NSF Awards New Grant for Poly’s Center for Biocatalysis

Prof. Richard Gross in his laboratory on the MetroTech campus.
The nation’s first Center for Biocatalysis and Bioprocessing of Macromolecules (NSF-BBM), established at Polytechnic University in 2000, was awarded a new five-year grant to continue its innovative research. Funded by the National Science Foundation (NSF) and private industry, the center conducts research to develop new “environmentally friendly” routes to polymers by using natural systems such as yeasts, fungi, bacteria and plants.

The NSF-BBM Center is using biocatalytic, or enzyme, reactions to connect small molecules known as monomers to form large molecules known as polymers. Instead of making polymers from potentially hazardous petroleum sources, renewable materials such as sugars and fatty acids are being transformed to make a family of naturally derived plastics. In another example, the center is replacing the use of heavy metal catalysts, which are toxic to the environment, with natural enzyme catalysts to produce high-volume commodity plastics.

The center at Polytechnic is also developing new polyester families that will biodegrade upon disposal.

Professor Gross, right, with Dr. Martin Bluth, director of research and assistant professor of surgery and pathology, in a laboratory at SUNY Downstate Medical Center.

Developing Environmentally Friendly Processes and Polymer Products at Polytechnic

Funding Renewed for First Center in United States for Biocatalysis and Bioprocessing of Macromolecules
and has already created many new polymers by enzyme technology that provide an environmentally safe alternative to conventional chemical routes. The new enzymatic routes are resulting in products that can be used for coatings, adhesives, plastics, thickeners and gels. The new routes to products reduce energy consumption and the release of toxic chemicals during product manufacturing.

Polytechnic University is working collaboratively with biomedical industry leaders and SUNY Downstate Medical Center to develop biocompatible polymers, polymeric drug-delivery systems and advanced therapeutic systems that actively promote wound healing and play a role in other biological processes. Recently, the NSF-BBM Center developed a new drug for the treatment of sepsis. The researchers’ findings, which appeared in the January 2006 issue of Critical Care Medicine, show that the administration of sophorolipids significantly decreased mortality in animals with intra-abdominal induced sepsis.

Dr. Richard A. Gross, a 1986 chemistry graduate of Polytechnic University, is also the head of the enzymes laboratory at Genencor, a division of Rohm and Haas Company. “Through our collaborative efforts we have learned more about the properties required of polymeric resins for their optimal use as solid supports for immobilized enzymes.”

Professor of Polymer Science at Polytechnic and the center’s director, notes that the NSF Center for Biocatalysis and Bioprocessing of Macromolecules is creating private industry partnerships for technology development. “We believe such university/industry partnerships are critically needed in the United States to boost our competitive position,” he says, “since many private industries have severely reduced their budgets to do exploratory research. In addition, our students gain valuable insights into the realities of industry needs and expectations.”

Gross was the 2003 Presidential Green Chemistry Challenge Award winner in the academic category for his contributions in environmentally friendly methods for synthesizing polymers.

The NSF-BBM Center has two programs for private industry participation. The “core” program consists of cooperative research, whereby companies pool their financial investment in the center to gain access to a larger research program. Companies that have more specific research needs may elect the “non-core” program, where research is carried out directly between one company and the NSF-BBM Center at Polytechnic University.

Chemical and biomedical industry leaders that have partnered with the center include BASF, Rohm & Hass, DNA2.0, Grace Chemical Co., Novozymes, Genencor, Estée Lauder and Johnson & Johnson.

Dr. Paolo Giacomoni, executive director of research for Estée Lauder Companies, says the production of polymers using enzymes is natural and safe. “It is the method of choice to prepare polymers for cosmetic products,” he explains, “and we look forward with optimism at its application in the very near future.”

Another member of the NSF-BBM private industry consortium is the Advanced Biosciences Business of Rohm and Haas Company. “We have enjoyed a very direct form of collaboration with Dr. Gross and the laboratory at Polytechnic,” says M. Elizabeth Miller, senior scientist, Rohm and Haas Company. “Through our collaborative efforts we have learned more about the properties required of polymeric resins for their optimal use as solid supports for immobilized enzymes.”

...university/industry partnerships are critically needed in the United States to boost our competitive position...” —Richard Gross
Polytechnic doctoral candidate Lisa Barrett cannot help but compare today’s technological advancements in construction management to the world that surrounded her when she received her bachelor of architecture in 1985. “There were no computers. We used to draw everything by hand. And now that they have the computer and you can design in 3D and do all these things, I tell my students, ‘I just have to give you more work now because it’s easy to do,’” she says with a chuckle.

Three- and four-dimensional computer-aided design is her forte. She teaches the practice to undergraduates in Poly’s four-year-old construction management program, which produced its first graduating class this spring.

Truth be told, however, 3D/4D design is a technology that has evolved so rapidly the construction-management industry has struggled to keep pace. It is still a rare practice at professional firms and universities. But thanks to her background in architecture, in which the technology is more commonly used, Barrett has helped Poly to implement 4D modeling, which links the element of time to 3D computer-aided design.

The construction industry today still relies predominately on two-dimensional designs because of the extensive training required to bring its workforce up to speed. Three- and four-dimensional software, however, can serve as a crystal ball, taking into account, for example, time constraints, building codes, size limitations and construction costs so that designers may forecast potential conflicts.

“All of those things can be programmed into a computer,” Barrett said. “When you’re creating in 3D, you already know what you can and can’t do, and you can generate ideas based on real issues.” Barrett, who earned her bachelor’s degree from City College of New York and a master’s in civil engineering from Poly, plans to complete her doctorate in construction management technology, in 2007. At the suggestion of Dr. Fletcher H. (Bud) Griffis, provost and director and founder of the University’s Center for Construction Management Technology, Barrett elected to pursue her doctorate at Poly to better learn the management side of the business. According to Griffis, Barrett is doing advanced research that has the potential to make a major impact on how construction will be managed in the future.

After graduating, Barrett, a lifelong New York City resident who is married with two children, doesn’t plan to stray far from her role as an ambassador of sorts to 3D/4D modeling—she would like to be a consultant to construction professionals as they embrace the technology. She already has worked on projects with the New York Transit Authority and St. Francis College.

Another testament to the hand she has in cutting-edge practices in the construction field, Barrett, along with students in Poly’s digital media department, will work on a project that allows users to design buildings in 3D and 4D through a process resembling a video game. Utilizing animation software, each of the designer’s decisions is met with a subsequent menu of choices, similar to a flowchart.

