



Irina Kalish's children

ment, my wife, Yukiko Tani, and I have trekked, climbed, and done photography in Patagonia, the European Alps, and the Himalaya. We also engage ourselves in local hiking and photography, and via attendance at operatic, symphonic, and classical ballet programs.”

**Steffen K. Kaldor MS '98, PhD '02** currently works at IBM's advanced 300 mm semiconductor fabricator in East Fishkill, N.Y., as the manager of manufacturing process integration and yield improvement. He and his wife, Lu Ann, have two boys, Sebastian, 4, and Alexander, 1. Steffen hopes everyone at Columbia is doing well. He can be reached at sk473@columbia.edu.

**Irina Kalish MS '07** writes, “We had a family addition this year. Our new daughter, Abigail Lydia Kalish, was born on April 15, 2009. So with three kids now—we are outnumbered!!!”

## mathematical methods

**David Levin MS '68** writes, “I earned my MS in mathematical methods of operations research in 1968. Finals were canceled because of the student unrest. I worked in the quantitative area of finance and securities for a number of years and have most recently (last nine years) been teaching math at a Bronx public high school. Recently, I attended a presentation by the Salvadori Center, which was, of course, begun by the late Professor Mario Salvadori, to increase an appreciation for mathematics by utilizing hands-on engineering modeling for younger students.”

## mechanical engineering

**Guillermo Guzmán-Barrón MS '90** writes, “I joined Microsoft in 1993 (after my MBA from CBS) and have spent the last 16 years at Microsoft in different jobs. Starting as product manager for Microsoft TechNet, then product manager for Visual Tools for Latin America, customer unit manager for Microsoft Peru, small business group manager for Microsoft Colombia, business group lead for Microsoft Andean Regiona, small and medium business marketing manager for Latin America, and now as the small, medium business, solutions and partners director for Microsoft Mexico. I am currently married to Klijne with three kids, ages 7 to 2.”

**Dr. Rajiv V. Joshi EngScD '90** is a research staff member at T. J. Watson Research Center, IBM. He received his BTech degree from Indian Institute of Technology (Bombay, India), MS from Massachusetts Institute of Technology and doctorate in engineering science from Columbia. He joined IBM in November 1983 and worked on VLSI Technology (NMOS, and CMOS, sub-0.5 m CMOS logic, DRAM and SRAM technologies). He developed novel interconnect processes and structures for aluminum, tungsten, and copper technologies widely used in IBM for various sub-0.5 m memory and logic technologies as well as across the globe. His circuit and CAD work is used in IBM main frame and power PC processors. He has received 3 corporate and 2 outstanding technical achievement awards from IBM. He also received 48 Invention Plateau awards from IBM, authored and coauthored over 140 research papers, and presented several invited and keynote talks and

tutorials in IEEE SOI, SSDM, ICCAD, CICC, ASYNC, and AMC, and coauthored tutorials in ISSCC and DAC. He holds 140 U.S. patents in addition to several pending patents.

Joshi is an IEEE fellow and ISQED fellow. He received the Lewis Winner Award in 1992 for an outstanding paper he coauthored at the International Solid State Circuit Conference, and, in 2009, the IEEE/ACM William J. McCalla ICCAD Best Paper Award. He is in program committees of IEEE ISLPED (Int. Symposium Low Power Electronic Design), IEEE VLSI design, IEEE Int. SOI conf (2000–2003), ISQED. He was a general chair for the 2004 ISLPED conference. In 2008, he was awarded the Distinguished Alumnus Award from IIT, Bombay.



# in memoriam

## faculty

### Theodore R. Bashkow

Dr. Theodore R. Bashkow, professor emeritus of electrical engineering and computer science, died Dec. 23, 2009, at his home in Katonah, N.Y. He was born in St. Louis, Mo., and attended Washington University, where he received his BS degree in mechanical engineering. He went on to receive his master's and doctorate degrees at Stanford University. He served in the U.S. Air Force as a first lieutenant during World War II from 1943 to 1945.



