Stanford Engineering Heroes (Alphabetical by Last Name)

Andreas Acrivos | Hero 2015

Andreas Acrivos is an internationally recognized educator and researcher who helped transform the field of chemical engineering, especially in the areas of fluid mechanics, heat and mass transfer. His research on the flow of viscous fluids made it possible to model, analyze and engineer chemical and fluid processes — with applications in microelectronics, petroleum recovery and many more industries. Recruited to Stanford in 1962, Acrivos joined the Department of Chemical Engineering as a professor and helped lead it to global renown. He took early retirement in 1988 to accept an Albert Einstein Chair in Science and Engineering at the City College of the City University of New York, where he served as a professor of chemical engineering and director of the Levich Institute. Acrivos returned to Stanford in 2007 and is associated with the Flow Physics and Computational Engineering Group of the Mechanical Engineering department.

Kenneth Arrow | Hero 2014

Kenneth Arrow earned the 1972 Nobel Prize in Economics with Sir John Hicks for pioneering contributions to general equilibrium theory and welfare theory — theories underlying the assessment of business risk and government economic and welfare policies. Arrow came to Stanford in 1949 as an assistant professor of economics and statistics and stayed for two decades, eventually becoming a professor of economics, statistics and operations research. He played a major role in the School of Engineering by helping to create and foster the Department of Operations Research — now part of Management Science and Engineering. Arrow left Stanford in 1968 to take a professorship at Harvard University. One of the most influential economists of the 20th century, Arrow focused on applying economic theory to real-world problems. In a paper written 50 years before healthcare reform in the U.S., he observed that markets do not work in healthcare because patients lack the information they need to evaluate the quality of the services they are receiving.

Craig Barrett | Hero 2012

Craig Barrett is the retired CEO and chair of semiconductor giant Intel Corp., where he rose through the company’s ranks to become president in 1997 and CEO a year later. He was chair from 2005 to 2009. Barrett joined the company in 1974 after 10 years on the faculty of Stanford Engineering’s Materials Science and Engineering Department. He earned his bachelor’s degree, master’s degree and PhD at Stanford. Barrett is coauthor of the textbook “Principles of Engineering Materials.” Today he is an advocate for improving education and a champion of technology as a path to higher social and economic standards worldwide.
Andreas Bechtolsheim | Hero 2012

Andreas “Andy” Bechtolsheim built the path-breaking SUN workstation while working as a doctoral student at Stanford in computer science and electrical engineering. He later became cofounder and chief system architect at Sun Microsystems. He also was CEO and a founder of Granite Systems, a gigabit ethernet switching company, from 1995 until 1996, when it was acquired by Cisco Systems. He managed Cisco's gigabit systems business unit, which was responsible for the highest-volume modular switching platform in the industry. Bechtolsheim's technology foresight is legendary. He was an early-stage investor in Google, VMware, Mellanox, Brocade and Magma Design, among many others. Today he is co-founder and chair of Arista Networks, a high-speed data center and cloud networking company.

John A. Blume | Hero 2013

John A. Blume (1909–2002) is considered by many in the profession to be the “father” of earthquake engineering. Blume achieved breakthroughs in seismic and structural engineering that had an unprecedented influence on modern earthquake engineering. His engineering advice influenced a host of significant structures, notably the Stanford Linear Accelerator, the restoration of the California State Capitol, and buildings and waterfront structures for Saudi Arabian oil giant Aramco. Blume served as a consulting professor of civil and environmental engineering at Stanford, where he earned his bachelor's, ENG degree and PhD. A devoted lifelong student of civil engineering, he earned his doctorate at age 57, 33 years after getting his bachelor’s degree. Blume also was an expert in nuclear power plant design who consulted for the U.S. Nuclear Regulatory Commission and who helped with some 70 nuclear plant projects.