While construction management is still known today as a male-dominated industry, Barrett said she sees more females entering the profession and has witnessed a steady transformation in her classroom. “More females are entering the architecture field,” she says, “and I wouldn’t be surprised if the same happens in the construction management area.”

Lynford lecture anticipates the future

John L. Petersen, president of the Arlington Institute, and considered by many to be one of the most informed futurists in the world, addressed “What To Do About the Future We’re About To Get” on April 11 in Polytechnic University’s Dibner Auditorium.

Mr. Petersen is best known for writing and thinking about high-impact surprises and the process of surprise anticipation. His current professional involvements include the development of sophisticated tools for anticipatory analysis and surprise anticipation, long-range strategic planning and helping leadership design new approaches for dealing with the future.

The Lynford Lecture, sponsored by Polytechnic Trustee Jeffrey H. Lynford and his wife Tondra, highlights the work of outstanding mathematicians, scientists and visionaries.
Faculty briefs

Professor Volkan Ötügen, Department of Mechanical, Aerospace and Manufacturing Engineering, has been elected fellow of the American Society for Mechanical Engineers for his significant achievements and contributions to the engineering profession. Ötügen’s research investigates complex problems in theoretical and experimental fluid mechanics and plasma aerodynamics. He has received international recognition for his pioneering work in optical measurement techniques.

Associate Professor Yi-Jen Chiang, Department of Computer and Information Sciences, was awarded a $300,000 grant from the National Science Foundation for “Out-of-Core Simplification and Multi-resolution Visualization of Large Volume Data Exploring Topological Features.”

Kalle Levon, Associate Provost for Research and Intellectual Property, Department of Chemical and Biological Engineering, has been elected director-at-large for the American Chemical Society, New York section. Levon also has been busy speaking at several recent events—the Chemistry Teachers Club on “Macromolecular Chemistry for a Safe and Sustainable World,” the Science Council of New York City on “Molecular Assembly and Organic Electronics as Novel Educational Tools” and the Cold Spring Harbor High School Science Fair on “Bionano Summer Program at Polytechnic University.”

Noel Kriftcher, industry professor and director of the David Packard Center for Technology and Educational Alliances, received a Crystal Leadership Award from Virtual Enterprises International, a simulated-business program offered by the New York City Department of Education for high school students. The Crystal Award honors industry leaders for their outstanding commitment to the program.

Four honored for teaching excellence

Associate Professor Mary K. Cowman, Department of Chemical and Biological Sciences, was named the recipient of the 2006 Distinguished Teaching Award for demonstrating a genuine commitment to students and superb teaching skills. A member of the Polytechnic faculty for over two decades, Cowman, is an internationally recognized leader in the study of the structure and properties of biologically important polysaccharides. The award was presented to Cowman during the 2006 commencement ceremony.

In addition to Cowman, three faculty members—Professor Mark M. Green, Department of Chemical and Biological Sciences, Associate Professor Magued G. Iskander, Department of Civil Engineering, and Professor Said Nourbakhsh, head of the Department of Mechanical, Aerospace and Manufacturing Engineering—were awarded the 2006 Jacobs Excellence in Education Awards.

Selected by Poly’s Teaching Awards Committee, the honor goes to individuals or groups who have demonstrated educational innovation and excellence. Each recipient also receives a $10,000 research grant.

Green, a recognized leader in polymer research, received the award for developing innovative methods to teach organic chemistry using real-world examples from the chemical industry and then moving backwards to the general principles. His methods have been published in a 2003 textbook, “Organic Chemistry Principles and Industrial Practice,” co-authored with Harold Witcoff, former vice president of General Mills.

The award was presented to Iskander for his innovative civil engineering instrumentation course and his participation in national and international conferences in disseminating his educational activities.

Nourbakhsh was honored for his leadership and creative, hands-on teaching technique and for mentoring a group of undergraduates who designed and developed a model airplane for national competition.

The award is named after the late Dr. Joseph J. Jacobs ’37 ’39 ’42 H’86, a former Polytechnic trustee and founder of Jacobs Engineering Group.

Poly wins national graphic design award

Poly’s Office of Communications and Media Relations has been named the recipient of the 2006 American Inhouse Design Award by the editors of Graphic Design USA for the Sesquicentennial Celebration: Invitations and Programs. According to the magazine’s editor Gordon Kaye and Awards Director Rachel Goldberg, the award recognizes outstanding work by in-house design teams. This year’s response to the competition was extraordinary, with over 3,500 entries submitted nationwide. The project included invitations and programs for the Sesquicentennial celebration, convocation and gala and was designed by the University’s Art Director Holly Block and edited by Michelle Kerr, director of communications and Cable editor.
Polytechnic awarded $1.6 million grant to battle cybercrime

Polytechnic University's Center for Advanced Technology in Telecommunications (CATT) was awarded a $1.6 million grant to further develop cybercrime detection and prevention with companies such as Verizon, Kodak, Lucent Technologies, AT&T Labs Research and the Securities Industry Automation Corp. The grant was awarded through the New York State Office of Science, Technology and Academic Research Centers for Advanced Technology Development Program (NYSTAR).

Professor Shivendra Panwar, director of Polytechnic's CATT, notes the alarming growth in the number and sophistication of cybercrimes. “Given the increasing proliferation of broadband connectivity and mobility, voice-over IP and sensor networks, the situation is only expected to get worse,” Panwar says. “Even more alarming, not only are we unable to prevent cybercrimes, but typically we are not even able to identify the perpetrators. We urgently need technology for prevention and investigation.”

The award was made through NYSTAR’s CATT Development Program, an initiative that creates nationally recognized research centers and brings high-technology innovations to the marketplace. The research that will be conducted as a result of the investments will produce significant technological improvements that will lead to substantial future economic development in New York. In addition, the research will earn substantial support from participating universities and private sector companies.

These specifically targeted research awards will enable New York’s world-class university research centers to work even more closely with industry to develop new technologies and innovations that will foster the growth of an even stronger economy for New York, noted Governor George E. Pataki. “These awards complement our other high-tech economic development initiatives,” Pataki said, “such as our Centers of Excellence program and will further secure New York’s role as an international leader in high-tech and biotechnology research and economic development.”

Joining Polytechnic in the cybercrime initiative is Columbia University, Poly’s Brooklyn Enterprise for Science and Technology and the Griffiss Institute.