While in the Air Force, he served as maintenance officer and helped to stage the Enola Gay. In the 1950s, while at Bell Labs, Professor Bashkow became well known for his development of a new method for analyzing linear electrical networks, Professor Bashkow's A matrix. He also became involved with digital computers. He joined the faculty of the Columbia Electrical Engineering Department in 1958 and helped transform the Electrical Engineering Department into the Department of Electrical Engineering and Computer Science. When, in 1979, this department was divided into the Electrical Engineering and Computer Science departments, Bashkow became one of the founding faculty members of Computer Science. He taught courses in digital logic, computer organization, and computer programming. He did research on parallel processing. In collaboration with Herbert Sullivan, he pioneered a new approach to that subject through the development of CHoPP, Columbia Homogeneous Parallel Processor, a large-scale, homogeneous, fully distributed parallel machine. A number of Columbia graduate students and a junior faculty member, David Klappholz, were also involved at various stages.

In 1980, the Computer Science Department

instituted an annual award in his honor, the Theodore R. Bashkow Award. Among his many affiliations, Professor Bashkow was an active member of IEEE, ACM, and Sigma Xi organizations.

### Praveen Chaudhari

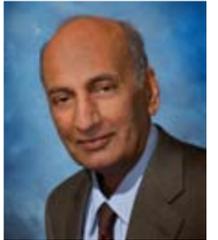
Praveen Chaudhari, a member of the National Academy of Engineering and winner of the National Medal for Technology and an adjunct professor in the Department of Applied Physics and Applied Mathematics, died on Jan. 13, 2010, at his home in Briarcliff Manor, N.Y., after a battle with cancer. Professor Chaudhari and two colleagues discovered and developed a new class of materials, the amorphous magnetic materials that are the basis of erasable, read-write, optical storage technology, now the foundation of the worldwide magnetic-optic disk industry. It was this technology that earned him the National Medal of Technology in 1995. A graduate of the Indian Institute of Technology-Kharagpur, he received his doctoral degree from Massachusetts Institute of Technology in physical metallurgy. He joined IBM in 1966 and held various research and management responsibilities for three decades in scientific research and technology development. He was appointed director in 1981 and vice-president of science in 1982. During his stewardship, IBM scientists were awarded Nobel Prizes for two consecutive years and the science programs at the IBM research laboratories across the globe grew significantly.

After retiring from IBM in March 2003, he became the director of Brookhaven National Laboratory, a position he held until April 2006. With the help of New York's senators and with private funding from Renaissance Technology, he enabled Brookhaven to implement a new vision and set itself on a growth curve that continues to this day. After 2006, he continued to work at Brookhaven part time as a research scientist and joined Columbia Engineering as an adjunct professor in the Materials Science Program.

He was the author of more than 160 scientific papers and held more than three dozen patents. In addition to his election to the NAE, he was

also a member of the National Academy of Sciences, and a fellow of the American Academy of Arts and Sciences and of the American Physical Society.

Dr. Chaudhari was active in many committees nationwide and internationally, including the Physics Policy Committee of the American Physical Society, the Governing Board of the New York Academy of Sciences, the Advisory Board of the Mathematical and Physical Sciences of the National Science Foundation, and the Scientific Advisory Council of the International Center for Theoretical Physics. He served as the executive secretary of President Reagan's Advisory Council on Superconductivity and was a member of the National Commission on Superconductivity that reported its findings to President Bush. In 1988, he reported to Prime Minister Rajiv Gandhi of India on science and technology, and in 1993, at the request of the Indian minister for sciences and technology, led an IBM group to evaluate the parallel computer activities in India.



## alumni 1930

**Richard (Dick) Silberstein** died Nov. 30, 2009, in his home of natural causes. He was 103 years old. He received an electrical engineering degree from Columbia University in 1930 and did graduate work at the University of Pennsylvania. Silberstein first became fascinated with radio when, at age 9, he saw equipment operating aboard a coastal steamship. This interest produced a lifetime hobby (amateur radio) and eventually a professional career. His interests also included travel and photography, but amateur radio was always his primary hobby. During the Great Depression, he held various jobs or was

self-employed in the radio industry. In 1941, he joined the National Bureau of Standards in Washington, D.C. In 1948, he married Florence K. Baker, and in 1954 the couple moved to Boulder, where Richard was involved with radio-propagation research for the Department of Commerce. Then after a 6-year period of working as a radio engineer for the Army in New Jersey, Dick took retirement. He is survived by his wife.

