Celebrating 150 Years In Brooklyn

Original Building at 99 Livingston Street - 1855

4 - Former Top Students: Where Are They Now?
10 - IEEE Honors Five Professors
13 - Class of '54 Celebrates 50 Years at Commencement
Dr. Henry A. McKinnell Jr., chairman and CEO of Pfizer Inc., appealed to Polytechnic’s Class of 2004 to keep the needs of the world in mind when pursuing a career. “You now have one of the finest educations the world can provide,” he told graduates. “Take a global view of how you can use that education. The world needs new thinking on how to change the lives of the poorest among us. It needs people with technological and management skills to take up the challenge of ensuring progress for all.”

McKinnell spoke at Polytechnic’s 149th Commencement, held May 27 at Lincoln Center. During the event, Polytechnic conferred honorary degrees on McKinnell and Dr. Laurence A. Shepp ’58 (MA), a pioneer in body imaging scanners and professor of statistics at Rutgers University.

The commencement exercise was also the launch of the University’s celebration of its 150th anniversary. President David C. Chang drew parallels between the turbulent era when Polytechnic was founded and today’s economic and ideological climate, and encouraged graduates to continue to learn and aspire to greatness. “Education and technology are the two most powerful enablers in providing solutions to the human struggles facing us today,” he said. “And you are equipped with both.”

Polytechnic conferred approximately 300 bachelor’s, 400 master’s and 30 doctoral degrees. To read McKinnell’s address, “How Poly Saved the Word,” visit www.poly.edu/ePoly_Briefs/speechM.htm.

Commencement speaker Henry A. McKinnell Jr. chronicled the innovations of Pfizer leaders Jasper Kane ’28 H’95 and John McKeen ’26 H’51, the men behind the mass production of penicillin during World War II.

President Chang with honorary degree recipient Dr. Laurence A. Shepp.

Outstanding Graduate Award recipients Gerti Bogdani (CS), left, and Tippy Ihalwar (CpE/TN), with POLYTECHNIC ALUMNI President James Gussani Jr. ’77 (ME).

Provost F.H. (Bud) Griffis, left, presented the Distinguished Teacher Award to Dr. Haldun Hadimioglu ’91 (CS), industry associate professor of computer science.

Valedictorian Daniel J. Ashe (CpE/CS), who earned a 3.95 GPA, advised graduates to value their education: “Jobs can come and go, but your degree can never be taken away.”
Commencement 2004

Alexei Mstagov (CS) with his proud grandmother and mother.

Artur Kasperski (CE) with his daughter, Ariana.

Alessandr Aleksandrov (CS) and his sister and niece.

Karen Tran (CS) receives flowers from friend Eric Shin '03 (Chen).

Anwar Sharhan's (TIM) mother makes some last adjustments as his brother looks on.

Pei-Ming (David) Chuong (MC) with his father, Simon Chung, and girlfriend, Annie Chen.
The Best and the Brightest: Cable Catches Up With Five Exceptional Poly Grads

In the spirit of Poly's 2004 Commencement, three top graduates from the past 25 years give an update about where they are now. Following this theme is a glimpse at two 2004 graduates and their plans for the future.

Philip L. Guzzardi '79

The one thing that Phil Guzzardi has kept constant—besides success as an engineer since graduating as co-valedictorian with a degree in electrical engineering—is his music. At Poly, he often played at school functions, and, years later, while working at the Sperry Corporation, he spent his nights as a bass guitarist for a local rock band, which is how he met his wife, Gina.

In one of the strange twists that romance sometimes takes, Guzzardi took music lessons with Gina's sister when he was 12. Fifteen years later, he ran into the sister at a bar where their respective bands were playing. She then introduced him to Gina. They will celebrate their 29th wedding anniversary next year.

But if he is a good musician, Guzzardi is an even better engineer. Today, he works for Northrop Grumman developing software for naval aircraft. These include the E-2C, a carrier-based, early-warning aircraft used by the navy for reconnaissance and to help direct other aircraft in combat situations.

Developing software for such an aircraft is enormously complex, and Guzzardi credits much of his skills to lessons learned from such Poly professors as Richard Haasdal '58 (EE), Donald Hunt, Oliver Keyes, Jamsheed Mirza, Michael Petrella '75 '77 (EE), Paul Pickel, Bernard Reischaff and Leo Silber. "They still stand out in my mind," he says, "for rendering into words what first seemed incomprehensible."

Salvatore R. Restivo '89

Serendipity has a way with careers, it seems, at least for Sal Restivo. Following his delivery of the valedictory speech, when he graduated from Poly with combined master's and bachelor's degrees in computer science, Restivo began his career at Credit Suisse First Boston. There, he developed equity-trading software.

Eight years and a move to Donaldson Lufkin Jenrette Securities, he found himself back with his old employer when Credit Suisse acquired Donaldson. He is now a vice president, leading a development team to create custom software for research analysts.

The position is perfect for Restivo, who combines years of development experience with an avid interest in finance. In fact, if he ever decided to, he could easily moonlight as a stockbroker, having passed the series-7 exam.

His knowledge comes in handy, particularly when developing applications to assist supervisory analysts and compliance officers, who ensure that business regulations are followed with regards to research. He also serves as chairman of the Standards Committee of RIXML.org, which develops XML-based standards for describing investment research. The standards are intended for use across the financial services industry.

"The more that the processes are automated, the more productive they are," says Restivo, adding that the challenge lies in keeping such software up-to-date amidst changing regulatory requirements.
Paul R. Yondola '92

Paul Yondola still has his trompet, though these days he doesn't find much time to play. For years, he was the director of the Poly Jazz Band, and a regular fixture at school functions. At graduation, where he received a bachelor's in electrical engineering, Yondola was named the University's inaugural Outstanding Graduate, an award given by the Polytechnic Alumni to a student who combines high academic achievement with strong community service. Soon after, he got married, joined the navy and spent the next three years playing jazz when he wasn't keeping the aircraft carrier John C. Stennis steaming.

Yondola now works for Bechtel Bettis Inc. as an instrumentation and controls engineer. He designs new ways to computerize industrial plant controls, converting 1970s-style gauges and dials into graphical elements on a screen. He finds satisfaction in making comprehensible what appears to be little more than chaos.