Erich Kunhardt envisions “A New University...” at student/faculty lecture

Erich Kunhardt ’76EL, former Poly faculty member and director of Poly’s Weber Research Institute, spoke to a capacity crowd of faculty, staff, students and alumni on “A New University for a New Age.” Currently dean of the Imperatore School of Sciences and Arts at Stevens Institute of Technology, Dr. Kunhardt presented a history of the German Polytechnic Institute upon which United States technological-educational institutions were developed. Arguing that a new model is required to take advantage of modern science and engineering, Dr. Kunhardt also emphasized the importance of the humanities in pursuit of prowess in technological enterprises.

Poly professor elected to National Academy of Engineering

David J. Goodman, professor of electrical and computer engineering, has been elected to the National Academy of Engineering for his contributions to the theory and practice of wireless communications and digital signal processing. Election to the academy is among the highest professional distinctions awarded to an engineer.

“Professor Goodman has been doing innovative research in the wireless area for many years, and his pioneering work has contributed significantly to the wireless community,” says Jonathan Chao, head of the Department of Electrical and Computer Engineering. “He plays an instrumental role with other young professors,” Chao adds, “collaborating with them in research and writing proposals.”

George Bugliarello, Poly’s president emeritus, is the current foreign secretary of the National Academy of Engineering and William L. Friend ’56 ChE Hon’05, a Polytechnic trustee and chairman of the University of California President’s Council on the National Laboratories, is the academy’s treasurer.
Poly alumni helped make Apollo lunar modules reality

Their shining moment came July 20, 1969, when Apollo 11 astronaut Neil Armstrong landed in Lunar Module 5 “Eagle” and became the first man to walk on the moon. Edwin “Buzz” Aldrin also walked on the moon during that mission, and 10 other astronauts followed suit by 1972.

The first moon landing was the result of President John F. Kennedy’s 1962 declaration that “no nation which expects to be the leader of other nations can expect to stay behind in this race for space.” He vowed the United States would reach the moon before the decade ended, triggering NASA’s around-the-clock operations, such as the one at Grumman.

“It was the highlight of my life, to be honest with you,” said Gaylor, chief engineer during Project Apollo. “It was something we needed to do. It was a commitment to the whole country.”

Lost somewhere in his Potomac, Md., home is a photo of Liccardi, an assistant manager, as he watched the first moon landing. “I can’t help but feel a sense of accomplishment,” Liccardi said. “We turned out a vehicle that was absolutely superb.”

All four credit their Poly education for their success as aerospace engineers. “The analytical and managerial education I received at Poly greatly assisted me in reviewing the technical issues and using the necessary tools to design, develop, build and test the lunar module,” said Zuckerman, who was a structures and dynamics engineer.

As for the Bush administration’s vision for the next chapter of the lunar module, “I’m completely enthusiastic about it,” said Zito, a former guidance, navigation and control engineer who still today remains in contact with Zuckerman, Liccardi and Gaylor. “I’m gratified to hear they’re going to use the same concept of the lunar module that we designed, only bigger.”

Poly enjoys a distinguished history with NASA. Most recently, Charles Camarda ’74AE was a mission specialist serving aboard the space shuttle Discovery on the historic “Return to Flight Mission” to the International Space Station. Camarda, a recipient of the University’s Sesquicentennial Medal, returned to campus to meet with students, and like the Poly alumni who helped make the lunar module a reality, he celebrated his Poly education: “It started it all for me.”

Robert Zuckerman ’70OR

Anthony Liccardi ’52ME ’56EE

Frederick Zito ’68MG ’03TC

Walter Gaylor ’53ME

Artist’s conception of 2018 planned U.S. lunar landing.

Demand for Graduate-Level Financial Engineers Continues to Grow (continued from pg. 3)

trend,” states Novomestky. “We’re in the process of establishing a state-of-the-art computational finance laboratory with a broad range of software tools and databases for our students to use in everything from structured product valuation to risk management. The goal is to create, compile and share—as open source tools—software, data and analytical tools that are web-enabled and part of our students’ learning experience at Polytechnic.” Tapiero adds, “We’ve also begun planning the first PhD program in financial engineering which will include both full- and part-time options. There is significant interest among working financial engineers and risk managers, many in their late 20s or early 30s, who hold a master’s degree in finance or even financial engineering to build on their real-world experience and earn a PhD in this field. We’re evaluating this need in terms of a full-time, part-time and even executive education learning format.

The current Polytechnic program offers several options for students. There is the Master of Science in Financial Engineering program and three advanced certificates programs covering financial engineering, risk management and financial technology management. More than 300 students are currently enrolled in these programs—all on a part-time basis. But beginning in the fall of 2006, Polytechnic will begin offering an accelerated Master of Science in Financial Engineering option with afternoon and evening courses requiring only one year to graduate.

— Jim Finnegan

cable spring 2006 | 7
From student government president to corporate CEO, Hinkaty exudes leadership

Charles Hinkaty ’70MA ’72MA admits his background as a math major is an unusual springboard for a career in marketing and now as a corporate CEO, amid the company’s continuing transition, “I characterize 2005 as a year of transition,” he says.

Hinkaty was a senior at Poly in 1970, when tensions were running high over the United States’ involvement in the Vietnam War. College campuses, including Poly, served as demonstration sites. After four protesters were killed by the Ohio National Guard at Kent State University in May, Poly, like many other schools across the country, elected to end its semester early.

With no finals being given, most instructors based students’ grades on their test averages. Hinkaty, however, was enrolled in a graduate course and was never tested during the semester. Professor Arthur Yaspan, Department of Mathematics, offered a solution: give students the option of accepting a grade in line with its semester early.

Hinkaty spent a short time, from January to August 2005, as chief operating officer of Del Laboratories before being promoted again to president and CEO, amid the company’s conversion from a publicly held company to a private one. “I knew I had a real passion toward sales and marketing for the consumer, small business and wholesale market segments. In addition, she will be responsible for Verizon’s Information Technology team as well as its Network Services Group. She is a recipient of the prestigious 40 Under 40 Award from Crain’s New York Business and was the first recipient of Rising Star Award from the New York Women’s Agenda.