## 1940

**George H. Brown '40, ChE '41, '39CC** died Sept. 24, 2009. He was a chemical engineer for 48 years with Pfizer, Inc. His wife, Elinor Schubert '42 Barnard, wrote, "His Columbia education was the key to a successful career and a long life of 93 years."

## 1942

**Charles (Chuck) Newlon** of West Knoxville, Tenn., died on Oct. 20, 2009. He was a long-time and faithful member of Church Street United Methodist Church and the Murphy Builders Sunday School Class. Born in Point Marion, Pa., he attended Columbia through a music scholarship, receiving a BS and MS in chemical engineering. His college nickname, "Tuba Charlie," followed him throughout his lifetime. While employed at E. I. DuPont in Charleston, W. Va., he married Dorothy Craumer on June 17, 1944. A veteran of the U.S. Army during WWII, he was transferred to Oak Ridge, Tenn., in 1944 to work on the Manhattan Project. Following the war, he joined Union Carbide as a nuclear engineer specializing in national health safety until his retirement in 1971.

During his career, several of his inventions were patented, and he developed a mathematical formula still used today for measuring the volume inside a cone. He was a member of the American Society of Chemical Engineers, Who's Who of Men of Science, and a Fellow of American Chemists.

After retirement, he became an avid tennis player, traveled worldwide, and created the "Charles E. Newlon and Dotty Jean" musical show, entertaining at nursing homes throughout the area. He was also a generous philanthropist to many charities. He is survived by his beloved wife of 65 years, Dorothy Craumer Newlon, two sons, and two daughters.

## 1945

**Jerome W. Heller** passed away Nov. 27, 2009, in Corona del Mar, Calif. He received his BS and MS degrees in industrial engineering and operations research from Columbia Engineering. Heller served as a naval officer in WWII and Korea.

**William F. Schreiber**, professor emeritus at Massachusetts Institute of Technology, died suddenly at home on Sept. 21, 2009, at the age of 84. Dr. Schreiber attended New York City public schools and Columbia Engineering, where he received BS and MS degrees in electrical engineering. In 1953, he received the PhD in applied physics at Harvard, where he was a Gordon McKay and Charles Coffin Fellow. Dr. Schreiber worked at Sylvania and at Technicolor Corporation in Hollywood, Calif., prior to 1959, when he joined the faculty at Massachusetts Institute of Technology as professor of electrical engineering. He was director of the Advanced Television Research Program from 1983 until his retirement in 1990.

Dr. Schreiber's major professional interest was image processing systems, including printing, facsimile, and television. This work included theory and extensive practical applications, including the development of a number of successful commercial products that incorporated innovative image-processing technology developed under his direction. He worked in graphic arts, including color correction, color printing, and laser scanner and recorder design, in facsimile, and in television. His work included digital television and high-definition television. He was awarded the Honors Award of the Technical Association for the Graphic Arts, the David Sarnoff Gold Medal from the Society of Motion Picture and Television Engineers, the Gold Medal of the International Society for Optical Engineering, and was a four-time recipient of the Journal Award of SMPTE. He was a member of the National Academy of Engineering.

## 1948

**Morton Herbert Eligator** died Dec. 1, 2009. After serving in the Army during World War II, Eligator received a BS in civil engineering and joined the consulting engineering firm of Weiskopf & Pickworth in 1948. During the 1950s he helped build the firm through collaboration with prominent architects, bringing it to the fore of modernism in the United States.

In 1960, he became senior partner and forged strong working relationships with many leading architects. Active with the firm for more than 40 years, he retired in 1990. Morton remained a partner in Olde Post Mall Associates in Fishkill, N.Y. He also served as president of Beechwood Homeowners Association, a townhouse development where he and his wife, Beverly, resided for 20 years. An aficionado of all the arts, he was an accomplished oenophile, delighted in traveling the world, and always remained a student of different cultures and architecture. As the active patriarch of an extended family, he was known and loved for his generosity of spirit, time, love, and humor.