"It's remarkable to take an original operating system with 600 meters and gauges," he explains, "and convert it to today's graphical flat-screen display."

In finding ways to express so much information in so little space, he believes is as much art as science. In a way, it's similar to jazz.

Aleksey and Yelena Shtykel '04

Fate or coincidence, Aleksey Shtykel could hardly believe it when he discovered that he and his twin sister, Yelena, would not just be working for the same company, Merrill Lynch, but in adjoining cubicles.

"Everyone kept telling us that companies don't usually hire relatives," says Yelena, who admits that she considered it a long shot when she e-mailed her résumé in response to an Internet posting. She never guessed that the position was in the very department—Merrill's Global Private Client Division—that had just hired her brother.

Yet, it's just another example of the success that the Shtykel twins have worked hard to achieve since emigrating from Ukraine in 1997. Both studied computer science at Poly and graduated in June with honors. Aleksey, magna cum laude; Yelena, cum laude.

While at Poly, Yelena interned at SIAC and Aleksey at Merrill Lynch. They also worked on Poly's Web Team, which, in addition to maintaining Poly's website, developed streaming video websites for the New York MTA and Department of Transportation.

"With those jobs, we got a lot of practical experience," says Aleksey, "which, combined with skills we learned in the classroom and labs, are now helping us in our careers."

It also helps to come from hard-working parents who are willing to risk a great deal. Their mother had been a music teacher for 25 years in Ukraine. However, her instrument of skill, the mandolin-like domra, is virtually unknown here. Undeterred, she took a course in computer programming and found success in a new career.

The twins, obviously, take after their mother.

—Shaun Koryen '02 (CS) '04 (TC)
Promise Fund Gala Raises $1.1 Million For Scholarships

Music, glamour and laughter filled the Grand Ballroom of the Waldorf-Astoria as the PROMISE FUND, Polytechnic’s leading scholarship and pre-college outreach program, raised $1.1 million at its 16th annual gala in June. Nearly 400 guests enjoyed dinner, dancing and entertainment at the black-tie event, which featured a musical performance by the dynamic Three Mo’ Tenors.

Since its inception in 1988, the PROMISE FUND has raised more than $13 million to provide scholarships for more than 1,000 students and to support Poly’s Center for Youth in Engineering and Science (YES), which develops programs to encourage middle- and high-school students, especially women and first-generation Americans, to study science and engineering.

From left, Vickie Lu, Chen’s Management Inc.; Trustee Arthur C. Martinez ’60, retired chairman and CEO of Sears, Roebuck & Co.; Jenny and David Chen, president, Chen’s Management Inc.; Trustee Laura Parsons; and Polytechnic President David C. Chang and his wife, Cecilia.

From left, Richard S. Thorsen ’63 ’67, vice president for development and university relations; Katherine and Clifford H. Goldsmith, vice chairman of the Board of Trustees and principal of The Pendel Co.; and Barbara Thorsen.

Stewart G. Nagler ’63, chairman of the Polytechnic Board of Trustees and retired vice chairman of the board of MetLife, and his wife, Roane.

Henry J. Singer ’57 ’64, vice chairman of Poly’s Board, chairman of the PROMISE FUND and president of Reg-Nix LLC, and his wife, Kathleen.

Ainsley A. Stewart Jr. ’06, a PROMISE scholar, speaks at the dinner.

Truster Michael Corey ’70, secretary and treasurer of Poly’s Board and retired managing director of J.P. Morgan, beams as the crowd sings “Happy Birthday” to his wife, Emilie.
Polytechnic Receives $1 Million to Develop B. anthracis Detection

The U.S. Department of Defense has announced a $1 million grant to the University’s Polymer Research Institute to continue to develop new field tests that can detect deadly microorganisms such as B. anthracis. The grant was sponsored by U.S. Senators Charles E. Schumer and Hillary Rodham Clinton, and facilitated by Dr. Richard S. Thorsen ’63 ’67 (EE), vice president for development and university relations.

Headed by Dr. Kalle M. Levon, associate provost for research and intellectual property, the bio detection research project at Polytechnic is based on detection of specific proteins on the surfaces of the bacterial spores. Existing military tests are largely laboratory-based optical examinations and cannot distinguish anthrax from far less serious organisms such as pesticides. These electrochemical assays will be portable for on-location detection, allowing the military to quickly analyze suspicious powders and other possible bioagents on the battlefield.

Dr. Kalle Levon’s research will allow the military to better detect deadly microorganisms.

Executive Master’s Programs Highlighted at MIT Conference

At the annual workshop of the Technology Management Education Association, held at MIT’s Sloan School in July, Poly’s Management of Technology (MOT) and Telecommunications and Information Management (TIM) programs were highlighted. Professor Mel Horwitch, co-MOT-TIM director and association vice chair, announced a new journal on technology-management education. Professor Nina Ziv, co-MOT-TIM director, gave a program overview, emphasizing the programs’ unique and redesigned courses. Professor Bharat Rao discussed global innovation, drawing on his new MOT course on that topic. MOT and TIM are designed for working professionals who want to advance their careers through the latest relevant thinking and practice. The programs, held in downtown Manhattan, start in September with courses every other week, Thursday evening and all day Saturday. For more information, call 718/260-4014, or send an e-mail to mot-tim@poly.edu.

Search Committee for President Announced

The Board of Trustees, on May 26, approved the formation of a search committee to find a successor for President Chang (see Cable, winter 2004). Upon invitation by the Board, the following individuals have agreed to serve on the committee:

Trustees:
Ralph Alexander, Chair
Craig G. Matthews, Vice Chair
Michael R. Corey
Arthur C. Martinez
Henry J. Singer

Faculty:
Stephen Arnold
Vikram Kapila
Shivendra Pandey
Roger P. Roews

Staff:
Cheryl McNear

Alumni:
James Outzani

Students:
Marlon King
W. Stuart Lewis

The Search Committee welcomes nominations or suggestions. They should be sent to Craig G. Matthews, c/o Lea Bowie, Office of University Relations, Polytechnic University, Six MetroTech Center, Brooklyn, NY 11201. If you wish your name to be held in confidence, please indicate in the letter.