Sergey Brin | Hero 2014

Sergey Brin co-founded web-search giant Google Inc. in 1998 with fellow Stanford student Larry Page. Brin earned his master’s degree in computer science at Stanford, where he and Page developed the “PageRank” algorithm, which calculated the relevance of a web page to the user’s query based in part on the number of other pages that linked to it. PageRank helped make Google the world’s dominant search engine. Today, Brin directs Google’s special projects such as its famed driverless-car initiative. He is a member of the National Academy of Engineering, a fellow of the American Academy of Arts and Sciences, and a recipient of the National Science Foundation Graduate Fellowship. He has received the Marconi Prize, given to those who achieve advances in communications and information technology for the social, economic and cultural development of all humanity.
Vint Cerf | Hero 2011

Vint Cerf helped develop computer-networking technology that led directly to the creation of the modern internet. Cerf earned his undergraduate degree in mathematics from Stanford, where he joined the computer science and electrical engineering faculty in 1972. As an assistant professor at Stanford, he worked with his students and Robert Kahn of the U.S. Defense Department’s Advanced Research Projects Agency (DARPA) to create Transmission Control Protocol (TCP), which determines how packets of data travel via the Internet. Today, TCP Internet Protocol (TCP/IP) is the foundation for all data traffic on the internet, and Cerf and Kahn have been christened “the fathers of the Internet.” Cerf left Stanford in 1976 to work at DARPA. He has been a leading advocate for the potential of the internet. Since 2005, he has been vice president and chief internet evangelist at Google.

Morris Chang | Hero 2012

Morris Chang is the founding chairman of Taiwan Semiconductor Manufacturing Company (TSMC), a pioneer of the dedicated integrated circuit foundry model. TSMC is the world’s largest silicon foundry. Born in China, Chang moved to Hong Kong during the Chinese Civil War and then to the U.S., where he attended Harvard and MIT. His employer, Texas Instruments, sent him to Stanford for his PhD in electrical engineering, which he earned in 1964. Chang returned to TI and devised the strategy of pricing semiconductors aggressively — sacrificing early profits to gain market share and long-term profits. By 1983, he had risen to group vice president responsible for TI’s global semiconductor business before leaving to lead General Instrument Corp. and, later, TSMC.

James H. Clark | Hero 2013

James H. Clark is an entrepreneur and computer scientist who was a founder of Silicon Graphics, Netscape, Healtheon, myCFO and Shutterfly. From 1979 to 1984, he was an associate professor of electrical engineering at Stanford, where he developed the Geometry Engine, an early hardware accelerator for rendering computer images based on geometric models. That technology was the basis for early products by Silicon Graphics, which revolutionized the design process for everything from bridges and airplanes to special effects for movies. In 1994, Clark joined Marc Andreessen (lead developer of Mosaic, one of the first web browsers) to form Netscape. He is a member of the National Academy of Engineering and the Horatio Alger Association of Distinguished Americans.

George Dantzig | Hero 2012

A trained mathematician, George Dantzig (1914–2005) is known as the “father” of linear programming and the “simplex algorithm.” Working during the midcentury heyday of industrial expansion intersecting with the rise of computing power, Dantzig developed the mathematical algorithms that helped countless organizations sort through myriad
possibilities to optimize their complex systems for profit and efficiency. Dantzig joined the faculty at Stanford in 1966 in the departments of Operations Research and Computer Science. In 1973, he was appointed the C.A. Criley Professor of Transportation Sciences. Virtually every industry, from petroleum refining to the scheduling of airline flights, has been transformed by his work. The journal “Computing in Science and Engineering” named the simplex algorithm as one of the top 10 algorithms of the 20th century.

Ray Dolby | Hero 2011

Ray Dolby (1933–2013) made his name synonymous with sound. After inventing noise-reduction technology that transformed the music recording industry, he developed innovations in cinema sound that reshaped the experience of going to the movies. Dolby held more than 50 patents during his lifetime. After earning his BS in electrical engineering at Stanford in 1957, he earned his PhD in physics at Cambridge University in 1961. Four years later, he founded Dolby Laboratories in London. His trademark Dolby noise reduction, which removed the hiss from taped recordings, became a hit with recording artists and fans alike. In the 1970s, the company branched out into cinema sound, where its technology greatly improved the quality of film soundtracks. In 1976, Dolby Laboratories moved its world headquarters to San Francisco. Showered with accolades throughout his career, Dolby received scientific and engineering awards, an Oscar from the Academy of Motion Picture Arts and Sciences, and multiple Emmys from the Academy of Television Arts and Sciences.