**Richard F. Gonseth** of Yonkers, N.Y., died on Sept. 22, 2009. A native of Brooklyn, he attended the Massachusetts Institute of Technology and joined the Navy, where he trained as a pilot. He graduated from Columbia Engineering in 1948, where he was on the rowing and wrestling teams. He worked as an engineer for IBM for over 35 years and was a long-time resident of Tarrytown, N.Y., with his family, and an active parishioner and trustee of Transfiguration Church.

## 1951

**Louis Forte**, 85, died Jan. 14, 2010, in Virginia Beach, Va., after a short illness. He was drafted and served in the U.S. Army as an MP during World War II. After the war, he attended Columbia Engineering, graduating with a BS in 1951. He worked as an engineer at Northrop Grumman and the Manhattan Transit Authority until his retirement in 1987. He had been involved in several community and professional organizations, including Toast Masters, American Society of Mechanical Engineers, Sons of Italy, and The Round Table at Stony Brook University. He is survived by his daughter, Lonia, and her husband Alfred Broderick Jr. of Virginia Beach, Va., their children, Delion and Eden; son Jeffrey Forte of Fredonia, N.Y.; his brother, Jerry Sr., and his wife, Jean Forte, of Colorado Springs, Co.; his sister, Roseanne, and her husband, Ed Pfenning, of Wading River, N.Y.

## 1952

**Arthur W. Camp** died on Oct. 23, 2009, at Samaritan Hospice at the age of 87. He has been a resident of Moorestown, N.J., for 42 years. During World War II he served as a pilot with the Air Commandos in the China-Burma-India theater. His duties included working with the

British behind Japanese lines, dropping Gurkha paratroopers on Rangoon and flying the treacherous mountains that lie between India and China. He was awarded the Distinguished Flying Cross, the Air Medal with three Oak Leaf Clusters, and several battle stars. After the war, he received a BS in industrial engineering from Columbia. After graduating, he worked first at IBM, helping to develop the new technology of computer operated manufacturing, and later with RCA.

## 1954

**Robert J. Spinrad**, a pioneer in computer design, died Sept. 2, 2009, in Palo Alto, Calif. Spinrad carried out his work in scientific automation first at Brookhaven National Laboratory and later at Xerox. He was director of the Palo Alto Research Center as the personal computing technology invented there in the 1970s was commercialized.

While a student at Columbia Engineering, he built his own computer from discarded telephone switching equipment. After arriving at Brookhaven, Spinrad spent a summer at Los Alamos National Laboratories, where he learned about scientific computer design by studying an early machine known as Maniac, designed by Nicholas Metropolis, a physicist. Spinrad's group at Brookhaven developed techniques for using computers to run experiments and to analyze and display data as well as to control experiments interactively in response to earlier measurements.

He has been hailed as the father of modern laboratory automation. After leaving Brookhaven, Spinrad joined Scientific Data Systems in Los Angeles as a computer designer and manager. When the company was bought by the Xerox Corporation in an effort to compete with I.B.M., he participated in Xerox's decision to put a research laboratory next to the campus of Stanford. Xerox's Palo Alto Research Center pioneered the technology that led directly to the modern personal computer and office data networks.

Taking over as director of the laboratory in 1978, Spinrad oversaw a period when the laboratory's technology was commercialized, including the first modern personal computer, the ethernet local area network, and the laser printer.

He received his BS in electrical engineering from Columbia and a PhD from the Massachusetts Institute of Technology. In addition to his wife, Verna, he is survived by two children, Paul, of San Francisco, and Susan Spinrad Esterly, of Palo Alto, and three grandchildren.

**Ralph Mattson '54CC**, a resident of Green Valley, Ariz., died on Oct. 17, 2009. He was a mining engineer and ran gold and copper operations in the Orient, South America, and other countries throughout his career. He is survived by his wife of 27 years, Prabha (Anneke); two brothers; as well as nephews, nieces, cousins, and more family in Finland, Thailand, and the Netherlands.

