds up the diagnostic testing process for food poisoning and a range of other diseases at a New Jersey Entrepreneurs Forum.

James McGowan ‘81SS is the executive director of off-campus administration at Adelphi University.

Christopher E. Kelly ‘88CE, training director for the Joint Apprenticeship and Training Committee, introduced an apprenticeship program to Eastern Suffolk Board of Cooperative Educational Services (BOCES) students enrolled in the Trade Electricity Program at Brookhaven Technical Center in Bellport, NY.

90s

Ruthie D. Lyle ‘94 ‘98EE was named as the 2009 RTP Inventor of the Year by the North Carolina Technical Experts Council. With 24 patents in 2008, Lyle received the 44th IBM Invention Plateau Award, and is believed to be the first woman to be named RTP Inventor of the Year. She serves as IBM’s Invention Disclosure Technical Lead for the Pervasive and Wireless Invention Team, and is an active member of Smarter Planet, Collaboration and Virtual World Invention Disclosure Teams. Lyle is a SWG Master Inventor who uses her interest in intellectual property development to mentor other aspiring inventors.

Scott E. Hurowitz ‘94ChE was honored for his work as senior principal technical professional for Mustang Engineering, LP, in Cambridge Who’s Who.

Yan-Yeung Luk ‘94Chem was awarded a $43,000 National Science Foundation Faculty Early Career Development Award for his study of water-soluble molecules.

Debra L. Brand ‘96CE is capital projects manager and facilities management engineer at the Thomas Jefferson National Accelerator Facility in Newport News, VA.

James Mazarakis ‘96IS joined the Systems Alliance Board of Advisors.

David M. Lee Hon ‘98, Nobel Prize winner in Physics and the James Gilbert White Distinguished Professor Emeritus of the Physical Sciences at Cornell University, will join Texas A&M’s Department of Physics.

00s

Amr Hafez ‘00CE was the project manager for the renovation of the landmark Rockefeller Apartments.

Peter D’Albenzio ‘03CpE and Jamie Primo were married last February in Babylon, NY.

Charles O. Holliday Hon ’05, chairman of the board of E.I. du Pont de Nemours and Co., has been elected a director of the Bank of America Corporation Board of Directors.

Pooja Gupta ‘05Chem was honored by the University of Wyoming Seiyo Shorin-Ryu Karate and Kobudo Club upon receiving his doctorate in molecular biology.

Christopher Alvarez ‘07HUSS, BEST tenant and founder of Transcendent Enterprise, won a Nevada Film Festival Golden Reel Award.

Major Codes:

AE Aerospace Engineering
BE Bio-Engineering
BTM Business and Technology Management
ChE Chemical Engineering
Chem Chemistry
CE Civil Engineering
EE Electrical Engineering
ES Economic Systems
Hon Honorary
HuSS Humanities and Social Sciences
IE Industrial Engineering
IS Information Systems
MA Mathematics
ME Mechanical Engineering
MG Management
MT Metallurgical Engineering
NE Nuclear Engineering
PH Physics
SS Social Sciences
TM Technology Management
NYU-POLY REMEMBERS MARTIN BLOOM

Martin Bloom, institute professor emeritus, Mechanical and Aerospace Engineering, received his bachelor’s, master’s and doctoral degrees in mechanical engineering from Polytechnic.

He joined the Polytechnic faculty in 1951 and worked with pioneering researchers such as Antonio Ferri. With Ferri, he worked on the design and construction of the aerodynamics laboratory and hypersonic facility. When Ferri left Polytechnic in 1964, Bloom became head of the Department of Aerospace Engineering and Applied Mechanics. During this time, he helped to develop hypersonic wind tunnels, which were later moved to the Long Island Graduate Center in Farmingdale, New York. The tunnels were housed at the Preston R. Bassett Research and Laboratory Building, which was dedicated in 1966.

Bloom was the director of the aeronautical research laboratories from 1964 to 1980 and was dean of engineering from 1966 to 1973. In 1972, he organized a landmark symposium at Polytechnic on computational fluid mechanics which eventually led to the founding of the Journal of Computers and Fluids, which he co-authored with Stanley Rubin. Bloom retired from Polytechnic in 1986.