Senator Padavan receives the President’s Service Medal

President Jerry M. Hultin presented Senator Frank Padavan ’55EE with the Polytechnic University President’s Service Award. Padavan has earned the respect of Poly faculty, staff and alumni as one of New York’s most prominent and well respected elected officials. The prestigious presidential medal recognizes Poly alumni who have been leaders in their communities and throughout the state. Padavan has continuously supported Polytechnic and been a true leader in New York throughout his tenure in the state senate.

Ruesterholz named president of Verizon Telecom

Verizon Communications Inc. has named Virginia Ruesterholz ’88TIM president of Verizon Telecom. Ruesterholz will be responsible for all sales, service and operations activities for the $37.6 billion Verizon Telecom unit. She earned a master’s in telecommunications management from Polytechnic, and began her career as a manager with New York Telephone in 1984.

Ruesterholz, most recently president of the company’s highly-efficient wholesale business, will now oversee sales and marketing for the consumer, small business and wholesale market segments. In addition, she will be responsible for Verizon’s Information Technology team as well as its Network Services Group. She is a recipient of the prestigious 40 Under 40 Award from Crain’s New York Business and was the first recipient of Rising Star Award from the New York Women’s Agenda.
DEAR POLY ALUMNI,

Last year, the class of ’55 was honored at the Brooklyn campus as well as at Lincoln Center along with the 2006 crop of new graduates. It was certainly a milestone in my life. I will always be thankful that Poly saw fit to remember us even though we graduated, in most cases, before many of the existing faculty was born.

My path to Poly was far from that of the typical student since I never attended Brooklyn Tech (failed the entrance exam) or James Madison, or any one of the many other excellent academic high schools in the New York metropolitan area. My father was an immigrant shipbuilding tradesman from Glasgow, Scotland, who insisted that my older brother and I learn a trade to becoming a tradesman from Glasgow, Scotland, who insisted that my older brother and I learn a trade to becoming an electrical engineer.

I did surprisingly well at Westinghouse. In 1948, my senior year, I was building and debugging television sets. With the unbelievable support of my teachers, I was the only student right out of high school hired by Philco Television Repair Service Company.

I worked three high-paying productive years at Philco while attending Erasmus Hall evening school. A friendly “real” engineer at Philco convinced me that attending an engineering college would be absolutely necessary if I wanted to get any further in the industry. I started night classes at Poly and after one successful summer semester, I quit my job at Philco and transferred to day sessions joining other members of the class of ’55. For me, all the courses were hard; I mean hell hard as far as most of us were concerned. The first year, two-thirds of the freshman class failed physics—which I happened to pass by the skin of my teeth. It was four years of non-stop hard work on my part and four years of daily support, encouragement, comradeship and mutual trust from most of the other students I mingled with daily. I ran out of money before the start of my senior year and I decided to marry one of my biggest supporters, who by chance had a well-paying job with AT&T. It was really time for other reasons as well. I was not as bright as [some of the] others, probably. But as a group, we all made it to graduation.

My first job after graduation was again at Philco, this time designing television sets at their Philadelphia facility as a bright-eyed “real” engineer with available time at night to further my education at the University of Pennsylvania’s Moore School of Engineering. I changed companies frequently working mostly in the defense industry as a project engineer, a supervisor, a manager, a general manager, a vice president and, finally, as a division president of a NYSE-listed company. All along the way, I can honestly point to the support and encouragement offered by many of my co-workers.

Okay, so what has anything I have written got to do with the Duryea Society which accepts financial bequests for Poly through alumni wills and trust funds. Everything! I believe God’s Plan A for putting so many of us on this planet was that all of us would have plenty of help and support available from each other. I certainly have had that from high school teachers, Poly professors, fellow students and employees in addition to a caring wife of 51 years. Therefore, quite a few years ago, my wife and I added Polytechnic University to the list in our trust of organizations that probably had students that could use a helping hand from us—at least financially. I have made the Poly the recipient of our designated gift—when we no longer have need of it—to provide some measure of support for the students. Alumni and friends who contribute to the University in their estate plans are listed as members of the Samuel Duryea Society. Perhaps, you could think about helping as well.

David Dry ’55EE

To discuss making a bequest to Polytechnic or to request a copy of “How to Make a Will That Works,” please contact Thomas Daly, director of development, at (800) 765-9929 or tdaly@poly.edu.

Ten corporate leaders named to the Board

The following business executives have been named to Polytechnic’s Board of Trustees.

**Aviva D. Budd**
Manager Commercial Real Estate Investments

**Deborah L. Devedjian**
Founder & Managing Partner Copernicus Learning Fund & Consultants

**Charles J. Hinkaty ’70MA ’72MA**
President & CEO Del Laboratories Inc.

**Larry Katz ’58EE**
Financial Advisor Katz Family Financial Advisors

**Mark Ronald ’66EE**
Chief Operating Officer & Director BAE Systems plc

**Israel Borovich ’67IE ’68IE ’70R Hon’05**
Chairman, El Al Airlines President & CEO Arkia Israeli Airlines Ltd. & Knudair-Arka Holdings Ltd.

**Glenn A. Britt**
President & CEO Time Warner Cable

**David M. Schweiger ’74SS ’76MG**
Buck Mickel/Floor Daniel Professor of Int'l Business Univ. of S. Carolina Managing Director Schweiger, Lippert & Assoc.

**James M. Smith ’71EE**
Chairman, President & CEO EDO Corporation

**Patrick A. Garzillo ’76MG**
Vice President Domestic Telecom Finance Group Verizon

**Ten corporate leaders named to the Board**
I contribute to the Polytechnic Alumni fund because I would like to give students, who otherwise could not afford to attend Polytech, the chance to experience brilliant professors and cutting-edge facilities. I attribute my success in the computer field in part to Poly’s help by having access to the then state-of-the-art computers.

Long before personal computers, I used Poly’s IBM 1401/7090 punch card system to do homework problems, and even graphs. And in the labs, the analog Pastoriza computer analyzed complex spring damping problems. I remember the amazing enthusiasm of my computer science professor, Dr. Truxal, as he actually excited the class when he chalked the blackboard with examples. Both he and Professor Braun were a real inspiration for my passion of computer technology. I hope that the Polytechnic experience will inspire other students as much as it has me—with no limits—even to become an astronaut if they desire!

My wife and I subscribe to corporate matching gift programs from our employers and we are able to triple match our gift.

There are several reasons why I contribute to Poly. First is loyalty for the fine education that I received while I was a student there in the late 1940s. Poly had an excellent faculty even in the night school, which was the only time that I could attend because I had to work during the day to provide necessary income.