DONOR SNAPSHOT

Gene Holzer ’52
BS, Chemical Engineering
Project Manager (retired)
PanEnergy Corp.

$500 to Polytechnic Fund
$500 Matching Gift from Duke Power Company

“As a long-term active alumnus, I’ve been impressed and delighted with the efforts of the trustees, the president and others responsible for the future of the University. I applaud the direction of Polytechnic and support the Board and the president through my financial donation to the Polytechnic Fund. My wife and I spent 10 days in the NYC area last summer. We used the Othmer Residence Hall as our vacation headquarters, and we took the time to appreciate the facilities donated by others around campus. An enjoyable experience.”

To discuss your contribution to the Polytechnic Fund, contact Colleen Jansen at 800/765-9929 or jansen@poly.edu.
Sigma Xi Chapter Reactivated

After a nearly two-decade absence at Poly, a chapter of the international research society Sigma Xi has been reactivated. Dr. John A. Allocca ’79 (BE), who restarted the chapter, is its president, with Dr. Myron S. Wecker ’57 (AE) ’67 (AA) as vice president and Dr. Fernando E. Nieto-Fernandez as secretary and treasurer. Poly’s chapter joins more than 500 chapters at universities, industrial research centers and government laboratories. Membership in the society is by invitation only. For more information, contact Allocca at john@allocca.com, or visit the Sigma Xi Poly chapter website at www.allocca.com/polysigmaxi.htm.

It Floats! Poly No. 1 in Concrete Canoe Competition

Poly engineering students captured first place in the American Society of Civil Engineers 17th Annual Regional Concrete Canoe Competition. They defeated Rutgers, CUNY, Cooper Union and Rowan University in a race that featured concrete canoes resembling fiberglass-racing canoes and boasting sophisticated designs aimed at achieving the best combination of speed and maneuverability. Pictured are members of the winning team, from left, Stuart Lewis, Jeremy Davis, Dan Winkelman, Timothy John and Frank D'Eufemia.

Poly Awarded $1.1 Million DARPA Grant to Study Green Plastics

Funded by a $1.1 million government contract, researchers at Poly are developing a revolutionary new process to make plastics that can be converted to liquid fuels.

Using an innovative enzyme engineering strategy developed by Dr. Richard A. Gross ’86 (Chem), the Herman F. Mark Professor of Polymer Science, and DNA 2.0 Inc., a California-based biotechnology firm, the plastics will be made from environmentally friendly renewable sources, such as agricultural products, using processes that do not require hazardous chemicals or generate toxic waste streams.

"In the next two years, we hope to prove that the bio-catalytic route we develop can convert plant-derived fatty acids to bioplastics that have properties virtually identical to polyethylene," says Gross, the principal investigator for the project. Polyethylene is produced in billions of pounds per year and is used in a wide-range of disposable packaging.

"The new bioplastics, unlike polyethylene, will have a special structure that will allow them to be converted to liquid fuels," Gross adds. "After use, the new bioplastics can be converted to a diesel-like liquid fuel that will run electric power generators or even replace a portion of gasoline for the car."

Gross was awarded a Presidential Green Chemistry Challenge Award from the U.S. Environmental Protection Agency for developing a simple energy-efficient enzymatic method to make plastics. This new research is funded by the Defense Advanced Research Projects Agency (DARPA), the central research and development organization for the Department of Defense.

Professor Richard A. Gross is researching ways to convert plastics to liquid fluids.
Poly Trustees Elect New Members

Polytechnic's Board of Trustees has elected four new members: Daniel H. Berry '74 (EE), operating partner of the private investment firm Riverside Partners; Ruth A. Fattori, senior vice president of process and productivity for J.P. Morgan Chase's Financial Services Division; Paul M. Horn '92, senior vice president and head of research for IBM; and Anthony Nozzolillo '72 (EE), executive vice president for the Electric Business Unit of KeySpan Corporation. Horn’s board term begins January 2005.

Professor Arnold Elected Othmer Institute Director

The senior faculty fellows of the Othmer Institute for Interdisciplinary Studies elected Dr. Stephen Arnold for a two-year term as director. He succeeds Dr. Mel Horwitz, professor of management, who was the institute’s founding director. A 26-year member of the Poly faculty, Arnold is a university professor, the Thomas Potts Professor of Physics and the Potts-Othmer Senior Faculty Fellow. He has recently been noted in the research community for his development of an optical biosensor with unprecedented sensitivity for detecting unlabeled molecules.

The Othmer Institute was established in 2002 as an incubator for breakthrough interdisciplinary technology-related research, education and curriculum development. It houses Poly’s Honors College, which has seen unprecedented success in enrollment and retention in its first year of operation.
Five ECE Faculty Members Honored by IEEE

Five professors from the Department of Electrical and Computer Engineering were recognized by the Institute of Electrical and Electronic Engineers (IEEE). Assistant Professor Elza Erkip received the IEEE Communications Society’s 2004 Stephen O. Rice Prize for best original paper published in the IEEE Transactions on Communications. Professors Shivendra S. Panwar and Yao Wang and Poly graduate students Shiwen Mao, Shunan Lin and Enmei Celebi received the Communications Society’s 2004 Leonard G. Abraham Prize for best original paper published in the IEEE Journal on Selected Areas in Communications. Wang was also elected an IEEE Fellow, as was Professor Spencer P. Kuo ’77 (EL). Associate Professor Peter Voltz ’81 (EE) received the IEEE Long Island Section’s inaugural Athanassis Papoulis Award for Excellence in Engineering and Technology Education. The award is named after the longtime Polytechnic professor who died in 2002.

William L. Friend Receives UD’s Medal of Distinction

The University of Delaware has awarded Polytechnic Trustee William L. Friend ’56 (ChE) its Medal of Distinction for his “numerous contributions to the international engineering and construction industry.” Friend earned a master’s in chemical engineering from the university after receiving his bachelor’s at Poly. In 1998, he retired as executive vice president and board director of the Bechtel Group Inc. He is chairman of the University of California’s President’s Council on the National Laboratories, which oversees Berkeley, Los Alamos and Lawrence Livermore laboratories.