He was the author or co-author of 50 technical papers, developed several patents and was the recipient of the Outstanding Civilian Service Medal for providing consulting services to the U.S. Army. He was named a Fellow, American Society of Aeronautics and Astronautics and received the Sesquicentennial Medal from Polytechnic in recognition of his faculty service and research accomplishments. Bloom was the first faculty member to be named Institute Professor.

Martin Bloom was a most thoughtful, compassionate and gentle human being who is missed by his students, colleagues, friends and beloved family.

He is survived by his loving wife of 61 years, Phyllis; children, Matthew, Robert and Alene; and seven grandchildren.

IN MEMORIAM

Robert E. Benson ’39
Robert H. Cummings ’40
Fred Mauger ’41
Edward J. Eyring ’42
Vito Rabito ’42
James Durborow ’43
Kenneth H. Becht ’44
Roy Stewart ’44
Peter Kahrilas ’46
Saul Tessler ’46
Herman Wagner ’46
Henry R. Linden ’47
Alan Smolen ’47
Alfons G. Hutter ’49
Stephen W. H. Yi ’49
Norman E. Banks ’49
Hugh J. Lennon ’49
Charles Jacobs ’50
Paul J. Tine ’50
Morris Goldberg ’51
Walter William “Bill” Hock ’51
Ramon A. Gadea Jr. ’52
John Habjan ’52
Philip F. Welch ’53
Melvin Rossnick ’54
Jan Dabrowski ’55

Warren S. Kyle ’55
John Bubaby ’55
Pedro Emil Marques ’57
Edward Steiner ’57
William Begell ’58
Leonard Frick ’59
Zalman Lavan ’59
Alastair Tainish ’60
Barry Schindler ’63
Alfred Vassalotti ’64
Donald Everett Franklin ’66
Herman Nils Seberg ’66
Iwan Cho ’67
Christian James Eckert ’68
Louis Friedman ’70
Abraham Pollack ’70
Benjamin Krinitz ’71
Koduwayoor Sundaram ’71
Howard Solomon ’71
Barbara Ann Petryshyn ’80
Romeo J. Hubner ’82
Dennis Davis ’97

Richard W. Sonnenfeld-faculty
Margaret Y. Keys ’47-faculty
[February 2010]
Regional Alumni Gathering
Wednesday, February 24, 2010
Hobe Sound, FL - 6 to 8 p.m.

[March 2010]
Graduate Student & Young Alumni Networking Event
Wednesday, March 10, 2010
reBar, Brooklyn, NY – 6 to 8 p.m.

[April 2010]
Regional Alumni Gathering
Thursday, April 15, 2010
San Francisco, CA

[May 2010]
Reunion Weekend
featuring Back to School Day & Golden Jubilee Class of ’60
Saturday, May 15 – Sunday, May 16, 2010
Brooklyn Campus

[May 2010]
Commencement
Tuesday, May 18, 2010
Radio City Music Hall, NYC

For more information or to register for alumni events, please visit www.poly.edu/alumni or call (718) 260-3424.
NYU-Poly rallies in epic fashion to topple defending champs Sage College

It was a game that will be talked about for years to come, as NYU-Poly came storming back from a 14-11 deficit in the fifth set tiebreaker to win 17-15. This nail biter of a win was NYU-Poly’s first-ever Skyline Conference Championship. Meredith Shipman (Sugarland, TX / Eklins HS) recorded 25 kills—and four of the final five kills—as a route to a unanimous Tournament MVP nod.

It looked as though Sage would keep its reign atop the Skyline, as they went up 14-11, but Shipman recorded back to back kills off serve and then Corey Loupee tallied a kill, getting a friendly tip off the net to tie it 14-14. Then down 15-14, the Blue Jays rallied for three straight points to seal the win and send a frenzy of NYU-Poly fans onto the court.

Front row: left to right: Assistant Coach Jasmine McDavid, Melissa Pona, Colette Coricca, Jacqueline Johnson, Judith Ford.

Back row: left to right: Assistant Coach Jackie Tsenovoy, Nikki Breibart, Alexis Walker, Corey Loupee, Victoria Kalvert, Meredith Shipman, Marisa Mauerhan, Head Coach Marc Solondz.