Second, I believe Poly serves a very real need in the New York metropolitan area. It provides the opportunity to get a first-class technical education in a variety of disciplines at a cost that is not prohibitive.

Third, I have been favorably impressed with the dedication and competence of those who have been responsible for running the institution. People like President Emeritus George Bugliarello and Chancellor David Chang have, in my opinion, done and continue to do a great deal for Poly. I feel that President Jerry Hultin will continue the fine stewardship.

The difference between school and life? In school, you’re taught a lesson and then given a test. In life, you’re given a test that teaches you a lesson.”

—Tom Bodett

“Any one of them would be sufficient. Respect for Poly as a teaching and research institution. Admiration and friendship for George Bugliarello, Poly’s president emeritus, and the fact that the University awarded me my first honorary doctorate.”

Hail Poly!”

To discuss a contribution to Polytechnic, contact Tom Daly, director of development, at 800-765-9929 or tdaly@poly.edu.
Coming to Poly would not have been possible if it weren’t for the Geiger-Fialkov Scholarship. I’m so glad I was able to go through my four years of college without having to worry about paying it off in the future. I was able to focus on my studies and graduate magna cum laude with a full-time position at Motorola waiting in the wings.

**Student Snapshot**

**Paul Berman ’06CS**

The Geiger-Fialkov Endowed Scholarship

The USS Scholarship

**Boca Raton reception**

In the early spring, 40 alumni and friends of Polytechnic gathered at the Boca Raton Marriott to meet President Jerry Hultin. During the president’s first trip to Florida, he discussed his vision for creating a “new” university and asked for alumni help in identifying potential students and exciting career opportunities for graduates. Among those present to greet President Hultin at the event were, from left, Fritz Armand ’82ME, Dave Gillette, former special assistant to the president and director of career services and Chris Mattera ’86EE.

**Felsen family endows scholarship at Poly**

Judy and Michael Felsen present President Jerry Hultin with a check for $150,000 to endow a scholarship in memory of their father, the world-renowned scientist, researcher and author Leopold B. Felsen ’48 ’49 ’50EE Hon ’05. Professor Felsen, a giant in the field of electromagnetic theory, served on the Poly faculty for over 40 years. He died in 2005 at age 81.

**Trustee honored as HKN Eminent Member**

Tsuneo Nakahara, CEO of Nakahara Research Institute Ltd. and Polytechnic advisory trustee, was elected an Eminent Member of Eta Kappa Nu, the honor society for electrical and computer engineering. HKN bestowed the Eminent Member distinction, the society’s highest honor, at a dinner in Minneapolis, Minn., on June 24. The honor, voted on by HKN’s Board of Governors, goes to those whose “attainments and contributions to society through leadership in the fields of electrical and computer engineering have resulted in significant benefits to humankind.”

To discuss a contribution to Polytechnic, contact Tom Daly, director of development, at 800-765-9929 or tdaly@poly.edu.

50s

Robert M. Spiegel ’50 ’54EE volunteers for the Civil Air Patrol and Lions Clubs International and is chairman of the IEEE’s central Texas consultants’ network. Donald L. Klein ’52Chem teaches the history of science and technology in a senior citizen’s program in Poughkeepsie, NY. ▼ Robert A. Olmsted ’53CE received the Lifetime Achievement Award in transportation from New York University’s Rudin Center for Transportation Policy and Management in February. ▼ Donald V. Richardson ’53ME is a volunteer and mentor at Platt Regional Vocational Technical School in Milford, Conn. ▼ Robert J. Whalen ’54ME retired as president of L-3 Communication’s Advanced Systems Division, but continues to serve as a corporate technical advisor. ▼ Arthur Bienenstock ’55 ’57PH is vice president of the American Psychiatric Society and received the Distinguished Associate Award from the U.S. Secretary of Energy. ▼ John P. Schaefer’s ’55Chem exhibited photographs of desert blossoms at the Arizona-Sonora Desert Museum in Tucson, Arizona. ▼ Byron G. Schieber Jr. ’55ME is an honorary life member of the American Nuclear Society and a fellow of the American Society of Mechanical Engineers. ▼ Theodore Fishman ’56EE makes steam-powered toys for his grandchildren. ▼ Harry S. Haber ’56 ’60ME is a senior mechanical engineer for MetroNorth Railroad. ▼ Fred D. Litty ’56ME is retired, but occasionally works in laser instrument design engineering. ▼ Arthur Worth ’56ME is an avid downhill skier at age 85 as well as a golfer, ceramic artist and potter. ▼ Howard Baum ’57 ’59AM was the plenary lecturer at the 8th International Association for Fire Safety Science Conference in Beijing, China and shared the group’s gold medal award from the Department of Commerce for his work on the World Trade Center collapse investigation. ▼ William T. Sha ’58ME received the 2005 Technical Achievement Award from the thermal hydraulics division of the American Nuclear Society. ▼ Paul Danzer ’59EE teaches computer science at Housatonic Community College and received the Bill Orr Technical Writing Award from the American Radio Relay League. ▼ Jerome P. Feldman ’59ME retired after 45 years in the Carderock Division of the Naval Surface Warfare Center. He was responsible for the evaluation and prediction of the stability, control and maneuvering characteristics of submarines, torpedoes, missiles, hydrofoils, air cushion vehicles and surface-effect ships.