Murray Goodman

Dr. Murray Goodman, Poly professor from 1956 to 1970 and former director of the Polymer Research Institute, died June 1, of pneumonia while on a lecture tour in Munich, Germany. He was 75. At the time of his death, he was a professor of chemistry and biochemistry at the University of California at San Diego. Recently, the UCSD established an endowed professorship, the Goodman Chair in Chemistry, in his honor.

In his more than 50 years of research, Goodman made significant findings in fundamental chemical science, helping to found the field of peptide chemistry, the synthesis and analysis of compounds that mimic important biological molecules. His work’s practical applications included the development of anti-cancer drugs, pain medication, artificial sweeteners and artificial growth hormones.

In September 2003, he returned to Poly to give a lecture at an event celebrating the Polymer Research Institute’s designation as a National Historic Chemical Landmark by the American Chemical Society. He is survived by his wife of 53 years, Zelda; sons Joshua, Andrew and David; and six grandchildren.

Yi-Yuan Yu

Dr. Yi-Yuan Yu, who taught mechanical engineering at Polytechnic from 1957 to 1966 and was a visiting professor in the mid 1970s, died May 7, in Essex Falls, N.J. He was 81.

An authority on stress analysis and vibrations, Yu also served on the faculty at Wichita State University in Kansas and the New Jersey Institute of Technology. He is survived by his wife of 52 years, Eileen; and daughters Yolanda and Lisa.
Catching Up to the Criminals: Ramesh Karri Is Fixing Smart Card Flaws to Stop Fraud

It seems the crooks are always one step ahead. Smart-credit-card technology hasn’t even taken off in the United States—though popular in Europe—and already clever criminals are exploiting speed-enhancing techniques employed by chip designers to dip into your bank account.

As a result, Dr. Ramesh Karri is playing catch-up with the criminals. With a fellowship from the Alexander von Humboldt Foundation and research grant from Cisco Systems, Karri, associate professor of electrical and computer engineering, is studying new methods to frustrate would-be frauds without frustrating circuit designers who need to squeeze the last drop of efficiency from their transistors.

“Computers would be two to three times slower without optimizations,” explains Karri, “so what I want to find are design rules and standards that don’t compromise speed.”

Such rules are needed because many shortcuts used to optimize the Very Large Scale Integration (VLSI) chips in smart cards create “leaks.” These leaks include fluctuations in the power usage of the chip as it chugs through calculations. Because shortcuts generally use less power, and power usage can be measured, they can give away what is being calculated.

For instance, one shortcut to save power is not to multiply with a zero. This means that a device measuring power usage can determine when zeros, instead of non-zero numbers, are being multiplied.

The problem arises in that a number of calculations are needed for a smart card to communicate with an external device, such as an ATM or smart-card reader. To communicate, the PIN number stored on the VLSI chip first needs to be encrypted using a special key that it shares with the external device. But if a separate device monitors the power usage of the VLSI chip during the calculations to encrypt the PIN, it can use the shortcuts to deduce part of the key.

“These methods are good for speed, but they are also bad because someone can use this info to access the key,” says Karri, explaining that with the key, anyone can discover users’ PIN numbers and gain access to their bank accounts. “Those tricks can really come back to haunt you,” he adds.

For now, the criminals are still a step ahead.

—Shawn Kenyon '02 (CS) '04 (TC)

Pinto Receives Wechsler Award

Dr. Jose M. Pinto, associate professor of chemical engineering—flanked by President David C. Chang and Dr. Jovan Mijovic, head of the Othmer Department of Chemical and Biological Sciences and Engineering—received the 2004 Wechsler Award for Excellence. The bi-annual award, established by Poly Trustee Dr. Harry G. Wechsler '48 (Chem), recognizes excellence in research among faculty members, primarily those in the early stages of their academic careers. The award includes $25,000 for research support.
Alumni Officers Elected

New officers of the POLYTECHNIC ALUMNI, elected at the annual meeting: from left, Executive Vice President George Likourezos '92 (EE), President Thomas A. Mauro '67 (PH), Secretary Luther L. White '87 (OR) and Treasurer Konstandino (Gus) P. Sirakis '97 (CE). Not pictured is Vice President Stephen Garone '73 (EE). Elected to the association's international board of directors were Avigdor Dagan '99 (MG), Debra R. Friedman '81 (MG), Dr. Erwin Lutwak '68 '72 '74 (MA), Claudia Tom '99 (CS) and Dr. George I. Zysman '62 (EE) '66 (EL).

Alumni Tee Off To Benefit Poly Athletics

Posing with their trophies are Thomas Healey '84 (ME) and his wife, Kathy; Roni Rozenblat '02 (CS); and Earl Thomas '01 (EE) at the Eighth Annual Polytechnic Golf Classic. More than 40 alumni and friends participated in the June tournament to benefit Polytechnic Athletics. The Big Apple section of the POLYTECHNIC ALUMNI was the co-sponsor.

ALUMNI PRESIDENT’S CORNER

The future isn't what it used to be. We navigate in a global economic and political world, where actions in remote places affect our lives. To advance, knowledge is the transforming force. In a sense, we are the captains of our own ships; and we are continually exploring unfamiliar territory. If we sometimes have trouble maintaining our momentum, it is a great comfort to be part of the Poly community and draw on 150 years of experience to deal with emerging technologies and systems yet undefined.

It has been my pleasure to serve as president of the POLYTECHNIC ALUMNI for the past two years. As always, the alumni association faces challenges as we try to be a partner, trainer and leader for our 38,000 members. And, once again, a dedicated group of talented alumni stepped forward to smooth the peaks and valleys as we tried new programs.

These “equalizers” bring to the group passion, focus and vision with a shared goal of being a service organization for all alumni. We took an inventory of our programs and began to address the issue of the needs of alumni in different stages of their careers. High on the list was continuing technical education opportunities. One alumni group started a review course for young alumni preparing for the first part (the Engineer-in-Training) of the Professional Engineer license. Another group was among the first in New York City to arrange for Continuing Education Units (CEUs) to meet the more stringent NYS license requirements that went into effect January 2004. All these add luster to our Poly degree, bring credit to the school and pave the way for today's students.