William F. Durand | Hero 2011

William Durand (1859–1958), one of the most revered engineers in Stanford history, was a pioneer in aeronautics, naval propulsion and engineering research methods. A picket-fence display of his hand-carved wooden propeller designs graces a wall of the Terman Library at the Huang Engineering Center. Durand joined the Stanford faculty as a professor in 1904 and began studying the then-nascent field of aviation. Working with Professor E.P. Lesley, Durand built one of the first wind tunnels and launched a rigorous study of propeller design that helped airplane makers choose the best props for their airframe designs. In the early 1930s, Durand edited the six-volume series “Aerodynamic Theory,” a major reference in the field. Durand served as chairman of the National Advisory Committee for Aeronautics — a precursor of NASA — and led a program during World War II to advance the development of jet engines.

David Filo | Hero 2013

David Filo co-created “Jerry and Dave’s guide to the World Wide Web” in April 1994 with fellow Stanford grad student Jerry Yang. The two co-founded Yahoo! Inc. in April 1995 and helped it become one of the most recognized brands on the internet. Filo earned his MS in electrical engineering at Stanford. At Yahoo!, he serves as a key technologist, directing the
technical operations behind the company’s global network of web properties. He is credited with helping build Yahoo! into one of the world’s most highly trafficked websites.

**Martin J. Fisher | Hero 2016**

Martin J. Fisher co-founded KickStart International, an award-winning non-profit social enterprise that develops appropriate technologies to improve lives and lift people out of poverty. After receiving a doctorate in theoretical and applied mechanics from Stanford in 1985, Fisher won a Fulbright Fellowship to study the appropriate technology movement in Kenya, an experience that informed his activities at KickStart. Fisher has helped to create and market simple yet effective tools like MoneyMaker irrigation pumps, over 285,000 of which have been sold to date to farmers who use human power to irrigate crops, grow year-round and increase their income from irrigation alone by nearly 500%, on average. He was the founding chair of BuildChange and still serves on its board, was recognized as a Skoll and Schwab Social Entrepreneur, and has received many other noteworthy awards.

**Irmgard Flügge-Lotz | Hero 2014**

Irmgard Flügge-Lotz (1903–1974) was internationally renowned for her many important contributions to aerodynamics and to automatic control theory. Flügge-Lotz joined the Stanford faculty in 1950 as the university’s first female professor of engineering. A professor of applied mechanics and of aeronautics and astronautics, emeritus, she was the first woman elected as a fellow by the American Institute of Aeronautics and Astronautics and received the Achievement Award from the Society of Women Engineers. She made significant advancements in methods for the prediction of aerodynamic pressures on bodies, wings and turbine blades, some of which were adopted as standard procedures throughout the world. In automatic control theory, she developed the first theory of discontinuous, or on-off, control systems. Flügge-Lotz published more than 50 technical papers and wrote two books.

**Alexandra “Sandra” Forsythe | 2018 Hero**

Sandra Forsythe overcame gender-related academic adversity to become a force in computer science. She was co-author of the first-ever computer science textbook, *Computer Science: A First Course*, in 1969. She was married to George Forsythe, founder of Stanford University’s Department of Computer Science. Fellow Engineering Hero Don Knuth acknowledged that Sandra Forsythe was also an important figure in computer science. “Sandra co-wrote the first elementary textbook on computer science. Up to that time, there had been lots of books about computer programming, but this was the first about computer science. It was translated into many languages and went through many editions and was extremely important in the development of the field,” he said. She died in 1980.
George Forsythe | Hero 2018

George Forsythe was the founder of the Department of Computer Science at Stanford, one of the first independent departments of computer science in the country. Sandra, his wife, is also an Engineering Hero. “[George Forsythe’s] foresight, combined with his untiring efforts to spread the gospel of computing, have had a significant and lasting impact; one might almost regard him as the Martin Luther of the Computer Reformation!” wrote fellow Engineering Hero Don Knuth of his mentor in a tribute published shortly after Forsythe’s death in 1972.