60s

David Lieberman ’60PH developed a software product, “The Virtual Cardiac Patient: A Multimedia Guide to Heart Sounds and Murmurs’ with Dr. Jonathan Keroes MD. ▼ Evans J. Lizardos ’60ME is a fellow of the American Society of Heating, Refrigerating and Air Conditioning Engineers and has been designated as a distinguished lecturer by the society. The Green Building Council has also recognized him as a certified Leadership in Energy and Environmental Design accredited professional. ▼ Joseph C. Salamone ’61 ’67Chem has been elected as a fellow of the American Institute for Medical and Biological Engineering. ▼ Stanley J. Silverberg ’61EE retired to Boynton Beach, Fla., and plans to pursue a new career as a certified Florida Supreme Court mediator. ▼ Frank J. Goldner ’62PH has been with the U.S. Department of Energy for 40 years and continues with the office of nuclear energy, science and technology. ▼ Ray Hofshi ’63PH is senior portfolio manager at Westport Resources’ Private Client Group. ▼ Bernard Malamud ’63EE recently taught in UNLV’s study abroad program in Bilbao, Spain. ▼ Martin S. Roden ’63 ’65EE retired as a professor and associate dean after 37 years at California State University, Los Angeles. ▼ Stephen F. Schiffer ’63 ’68CE retired from Lockheed Martin after 42 years as a designer of
high-energy batteries for the space and defense industries. ▼ Jerry Swartz ’63 ’69EE was honored by the University of California, San Diego for his support and leadership of the school’s studies on brain rhythms and the role they play in human cognition and awareness. ▼ Joel S. Engel ’64EE was elected to the Board of Directors of Hand Held Products Inc. ▲ Robert M. Shaw ’64MA ’70SyS is associate pastor for Christian Education at the First Congregational Church in Greeley, Colorado. ▲ Howard N. Franklin ’65AE ’66, ’70AM is director of technology for SCR-Teck in Charlotte, NC. ▲ Dominick A. Labianca ’65Chem is professor of chemistry at Brooklyn College and received the 2005 Brooklyn College Award for Excellence in Teaching. ▲ Frank E. Wolf ’65MG is a faculty member in the weekend MBA program for Nova Southern University’s Huizenga School of Business; an arbitrator of the National Ag Safety Database and New York Stock Exchange; and a mediator for bankruptcy court for the Southern District of New York. ▼ Paul W. Dillon ’66Chem is a biostatistician with Bayer Healthcare Diagnostics Division in Tarrytown, NY. He is the proud grandfather of three granddaughters. ▼ Stan Kloyd ’62 ’66CE is a managing member of Chartwell Consulting LLC. ▲ Sheldon A. Gasior ’66IE ’70MG is an engineer in charge of maintenance for Hudson County, N.J. ▲ Laurence Milstein ’66 ’68EE is the Ericsson Endowed Chair in Wireless Communications Access Techniques at University of California, San Diego. ▲ Richard T. Santulli

Charles J. Camarda ’74AE

‘66MA ’66MA is chairman and CEO of Netsjets Inc. ▲ Israel Borovich ’67IE ’68IE ’71OR Hon’OS is chairman of El Al Airlines and president and CEO of Knaafim-Arka Holdings Ltd. Its subsidiary, El Al Airlines, posted record revenue in 2005. ▲ Lawrence M. Weiner ’67Chem works for the New York City Housing Authority’s Building Systems Group. ▲ Melvin Weinzheimer ’67IE is director for the domestic FAA automation programs at Raytheon. ▲ Walter S. Zahn ’67IE is a director of the Coates Motorcycle Company Ltd., a subsidiary of Coates International. ▲ Martin G. Biestock ’68Chem retired from his position as senior engineering advisor at ExxonMobile Research and Engineering Co. after nearly 37 years of service. He lives in Fairfax, Virginia. ▲ Gary Glaser ’68AE retired from DCS Corp. in March and is a real estate investor along with his wife, Linda. ▲ Ta Lin Hsu ’68BE, chairman of H&Q Asia Pacific, was named to the Forbes Midas List of the best dealmakers in high-tech and life sciences. ▲ Peter Kestenbaum ’68 ’71EE is a business unit executive at IBM responsible for the strategy and planning of the UNIX product line. ▲ John Lechuck ’68 ’72EE is the factory director for Delta Design Inc., a manufacturer of semiconductor test handling equipment. ▲ Daniel Levine ’68Chem is president of Product Safety Solutions, a consulting firm providing product safety and regulatory assistance to firms that make or use chemical substances. ▲ Roger Roess ’68CE ’69 ’72TP has served on the Franklin

Robert Prieto ’76NE

Square Union Free School District Board of Education for 18 years and has been on the Sewanhaka Central High School Board of Education for 10 years. He will retire from both boards at the end of this year. ▲ Joseph A. Salgado ’68SS retired from American Airlines after 16 years of service. ▲ Robert J. Franco ’69MT is a materials and corrosion advisor for ExxonMobil Production Co. ▲ Robert C. O’Handley’s ’69 ’72PH textbook “Modern Magnetic Materials” has been translated into Chinese.

70s

Leonard Shustek ’70PH ’70ME is the co-founder of Nestar Systems and Network General Corp., a partner in the venture firm Ven-Craft. He is also a consulting professor at Stanford University and chair of Trustees of the non-profit Computer History Museum in Mountain View, Calif. ▲ Richard Suttmeier ’70OR is president of Global Market Consultants Ltd. and chief market strategist for Joseph Stevens & Co. He is also the author of thestreet.com’s technology report newsletter. ▲ Charles Wilson ’70ME published a revised edition of his textbook “Noise Control” and the Chinese translation of his “Kinematics and Dynamics of Machinery.” ▲ Bernard D. DeMaria ’71IE is director of homeland security and strategic programs for Mitre Corp. ▲ Robert V. Wood ’71ME recently returned stateside after 14 months in Iraq where he worked as a contractor leading the rebuilding of the electrical system. He has resumed his position of vice president for Worley Parson Power Group. ▲ Alan L. Ovsak ’72AE is retiring from the National Park Service after 31 years of federal service. ▲ Daniel J. Paulish ’72 ’76EE is a distinguished member of the technical staff at Siemens Corporate Research in Princeton, NJ. ▲ Peter K. Raimondi ’72EE has started a consulting firm, Tropea System Sciences Inc., which performs technology assessments. ▲ David L. Sobin ’72 ’76EE is CEO of BAMnet Corp., an Internet service provider. He was elected to the international board of directors of the POLYTECHNIC ALUMNI at the annual meeting on May 21. ▲ Tippure Sundresh ’72EE chaired the 10th Lucent Technologies Software Symposium in October which brought together staff from all of Lucent’s R&D facilities worldwide. ▲ Robert Yauch ’73CE retired from the NYC Housing Authority after more than 32 years of service, where he was program administrator for new construction and major renovations. ▲ Charles J. Camarda ’74AE is director of engineering at NASA’s Johnson Space Center. ▲ Richard M. Darer ’74MA is vice president and CFO of Gomez Inc., a leader in web application performance solutions. ▲ Larry Friedman ’74SS is the global director for brand and advertising research for TNS, the largest custom market research company in the world. ▲ Robert Weiner ’74ME is a principal at Bottom Line Solutions LLC in East Windsor, Conn. ▲ Herman F. Bozenhardt ’76Chem ’78EE is vice president of BE&K Engineering Co. with responsibility for validation, engineering and construction management services within the biotech, pharmaceutical and medical device sectors. ▲ Robert J. Collegio ’76CE ’81MG continues to work for the General Services Administration at the federal courthouse in downtown Brooklyn. ▲ Dennis J. Gerson ’76Chem has been with IBM for 25 years and is now an executive I/T architect for retail and airline customers in the Dallas-Fort Worth area. ▲ Robert Prieto ’76NE will be the principal-in-charge of the joint venture to construct the new transportation hub at the World
Ursula Burns ’80ME