The usual cluster of activities in May and June—including award dinners, reunions and commencement—set the stage for the entire Poly family to gather. Of course, anticipation of Poly's sesquicentennial anniversary added to the excitement at the Annual Meeting of the POLYTECHNIC ALUMNI, where the baton passed to a new alumni executive team. I hope you will make 2004 the year you become more involved with your regional alumni section. For this is a great time to pay tribute to Poly's rich heritage and witness the next steps in the life of our world-class alma mater.

Namad, Wong Receive Alumnus Award

Frank A. Namad '68 (ME), pictured with POLYTECHNIC ALUMNI President James Oussani Jr. '77 (ME), and Richard C. Wong '81 '87 (EE) (not pictured) each received a Dedicated Alumnus Award. Namad was recognized for his nearly 40 years of volunteer activities at Poly, including serving as chair of the alumni association's awards committee. Wong for his work with Poly students in robotics competitions and for mentoring high school students in the FIRST Robotics program. The awards ceremony took place at the association's annual meeting in June.
Class of ’54 Reunited


Russell K. Hotzler Named City Tech President

Dr. Russell K. Hotzler ’67 (MT) ’75 (MM) has been named president of the New York City College of Technology (formerly New York City Technical College). He’ll begin his term at City Tech after he ends his current role as interim executive vice chancellor for CUNY’s academic affairs. He began his career at CUNY in 1971, teaching at Queensborough Community College. Since then, he has held a variety of administrative posts, including university dean for academic affairs and interim president at York College and Queens College.

IN MEMORIAM

Richard D. Keller ’30 • Louis J. Kern ’32 • Gerald L. Epner ’35
Albert Shadowitz ’35 • Isidore (Irving) Resnick ’39
Harold Liebowitz ’44 ’46 • Herman Salsky ’45 • Joseph J. Byrne ’48
James R. Harris ’48 • Paul Torda ’49 • Rudolf F. Graf ’51
David Groner ’51 • Robert H. Lentz ’51 • Walter L. Brundage ’53
John J. Horgan ’53 • Nelson Karson ’54 • Martin Koenig ’54
Stephen L. Korosh ’54 • Philip R. Junghans ’59 • William T. Seewagen ’64
Charles J. Tozzo ’70 ’85 • Harry R. Auferheide ’81

Henry L. Bachman Elected HKN Eminent Member

Polytechnic Advisory Trustee Henry L. Bachman ’51 ’54 (EE) was elected an eminent member of Eta Kappa Nu, the electrical and computer engineering honor society. This recognition is the society’s highest membership award. During his nearly 50-year career, Bachman was president of Wheeler Laboratories, a vice president of its successor, Hazeltine Corporation, and a vice president of Hazeltine’s successor, BAE Systems.

Corrections:
The basketball championship photographs in the spring 2004 issue should have been credited to William Chin ’04 (ME).
Dr. Joseph G. Lombardino’s degree was incorrect in the winter 2004 issue. He received a doctorate in organic chemistry from Poly.
49 SIDNEY J. RUBIN (CHE) was elected an honorary member of the New York Society for Coatings Technology. JESSE J. TAUB (EE) is active in various IEEE activities.

50 EMIL GAYNOR '53 (EE) and his wife, Rose, celebrated their 60th anniversary by taking the family on a Caribbean cruise.

53 WILLIAM C. KLEM (AE) is retired from Bell Helicopter Textron and is a contract engineer with HiTech Associates. He and his wife have two daughters. EDMUND J. MODERACKI (ME) received the New York State Legislature's Outstanding Contribution as a Senior Citizen Award at a May ceremony in Albany celebrating Senior Citizens Recognition Day.

55 The Golden Jubilee of the Class of '55 will be held in Brooklyn, May 21-22, 2005. If you are interested in helping organize this festive event, contact the Office of Alumni Relations at 718/260-3885 or aluno@poly.edu.

63 THOMAS J. GUADAGNO (EE) '80 (CS) retired after 43 years with AT&T. He enjoys photography, travel, golf and visits with grandchildren in Florida. IRA A. RUBEL (EE) is chief engineer for the Electronic Systems Division at Parker Hannifin Corporation in Smithtown, N.Y. He celebrated 35 years with the company in May.

66 EDWARD DUFFY (MT) works at NAVAIR, North Island, where he supports naval air operations by maintaining and repairing F/A 18, E2, C2, H1 and S3 aircraft. He and his wife, Mary, have two grandchildren, Bridget, 2, and Brendan, 7 months. CHARLES A. FREDRICKSON (ME) is retired from the Sikorsky Aircraft Division of United Technologies Corporation. ARTHUR J. HEYDERMAN '73 (MA) completed a six-year term on ACLU's national Board of Directors. He lives in Bettendorf, Iowa, and is active in the Democratic Party. DAVID KAYE (EE) is president of KPR Inc., a public relations firm for the high-tech industry.

67 FREDERIC C. LANDMAN (EE) is a documentation manager at Curtiss-Wright, Peerless Instruments, in Farmingdale, N.Y. His daughter, Allison, is a first-year graduate student in molecular biology at MIT. JOHN H. PEREPETCEO '89 (MT) is the IBM-Wascom Professor of Material Sciences and Engineering at the University of Wisconsin-Madison. He was elected a Fellow of the Minerals, Metals and Materials Society for "seminal scholarly contributions to the fundamental understanding of structural synthesis during materials processing, especially at the nucleation stage of reaction."

69 EUGENE D. SKURNICK (EE) has formed Skurnick Consulting, specializing in communications sensors, networking and satellite systems business development for government agencies.

71 BARRY D. HYMAN (MA) '72 (MG) is the owner of New Jersey's oldest family-owned shoe store, Hymans Shoes in Bayonne, which will celebrate its 100th year of operation next year. He is also chairman of the National Conference for Community Justice.