Edward Ginzton | Hero 2014

Edward Ginzton (1915–1998), co-founder of Varian Associates, helped pioneer the development of klystron radio tubes for use in radar and linear accelerators. During World War II, Ginzton worked with a Stanford team hired to employ the klystron in radar, which played an important role in the war. He later joined brothers Sigurd and Russell Varian, who invented the klystron, to form Varian Associates, which played a major role in Silicon Valley’s early development and became the world leader in medical linear accelerators. Ginzton earned his doctorate in electrical engineering at Stanford. As a professor of electrical engineering and applied physics, Ginzton led a Stanford team that designed the world’s most powerful particle accelerator. He received the IEEE Medal of Honor, and was a member of the National Academy of Engineering and the National Academy of Sciences.

Reed Hastings | Hero 2016

Reed Hastings co-founded Netflix in 1997. In 1991, he founded Pure Software, which made tools for software developers. After a 1995 IPO, and several acquisitions, Pure was acquired by Rational Software in 1997. Hastings is an active educational philanthropist and served on the California State Board of Education from 2000 to 2004. He is currently on the board of several educational organizations including CCSA, DreamBox Learning, KIPP, Pahara and the Hispanic Foundation of Silicon Valley. He is also a board member of Facebook, and was on the board of Microsoft from 2007 to 2012. Hastings received a BA from Bowdoin College in 1983, and an MSCS in Artificial Intelligence from Stanford University in 1988. Between Bowdoin and Stanford, he served in the Peace Corps as a high school math teacher in Swaziland.

Martin Hellman | Hero 2013

Martin Hellman is best known for inventing — with Whitfield Diffie and Ralph Merkle — public key cryptography in 1976. Today, public key cryptography secures trillions of dollars of financial transactions daily, making it possible for us to bank, shop, and perform countless other tasks on the Internet with peace of mind. Hellman earned his master’s degree and PhD in electrical engineering at Stanford. He joined the faculty here in 1971, serving as associate
chair of the Electrical Engineering Department, chair of EE graduate admissions and associate dean of graduate studies for minority student affairs until he became professor emeritus in 1996. Hellman, a long-time activist in the computer privacy debate, also has campaigned for more than 30 years to raise awareness about the risks of nuclear weapons. He has applied risk analysis to demonstrate the continued risk of a nuclear catastrophe even when most people think this danger is behind us.

William Hewlett | Hero 2011

William “Bill” Hewlett (1913–2001) helped launch the computing giant Hewlett-Packard in 1939 with his friend and fellow Stanford alum David Packard. Their startup in a Palo Alto garage became one of the founding stories of Silicon Valley. Hewlett earned his AB in general engineering and his ENG in electrical engineering at Stanford. Packard’s enthusiasm about electronics, nurtured in Professor Fred Terman’s radio engineering class, propelled Hewlett and Packard into the vanguard of the electronics revolution. Hewlett’s graduate project, the “resistance-capacitance oscillator,” led to the founding of the Hewlett-Packard Company in that celebrated garage. When the Walt Disney Company purchased eight HP oscillators for the movie “Fantasia,” an industry was born. Over the course of that career that saw the rise of “management by walking around,” which came to be called the “HP Way,” Hewlett became one of the most admired figures in American business. His service to Stanford was surpassed only by Leland and Jane Stanford themselves.