## 1957

**James Michael Kennedy** died on Nov. 12, 2009. A life-long resident of New York City, he was the valedictorian of his class at Xavier High School. He earned a BA degree from Fordham University and an MS degree from Columbia Engineering. After completing his formal studies, he joined the staff of the Columbia University Electronics Research Laboratories (CUERL) as a mathematical analyst. He continued his employment at Riverside Research Institute (RRI), the successor of CUERL, where he served as executive vice president. He retired from RRI in December 1995, after 40 years of service.

Kennedy is survived by his wife of 43 years, Mary Alice Kennedy McDonald, and family and countless friends around the world. He was a member of Holy Trinity Church of West 82nd Street in Manhattan, and the Ancient Order of Hibernians, Jack Kehoe Division, Girardville, and the New Cavendish Club of London.

## 1972

**Steven Zeff '69CC** of Harrington Park, N.J., died on Oct. 6, 2009. Born in Brooklyn, N.Y., he grew up in Valley Stream, N.Y., and moved to Harrington Park in 1978. He graduated as valedictorian from Columbia College in 1969 and received his MS from Columbia Engineering in 1972. In 1973, Mr. Zeff founded SRZ Software Services in Ridgewood, N.J. After selling SRZ Software Services, he founded Spantech Software, Inc., in 1988. He sold Spantech in 2007 but continued to serve as administrator. Zeff is survived by his wife, Marion; son, Jeremy and his wife Alyssa; daughter, Dr. Karen Hebert and her husband, Varian; mother, Shirley; grandson, Nathan; and sister, Dr. Marjorie Zeff.

## 2004

**Garland English**, a civil engineering major who was an Army platoon leader, died Jan. 10, 2010,

in a rock climbing accident in Hawaii, where he was stationed. He had recently returned from a tour of Iraq.

According to newspaper reports, Garland and a friend Sunday had returned to a rocky cliff in the remote and rural Makaha Valley near Honolulu to try to retrieve a tent one of them dropped days earlier while hiking. He apparently fell while trying to reach the gear.

In a story in the *Albany Times Union*, one friend said that he had "certain deep beliefs about social justice, conservation and kindness that he tried to put into practice." In 2007, he enlisted in the Army and completed Officers Candidate School at Fort Benning, Ga. He was commissioned as 2nd lieutenant and subsequently was deployed to Iraq in November 2008. He was promoted to 1st lieutenant before returning to Hawaii last fall. While in Iraq, he was awarded the Bronze Star. His intensity for life and diversity of interests was legendary. He studied Spanish in Costa Rica, bungee jumped in South Africa, ran with the bulls in Spain, crossed North America by motorcycle, went deep sea diving in Malaysia, taught English in Japan, and journeyed from Mexico City to Peru. Read other remembrances of Garland in the Alumni Notes section, page 48.

We also have learned of the passing of the following alumni and friends:

Harold C. Sperry '39  
Clark I. Fellers '40, '41, '39CC  
Charles M. Kuhbach '41, '41, '39CC  
James W. Cronenberg '42, '41CC  
Boris J. Sterk '42, '41CC  
George L. Hesse '43, '41CC  
Raymond W. Arnesen '46, '48CC  
Norman Rosenberg '46  
Kenneth J. Sabella '46, '48CC  
Dr. Robert L. Thompson '46  
Dr. Peter L. Tea Jr. '47, '55  
Dr. Sherman S. Weidenbaum '47, '48, '53  
Walter Morykwas '48  
Dr. Carl Gans '50  
George E. Canuel '51  
Maurice Rifkin '53  
Sheldon Bilgri '55  
Anthony J. Delano '55  
Philip G. Luckhardt '56  
Dr. Hugh D. McNiven '58  
Bijaya C. Mahapatra '76  
Hanan Livneh '79  
Linda R. Heffner (Friend)  
Dr. Anthony Kurtz (Friend)  
Connie S. Maniatty '43CC (Friend)