73 CARO B. GARABEDIAN (TP) is the traffic engineer for the town of Greenwich, Conn.

76 ROBERT A. GRODEN (ME) is a manufacturing manager for Ford Motor Co. and lives in Illinois with his wife, Louise, and three children, Mark, Claire and David.

77 MUHAMMAD HATIM (TP) '91 (CE) is an environmental engineer at the U.S. Environmental Protection Agency. He is also chairman of Opera Ebony's Board of Directors, an un and general secretary of the Admiral Family Circle Islamic Community, general secretary of the Malak Shabazz Human Rights Institute and co-founder of What It Takes, a career guidance organization for high school freshmen.

79 BAIK M. SUNG (SE) received a Master of Theology degree from the Princeton Theological Seminary, the largest Presbyterian seminary in the country.

80 MICHAEL LOUDIS (EE) is chair of the Engineering Technology Department at Morrisville State College in New York. He recently completed training to be an IEEE TAC/ABET engineering technology program evaluator. VICTOR MOY (EE) married Sung Min Nam, a graduate of the Gordon-Conwell Theological Seminary, in April in Poughkeepsie, N.Y.

84 MARTIN J. OLSEN (ME) '93 (MG) is the owner of engineering technology at MTA Long Island Bus in Garden City.

HAPPLY EVER AFTER POLY

Did you first glimpse your future spouse in the hallways, classrooms and laboratories of Poly? If yes, we want to hear from you. Send us your story of how you met for a future cover story in "Cable."

Therese E. Tillett. E-mail: ttilett@poly.edu; Fax: 718/260-3084.
Mail: Polytechnic University, Six MetroTech Center, Brooklyn, NY 11201.
GEORGE TROVATO (EE) is a lawyer in the Legal Department of the City of Deltona, Fla., and a certified county mediator for the Florida Supreme Court. He earned a J.D. from Barry University’s School of Law and a master’s in law from Regent University’s School of Law. He was recently sworn in as a lawyer in North Carolina.

Sandeep Chandra (EE) is a clinical assistant professor in the Cardiology Division at Emory University’s School of Medicine and is a founding partner of Atlanta Heart Specialists. His twins, Rahul and Rushil, are 6 years old. Joseph L. Cina (EE) ’87 ’95 (EL) is a vice-president in the risk management division of J.P. Morgan. He and his wife, Sunita, welcomed the birth of a son, Jonathan, in March. They have a daughter, Sofia, 2, whom they adopted from China in 2003. Elie MOURAD (EE) is a principal engineer at Northrop Grumman in San Antonio, Tex.

JOHN J. MORONEY (EE) is a fiber optics manager for Pelco, a video security equipment manufacturer, in its offices in Orangeburg, N.Y.

GEORGE LIKIOUREZOS (EE) was made a partner at the law firm Carter, Deluca, Farrell and Schmidt J.P. MICHAEL URMENETA (ME) ’00 (MG) is director of information systems and data management at the New York Institute of Technology.

LEONID VAYNER (CS) and his wife, Yelena, welcomed daughter Stella Rachel in March.

THOMAS P. BRADLEY (EE) is an associate product manager for the U.S. Army. Johnny Tsang (CE) is president of Enterprise Technology Management Consulting in Brooklyn.

Daniel Nash (MG) is director of manufacturing operations at Goodrich Corp. in Chelmsford, Mass.

Steven Busiello (CP) works at Goldman Sachs as the technical lead in a development team in the Asset Management Division. Nitin Gogate (EE) is a systems engineer for Fujitsu Network Communications in Pearl River, N.Y.

Joanne Castagna (JO/TC) is a technical writer and editor for the U.S. Army Corps of Engineers, New York District. She recently received a doctorate in educational administration.

John L. Marcantonio ’02 (CS) is a program manager for Microsoft in Redmond, Wash. YonaH Wolf (CS) is a software project manager for the United Jewish Communities. He, his wife, Faigy, and son Mitch welcomed the birth of Michael Evan in March. The family lives in White Plains, N.Y.

Robert A. Palmieri (MG) is a technical program manager for Hewlett-Packard in New York City.

Robert J. Stevens Assumes Top Position at Lockheed Martin

Robert J. Stevens ´85 (AA) has been named CEO of defense contractor Lockheed Martin. Stevens joined Lockheed in 1993; previously, he was general manager of Loral Systems Manufacturing Company. He earned a master’s in aeronautics and astronautics from Poly and a master’s in business from Columbia University. He is also a graduate of the Department of Defense Systems Management College—School of Program Managers and served in the United States Marine Corps.
Are You A PolyThinker?

To those alumni from the Livingston days, here's a chance to test your Brooklyn Poly History. Correctly answer the question and be entered in a drawing to win a Poly sweatshirt.

QUESTION:
Poly's South Building across the street from the main buildings at 99 and 85 Livingston was a creaky, wooden structure that many alumni recall being told was formerly a Civil War hospital. What did the building originally house when Poly was established in 1854?

Send your answer and sweatshirt size to Therese E. Tillet.
E-mail: tillettt@poly.edu
Fax: 718/260-3684;
Mail: Polytechnic University
Six MetroTech Center, Brooklyn, NY 11201

Last Issue's Poly Quiz

WINNER OF DRAWING FROM SPRING '04 QUIZ: ELLERY POTASH '75 (EE) '78 (MS)

Correct respondents answered "more than 1000 AA cells" to the question "If the average human adult were battery powered, how many AA cells would it take to power a person for one day?"
Kazimiercz (Kaz) Siwik '70 '72 (EE), who submitted the question, began with the energy in an AA cell, $1.5V\times(1400/1000)\text{Ah}\times(3600\text{sec/hour}) = 6552\text{ joules or 1566 calories, at 4.848 joules per calorie. The basal metabolic rate for an adult is about 1500-1600 food calories per day. The twist in this problem is that one food calorie is 1000 calories. It would require at least 1000 AA cells to power a typical resting adult for a day. Professor Henry Bertoni '62 (EE) '68 (EL) agreed saying that a person generates about as much heat as 100 watt light bulbs in a day, that is 2400 watt-hours. The AA cell can deliver $1.4 \times 1.3 = 1.8$ watt-hours of energy. Hence, it takes $2400/1.8 = 1333$ AA cells to power a person for one day."