Marcian “Ted” Hoff | Hero 2015

Marcian “Ted” Hoff is best known as the architect of the first microprocessor — the Intel 4004. Released in November 1971, the 4004 sparked the microprocessor revolution that came to define Silicon Valley. Hoff earned both his master’s degree and PhD in electrical engineering at Stanford, where he studied under a National Science Foundation Fellowship. As the 12th employee of Intel, he devised a computing architecture that combined memory, calculating and processing on one circuit rather than scattering them among many custom-designed circuits. The result was the Intel 4004, which opened the door to breakthroughs in personal computing, communications and the Internet. Hoff was the first Intel Fellow, the highest technical position in the company. He is a U.S. National Medal of Technology and Innovation winner, a recipient of the IEEE/RSE Wolfson James Clerk Maxwell Award and has been named to the National Inventors Hall of Fame.

Jensen Huang | Hero 2018

Born in Taiwan, Jensen Huang studied at Oregon State University before receiving his master’s degree in electrical engineering at Stanford in 1992. The following year he founded NVIDIA, which started out in PC graphics and helped build the gaming market into the largest entertainment industry in the world. Its invention of the graphics processing unit (GPU) in
1999 made possible real-time programmable shading, which defines modern computer graphics, and later helped revolutionize parallel computing. More recently, GPU computing has helped drive the development of modern artificial intelligence applications. Huang and his wife, Lori, are benefactors to numerous organizations, including Stanford School of Engineering. The Huang Engineering Center bears his name.

Mae Jemison | Hero 2018

Jemison earned her bachelor’s degree in chemical engineering at Stanford in 1977 and would apply her knowledge and academic excellence to medical school and to becoming a physician. But it was her next career leap for which she will be most remembered. Jemison became the first woman of color in space as an astronaut aboard the Space Shuttle Endeavour and then logging additional time as a member of Spacelab. In total, Jemison has logged 190 hours, 30 minutes, 23 seconds in space. In the years since, she has received 9 honorary doctorates and, in 2012, authored the winning bid on DARPA’s 100 Year Starship project that aims to make human interstellar travel a reality within the next century.

Donald Knuth | Hero 2011

Donald Knuth is a towering figure in computer science, widely considered the “father” of the analysis of algorithms, attribute grammars, empirical study of programming languages and literate programming — the notion that computer programs should be readable by and understandable to non-programmer humans as well as machines. Appointed a professor at Stanford in 1968, Knuth stayed until his retirement in 1993. He introduced a variety of new courses into the Stanford curriculum, notably Concrete Mathematics, and has mentored numerous doctoral scholars. His life’s work is The Art of Computer Programming, a proposed seven-volume compilation of his insights on writing computer software. Knuth started his magnum opus in 1963 and has published four of the seven volumes. This singular work has sold over a million copies and has been translated into 10 languages.

Charles Litton | Hero 2011

Charles Litton (1904–1972) was among the first in a long line of Stanford-educated engineer-entrepreneurs who made Silicon Valley an enduring technology center. In the 1930s, Litton developed metal- and glass-working machinery to mass-produce vacuum tubes, then in high demand in the burgeoning radio industry. Litton earned his bachelor’s and ENG degrees at Stanford. In 1931, he founded Litton Engineering Laboratories not far from Stanford’s campus and went on to become a supplier to fellow Stanford graduates Russell and Sigurd Varian, makers of klystrons for radar applications. Soon, Litton himself began making magnetrons, which were important sources of microwave and radar technology during World War II. In 1953, Litton spun off Litton Industries to Tex Thornton, who turned that company into a major defense conglomerate. Litton kept Litton Engineering Labs, a smaller glass-working machinery and manufacturing company, which is still in business in Grass Valley, California.
Theodore Maiman | Hero 2012

Theodore “Ted” Maiman (1927–2007) holds U.S. Patent 3,353,115 for the world’s first working laser. His creation, using a synthetic ruby and flashlamps, was first operated on May 16, 1960, at Hughes Research Laboratories. Today, the laser has a remarkable array of uses from surgery to shopping. Maiman earned his master’s degree in electrical engineering and his PhD in physics at Stanford. Maiman had a rare blend of advanced training in physics and engineering combined with significant laboratory experience. The design of Maiman’s laser was so simple it is estimated to have cost Hughes Research just $50,000 to produce, including the inventor’s salary — likely one of the greatest research bargains of all time.