Trade Center site. **Kevin E. Smedley ’76AE** has been elected president of the UNITE Alliance. The UAV National Industry Team (UNITE) is a coalition of leading Unmanned Aircraft Systems companies. **Robert W. Wilburn ’77 ME** is a project director for Foster Wheeler North America. **Maher Z. Labib ’79CE** is the executive vice president of STV Group and director of the firm’s National Buildings and Facilities Division.

**80s**

**Ursula Burns ’80ME** delivered the commencement address at SUNY-Brockport in May. She is president of Business Group Operations for Xerox and is on Fortune magazine’s list of the most powerful women in America. **Robert A. DiFazio ’80 ’82 ’87EE** is a fellow at Interdigital Communications Corp. and is an adjunct faculty member at Polytechnic. He holds four issued and 17 pending U.S. patents. **Roderic Ellman ’80CE ’84CE** is a partner at Mueser Rutledge Consulting Engineers. **Michael Fehn ’80ME** is a program manager with the Titan Group, L-3 Communications, Inc. His son, Christopher, has just become an Eagle Scout. **Hubert Figueiredo ’80AE** is the manager of the Palmdale Production Support Engineering for Northrup Grumman’s Global Hawk program. **Robert Kraft ’80EE** is vice president of enterprise services at The New York Times Co. where he oversees company-wide networks, data centers, server administration and server consolidation. **Carol Mancuso ’80CH** is currently an associate professor of medicine at the Weill Medical College of Cornell University. Her asthma research is funded by the National Institute of Health. She lives in Manhattan with her husband and two sons. **Chui Mui ’80CE** was the first Asian to be elected mayor of San Gabriel, Calif. **Nunzio Pietrosanti ’80CE** is building inspector for the village of Scarsdale, NY. **Catherine C. Smith ’80ME** is a chief in the CVN21 program for the Electric Boat Corp. **Clyde R. Hosein ’83BE** has been named to the board of directors of Cree, Inc. He is vice president and CFO of Integrated Device Technology Inc. **George H. Laccorn ’83BE** is a technical instructor for Philips Medical Systems. **Nancy (Hall) Mead ’83MA** has been named a fellow of IEEE for her leadership in software engineering education. **Irene Dorzback ’84MG** is assistant dean for career services at NYU School of Law. She was associate director of career services at Polytechnic from 1978 to 1983 and would like to hear from students she worked with in those years (irene.dorzback@nyu.edu). **Edward P. Holtaway ’84EE** is vice president for operations at Lucenta Inc. **Stephen S. Korniczky ’84ME** is chair of Paul Hastings Global Intellectual Property Practice. **Jeanne M. (Britton) Victor ’84CE** is a member of the State of New Jersey equal employment opportunity commission and is a senior deputy attorney general. **Kwok T. “Kevin” Loo ’85EE** is the vice president of technology and product development for Cyber-Shift. **Marco Guglielmi ’86EL** is the head of the technology strategy section at the European Space Research and Technology Centre in the Netherlands. **William Lam ’87EE** is a building engineer and architectural manager for the MTR Corp. **Dale A. Siegel ’87MA ’89AS ’91OR** is an associate professor of mathematics at Kingsborough Community College. **Theo Theodorou ’88EE** is a manager with Consolidated Edison in the substation operations department and is responsible for the computer-management systems and procedures that are used in construction, maintenance and testing activities. **Fernando Real ’89 ’93PH** is a Catholic priest at the parish of Santa Maria in the Bronx. **Laura A. Steward ’89MG** is president of Guardian Angel Computer Services LLC of Norwalk, Conn.

**90s**

**Michael Smart ’96AA** is an associate professor at the University of Queensland in Brisbane, Australia and is part of their scramjet research team. **Hongyong Fu ’97Chem ’00CS ’01Chem** is a polymer scientist for the Sherwin-Williams Automotive Finishes Corp. in Ohio. **Stephen Bates ’99Chem** has been appointed to the EnviroSafe Corp.’s Board of Directors. **Melissa (Moreau) Symons ’99CE** is a research assistant at the University of Chicago. **Andrew Timmerman ’99MN** is chief operating officer of Fairfield Crystal Technology LLC in Milford, Conn.

**00s**

**Moataz “Mo” Hassan ’00CE** is the branch manager of the Orlando office of S&ME Inc. **Monplaisir “Monty” Hamilton ’01EE/CPE** is attending George Washington University law school and working at a law firm in Washington, DC. He is active in the Potomac alumni section. **Navneet K. Kothari ’04TM** was honored by Telephonics Corp. with their Excellence Award. **Sanjeeva Indraratne ’05T** is a database administrator for Moody’s Investment Services.

**In Memoriam**

George R. Yenzer ’35
Arthur B. Hirtreiter ’36
Ralph H. Beutel ’37
Donald A. Diehl ’38
Martin R. Richmond ’40
Douglas G. Hubert ’42
Joseph G. Acker IV ’43
Karl J. Bea ’44
Joseph F. Pizzirrusso ’47 ’50
Harold Werbin ’47 ’50
Gasper S. Domino ’48
William Hackemann ’48
Richard A. Wies ’48
Carl W. Larson ’49
John L. Miller ’49
Frank J. Adamec ’51
William A. Catherwood ’51 ’69
Joseph J. Coughlin ’51
Nicholas Kerassotis ’51
Daniel Schwartz ’51
John P. Sirles ’51
James W. Toner ’51
George M. Wambold ’51
Paul Zell ’51 ’54
Albert L. Batik ’52
Robert J. Haase ’52
John H. Holland ’52
Samuel M. Kramersen ’52
William L. Grupp ’54
I. Bruce Tiedeman ’54
Stephen H. Marx ’55
Neil D’Avanzo ’56
Roy B. Johnson ’56 ’63
Louis A. Juhas ’56
George M. Katz ’57
William Kent ’57
Edward J. Stero ’57
Martin L. Amsl ’59
Philip A. Usaitis ’59
Manfred W. Ortmann ’60
Carl Bohman ’64 ’70
Peter S. Kelly ’61 ’65
James K. Picciano ’61
Ronald E. Tadross ’61
Richard Chan Low ’67
Gerhard O. Mietz ’67
Robert F. Mons ’67 ’67 ’71
Malcolm C. Moore Jr. ’67
Joseph Rella ’67
Roy P. Weber ’67
Robert J. Coughlin ’69
Murray R. Selwyn ’69
Chi Mui ’80
Hjalmar H. Jorgensen ’82
Stephen Salmaggi ’96
Hiuping Xiang ’02
Donald M. Cox—former trustee
Henry S. Craemer—faculty
President’s Corner