The Lynford Lecture Series

Presents Dr. Richard L. Garwin
Thursday, November 4, 2004, at 4 p.m.
Dibner Auditorium, 5 MetroTech Center

One of America's top nuclear scientists, Dr. Richard L. Garwin is credited with the first design of the hydrogen bomb. He has served as a scientific adviser to several U.S. presidents and is a recipient of the presidential Enrico Fermi Award and the National Medal of Science. He has been a member of the Scientific Advisory Group to the Joint Strategic Target Planning Staff and served on the Rumsfeld Commission to Assess the Ballistic Missile Threat to the United States. He has written extensively about missile defense; his latest book is Megawatts and Megatons: The Future of Nuclear Power and Nuclear Weapons.

POLYTECHNIC ATHLETICS presents
THE 1ST ANNUAL LIMITED DRAWING
1st Prize: $10,000
2nd Prize: $1,000
3rd Prize: $500

BECOME A SHAREHOLDER IN POLY ATHLETICS AND BE ENTERED TO WIN $$$$!

Only 300 shares will be sold at $100 per share.
Drawing to take place 7:30 p.m., SATURDAY, NOVEMBER 6, in the Jacobs Gymnasium.

For more information and to buy a share, contact Jimmy Barrett at 718/260-3465 or jbarrett@poly.edu.

Polytechnic University
Six MetroTech Center
Brooklyn, NY 11201
Address service requested
Brooklyn Poly: The Beginning

A School of Higher Learning for Brooklyn's Future

"Our sister city is to have a Seminary of learning for her sons, worthy of her character as 'the third city in the Union,' the beautiful city of Churches and Homes."

—New York Independent, August 9, 1855

When the building at 99 Livingston Street was finished in 1855, the New York Independent reported that it "combines all the modern improvements in style of building, form of furniture, methods of warming and ventilation, etc., designed to promote the health and comfort of the pupils and secure the greatest possible efficiency in the business of instruction."

On New Year's morning of 1853, bells clanged at City Hall and crowds gathered on Joralemon Street as the Brooklyn Female Academy caught fire and burned to the ground. It was tragic news for the then-City of Brooklyn, incorporated only 19 years earlier and already a bustling home to large industry and 130,000 residents. For although the city boasted dozens of public schools and several private schools, most of which were "classical institutions in which young men are fitted for college or counting house," the Female Academy was its only school for higher learning.

Hopes weren't completely dashed, however, for the future of Brooklyn's youth. Harriet Putnam Packer, the widow of an academy trustee, soon came forward with $65,000 to rebuild the academy with two caveats: The new institution would be named after her husband (now called the Packer Collegiate Institute, still on Joralemon) and a similar school would be established for young men. Four months later, on May 17, 1853, a group of distinguished Brooklyn residents drew up a charter to create "an educational institution in our midst, which [would] . . . enable us to give our sons . . . such an education as would qualify them in a far higher degree, through an enlarged, liberal and thorough training in a course of practical, scientific and classical studies to enter successfully upon the active pursuits and duties of life."

Thus, the Brooklyn Collegiate and Polytechnic Institute was conceived. A year later, 17 local business and civic leaders attended the first meeting of the Board of Trustees of the future school. They elected Isaac H. Frockingham its chairman, bought land at 99 Livingston Street for $16,000 and hired architect Frederick A. Peterson to design the building. (Peterson would later design the Cooper Union building.) To raise money for construction, shares in the school were sold at $100 each. In 1854, the New York State Board of Regents granted its charter.

The Institute opened its doors on September 10, 1855, to 255 young men, ages 9 to 17. The Rev. John H. Raymond, who helped establish the University of Rochester, designed the curriculum and hired the faculty, which included professors in English, mathematics, physical science, ancient and modern languages, penmanship and bookkeeping, drawing and music. (Raymond also served as professor of mental and moral philosophy.) The school was an immediate success and doubled its enrollment the next year. Tuition at the time ranged from $15 a semester for the lower grades to $25 for students in the collegiate department.

During the first 10 years, the Institute annually served nearly 500 students from Brooklyn and nearby towns. The school enlarged its building on Livingston Street and expanded its science and engineering curricula, while also educating students in business and the arts. In 1863, the alumni association was established. In 1864, Raymond resigned to accept the presidential appointment at a newly established college for women, Vassar College. Succeeding him was David H. Cochran, who had served as principal of the State Normal School (now the University of Albany SUNY) and one of two people in the country to earn a doctorate.
A Period of Growth

“Brooklyn has the Polytechnic and she has good reason to be proud of it, and of the thousands of boys who owe much of what they have become to its influence upon them.”
—Brooklyn Eagle, March 12, 1897

The last three decades of the 19th century saw the City of Brooklyn undergo major growth as it introduced electric lighting to businesses and homes, completed the Brooklyn Bridge, installed streetcar lines and elevated railroads, and merged, in 1898, with New York to form the City of New York. The population swelled to 800,000.

The Institute followed a parallel growth. In 1869, the New York State Board of Regents raised the Institute to full college status and authorized it to confer the degrees Bachelor of Science and Bachelor of Arts, which were first awarded two years later to two students at a ceremony at the Brooklyn Academy of Music.

In 1890, the preparatory and collegiate departments were separated, and a new building adjoining the original facility was erected on land owned by the Dutch Reformed Church at 85 Livingston Street. The new building—designed by William B. Tubby, a former Poly student and architect of five Brooklyn libraries—housed the collegiate department and contained, through an imposing archway, the Uriah D. Spicer (class of 1873) Memorial Library, endowed with $30,000 and named in memory of the son of Captain Elihu Spicer. The preparatory department was renamed Polytechnic Academy (now called the Polytechnic Preparatory Country Day School), it moved to Dyker Heights in 1917 and is still known as “Poly Prep”). The collegiate division adopted the name Polytechnic Institute of Brooklyn.

Polytechnic closed the century as a full-fledged school of engineering, offering degrees in chemistry and in civil, mechanical and electrical engineering.

Statistics of the class of 1887:
Tallest man, 6 ft. 3 in.; shortest man 4 ft. 11 in.;
average ht., 5 ft. 9 in. Heaviest man, 165 lbs.;
lighest, 92 lbs.; average w., 136 lbs.
Oldest man, 20 yrs.; youngest, 15 yrs. 9 mos.
Affiliation: 11 Republicans, 4 Democrats,
2 Magrumps, 1 Independent, 1 Prohibitionist,
1 Labor, 1 none. Favorite studies: Greek and
Surveying. Future: 10 for college (Vale and
Columbia most popular choices), 2 law, 1 business,
1 architecture, 1 medicine and 5 uncertain.
Source: 1887 yearbook, Polyvog.
Making Their Mark: Alumni, 1860–1900


Robert G. Brown ’68, inventor of handset phone and designer of first central telephone system in France.

Wilford S. Conow ’99, portrait painter of state governors, industry leaders and university presidents. His portraits hang at Smithsonian Institution, New York Historical Society and Brooklyn Museum of Art, among others (including Polytechnic).

Charles R. Flint ’68, exporter, ship owner, arms dealer, financial speculator and noted trust organizer; built U.S. Rubber Company (now Uniroyal) and what is now IBM; secretary to U.S. minister to Peru, consultant to the czar of Russia and New York consul for Chile; flew with Wright brothers in 1907 to discuss buying their flying machine.

Henry C. Goldmark ’74, designer of Panama Canal’s lock system and one of the first to use steel in bridge construction.

Walter Hampden ’00, actor, considered the most famous “Cyrano de Bergerac” of his time, playing the role onstage from 1923 to 1936; played Hamlet onstage in 1925, with Ethel Barrymore as Ophelia; films included “Sabrina,” “They Died with Their Boots On,” “The Hunchback of Notre Dame,” “Reap the Wild Wind” and “All About Eve.”

Edward R. Knowles ’70, developer of searchlights for Navy; designer of heat, light and power installations for many New York City buildings.

Seth Low ’66, mayor of City of Brooklyn and Greater City of New York (Mark Twain stumped for him); president of then-Columbia College. An uncle, Josiah H. Low, was founding trustee of Poly and board secretary for 43 years.

Rear Admiral George W. Melville ’60, Civil War hero, U.S. explorer and naval engineer; led sole surviving party from George W. DeLong’s tragic North Pole expedition; presided over construction of new steam navy; founding member of National Geographic Society. In his honor, Navy established Melville Award and named two ships: destroyer USS *Melville* and oceano- graphic research ship *Melville*. Statue of Melville stands at Philadelphia Naval Base.

In addition to inventing the handset phone and installing the first central telephone in France, Robert G. Brown, class of 1868, far right, is also credited with hiring the first female telephone operator, who went to work in Paris in 1880.

The quote “If God had intended that man should fly, he would have given him wings,” is widely attributed to Rear Admiral George W. Melville, class of 1860.

Future New York City mayor Seth Low, class of 1866, was captain of the Polytechnic Cadets during the Civil War. In his memoirs, Low recounts running from the telegraph office on Livingston Street to carry news of the fall of Richmond to Poly.
Alfred P. Sloan Jr. ’91, president and CEO of General Motors and noted philanthropist. Today, his 72-year-old eponymous foundation has assets worth more than $1.2 billion.

Henry J. Van Dyke ’59, American ambassador to Netherlands and Luxembourg; pastor of Brooklyn’s Second Presbyterian Church; author of more than 50 published sermons and hymns, including popular, “Joyful, Joyful, We Adore Thee” (1907); editor of Presbyterian Book of Common Worship (1905); source of widely published quote, “Time is too short for those who wait, too swift for those who fear, too long for those who grieve, too short for those who rejoice, but for those who love, time is eternity.”

Guy C. Wiggins ’99, renowned American Impressionists painter; member of historic Lyme Art Colony in Connecticut; youngest artist, in 1903, ever to have a painting accepted in Metropolitan Museum of Art’s permanent collection. His paintings now sell for more than $100,000 at auctions.

James J. Wood ’79, inventor of electric fan, internal combustion engine, horizontal steam engine, A/C generator, Brayton oil engine, sparkfree dynamo and arc lamp, engine for John Holland’s submarine, machinery to construct main cables for Brooklyn Bridge, and floodlights for Statue of Liberty. He guided General Electric Company’s development of household refrigerator.

To the Editor of The Polytechnic

Sir—Change the name of this old institution! Never. The word Poly is deeper in the hearts of her alumni than any intricate title could ever possibly be. Why Poly is known all over the country by that euphonic diaphanous, Don’t consider a change until this grand old building shall have passed away and the name Polytechnic has been worn from the solid stone in the front of the building. Nine cheers for Poly! Dear old Poly! Down with Brooklyn Institute of Technology!

—“Mau,” class of 1901, in response to a proposal to change the institution’s name, November 8, 1899

Poly’s first chairman Isaac H. Prossingham was a successful merchant who served on numerous company boards, but made his home at Poly for more than 35 years. When he died, the Brooklyn Eagle called him “one of the best known and most public spirited citizens of Brooklyn.”

A founding Poly trustee James S. T. Stranahan was also the visionary behind Brooklyn’s Prospect Park and the borough’s boulevards. His statue looks out over Grand Army Plaza at the park’s northern entrance.

The practice of diagramming sentences still used today in English class (e.g., the jumps = subject, verb) was popularized by the 1877 book A Work of English Grammar and Composition by Poly Professors Alonzo Reed and Brainerd Kellogg. Pictured. Kellogg taught at Poly for 39 years and was a favorite of the students.

Special thanks to the following sources for information and photos: Patricia Convey; Christopher Hayes; Heather Walters; Towards the Technological University by George Baglianello (1973); Polytechnic Institute of Brooklyn by John F. O’Connor (1954); The Story of Poly by Miles M. Kastenheck (1940); History of Polytechnic 1890–1920 by Alice Walter (unpublished); The Polytechnic Preparatory Country Day School 1855–1925 by William E. Golden (unpublished); and archived issues of the Brooklyn Eagle, made available by the Brooklyn Public Library’s Brooklyn Collection.