Quite unexpectedly, I find myself looking back on my tenure as president of the Polytechnic Alumni. I am amazed at the experience and grateful for the opportunity to serve you in this capacity. What a ride it has been! We have weathered the threat of the NYU merger, celebrated Poly’s 150 years of world-changing accomplishments—and on my birthday, September 29, no less—and concluded the University’s sesquicentennial celebration with the inauguration of Poly’s tenth President, Jerry McArthur Hultin.

At the convocation, we honored 16 outstanding alumni—Sesquicentennial Medalists whose careers and achievements so accurately reflect The Power of PolyThinking®. Look at what is happening in downtown Brooklyn and on the Poly campus. Under President Hultin’s leadership, together with a revitalized and enthusiastic Board of Trustees, we can rest assured that the University remains in good hands. I have never had more hope for the future of our renowned and storied alma mater.

The alumni as well have been renewed by the process of events. The association is proud of what our alumni have accomplished. PolyThinkers continue to change the world. In his inaugural address, “A New University for a New Age,” President Hultin very appropriately ushered in the next 150 years by reminding us what we sons and daughters of Brooklyn (in spirit, if not in fact) know in our hearts. “A university can transform itself if it is small enough to be agile and smart enough to think innovatively.” The alumni association has focused its priorities on recruitment and fundraising—the elements that will transform the University for this dynamic New Age. We also have focused on networking among alumni for our collective benefit. In major cities around the country, you will find groups of alums getting together socially to renew and strengthen their common ties and to advance Poly’s interests. If there is not such a group in your area, call us and we can help you set one up.

Of course, great challenges lie ahead. I assure you under the leadership of the association’s new President George Likourezos ’92 ’92EE and Executive Vice President Ed Sawchuk ’76 ’78CE, you will see the innovative and agile responses necessary to answer President Hultin’s call to the challenges ahead. The first is recruitment.

Despite the growing opportunities for employment in existing and emerging technologies, our country faces a crisis today in engineering and science education. We will respond as a nation—as we always have in times of need—with an increase in enrollment in these disciplines. With this in mind, we welcome the re-establishment of the physics department, recently announced by President Hultin. Poly has educated approximately one in every 200 engineers in the United States. More than 2,000 CEOs and leaders of high-tech corporations are Poly alumni. Poly has all of the necessary components to attract intellectually curious young men and women to the fields of science and technology—rigorous education, an impressive history of educating some of the world’s greatest innovators; its New York City venue, the cultural mecca of the world; the continuous transformation of downtown Brooklyn and its environs; and the University’s new and dynamic vision under its new leadership. Alumni are in an ideal and unique position to help.

Poly alumni provided financial support and were well represented on Accepted Student Day on April 1. But we can do more. We can direct promising students to the University and work with local alumni to encourage these students to attend Poly. The admissions office has promised continued coordination and support of our efforts. Check our website www.poly.edu for opportunities to help in areas that may interest you.

The second great challenge is fundraising—the core of any vital alumni organization. Your generous donations to the Annual Fund are essential to continue the University’s mission to educate the technological leaders of tomorrow. It is a fact that each donation improves our standing in U.S. News and World Report. Find out if your employer has a matching gift program and use it to double your gift to Poly. Each year, the University loses thousands of dollars in support because donors fail to use this resource. Put your name on the Alumni Wall. Include Poly in your estate planning. Remember, a great University is reflected in its people and in the legacy they leave behind for future generations.

I will end the same way I began two years ago, by thanking you for what I knew would be a memorable experience and for the chance to meet and serve so richly talented and dedicated community as the Polytechnic Alumni.

Dr. Ines Mandl presents $100,000 gift to the University

Dr. Ines Mandl ’47 ’49Chem, a world-renowned biochemist and professor emeritus at Columbia University, made a $100,000 gift to the University on May 25. The gift is earmarked for fellowship support for chemistry and chemical engineering students. In 2000, Mandl established the Dr. Ines Mandl ’47 ’49 Endowed Scholarship for undergraduate students in chemical engineering, biomedical or biological sciences. Jacquelyn LoBello ’07Chem/BE, the scholarship’s 2005 and 2006 recipient, joined Mandl for a photo-op at the Poly 100 dinner on May 17.

During her distinguished career, Mandl’s work focused primarily on the biochemical basis of pulmonary emphysema and respiratory distress syndrome in newborns and the medicinal uses of collagenases, elastases and their inhibitors. She received her master’s and doctoral degrees from Polytechnic and is the recipient of the of the University’s Distinguished Alumnus Award and a 2003 Alumni Achievement Award.
In the winter issue of Cable, we reminded alumni that participating in a corporate matching gift program was an excellent way to help Polytechnic and increase the value of their gift. Since then, the number of participating companies has grown from 48 to 71 and 444 alumni and friends of the University have had their gifts matched, resulting in more than $140,000 received in this fiscal year.

The top 10 matching gift companies as of June 15, 2006 are:

- AT&T Foundation
- Computer Associates International Inc.
- C.R. Bard Inc.
- Exxon Mobil Corporation
- General Electric Company
- IBM Corporation
- Ingersoll-Rand Company
- Merck & Company
- Pfizer, Inc.
- Verizon Communications Inc.

Matching gift update

Upcoming Alumni Events:

Saturday, July 8
Alumni Beach Party
Robert Moses State Park
10am–4pm

Sunday, July 30
Northern California Picnic
Los Altos Hills, CA
12–3 p.m.

Wednesday, September 13
Alumni-Student Mentoring Dinner
5–9:30pm

Saturday, October 14
Homecoming is coming!
Check the next issue of Cable for details