John McCarthy | Hero 2013

John McCarthy (1927–2011) was a giant in the field of artificial intelligence. Credited with coining the term “artificial intelligence,” he subsequently went on to define the discipline for more than five decades from his professorship at Stanford. McCarthy came to Stanford in 1953 as an assistant professor. He moved to Dartmouth and then MIT from 1955 to 1962, when he returned to Stanford for good as a full professor of computer science. He retired in January 2001. In his career, McCarthy developed the programming language LISP, played computer chess via telegraph with opponents in Russia and invented computer time-sharing — an advance that greatly improved the efficiency of distributed computing and predated the era of cloud computing by decades.

Perry L. McCarty | Hero 2016

Perry L. McCarty joined Stanford University in 1962 to develop the environmental engineering and science program. From 1980 to 1985 he was chairman of Stanford’s Department of Civil and Environmental Engineering, and from 1989 to 2002 he served as director of the Western Region Hazardous Substance Research Center. His research has focused on biological processes for the control of environmental contaminants. In addition to more than 300 publications, he is coauthor of the textbooks “Chemistry for Environmental Engineering” and “Science and Environmental Biotechnology – Principles and Applications.” Elected to membership in the National Academy of Engineering in 1977 and numerous other organizations, he was selected by the National Academies to be the 2001 Abel Wolman Distinguished Lecturer.

David Packard | Hero 2011

David Packard (1912–1996), co-founder of Hewlett-Packard, was a progenitor of the innovative and entrepreneurial spirit that came to define Stanford School of Engineering. Packard earned his bachelor’s and ENG degrees at Stanford. Professor Fred Terman, who later became one of the most important deans in School of Engineering history,
noticed Packard’s zeal for electronics and encouraged Packard and his friend William Hewlett to start an electronics company. The company they started in 1939 became Hewlett-Packard, one of the pioneering names in the history of technology in general and Silicon Valley in particular. Packard served as president of HP from 1947 to 1964 and then CEO until 1969, leaving to serve as Richard Nixon’s deputy secretary of defense. He returned to HP in 1971 and served as chairman until 1993. A prominent philanthropist, he created a foundation that helped launch the Monterey Bay Aquarium.

Larry Page | Hero 2014

Larry Page is chief executive officer and co-founder of Google Inc., the world’s dominant web search company. Page earned his master’s degree in computer science at Stanford. While pursuing his PhD at Stanford, Page and fellow student Sergey Brin developed the “PageRank” algorithm, which calculated the relevance of a web page to the user’s query based in part on the number of other pages that linked to it. PageRank became the foundational technology of Google, which he and Brin started in 1998 with Page as the first CEO. From 2001 to 2011, Page was president of products, then resumed responsibility for day-to-day operations as CEO. Page is a member of the National Academy of Engineering and a fellow of the American Academy of Arts and Sciences. He has received the Marconi Prize, given to those who achieve advances in communications and information technology for the social, economic and cultural development of all humanity.

Bradford Parkinson | Hero 2012

Bradford Parkinson is chief architect of the now-ubiquitous Global Positioning System (GPS), whose design he led as a U.S. Air Force colonel in 1973. Parkinson received his PhD from Stanford in 1966 and became a professor in 1984. His pioneering work at as a Stanford professor included GPS for aviation and other applications, including the Wide Area Augmentation System (WAAS) used by the FAA. More recently, he led the NASA/Stanford Gravity Probe B program that validated Einstein’s General Theory of Relativity to an unprecedented accuracy. Parkinson is co-editor and author of the best-selling textbook “Global Positioning System: Theory and Applications.” He is a Stanford Engineering professor emeritus of aeronautics and astronautics.

William J. Perry | Hero 2013

William J. Perry was secretary of defense of the United States from February 1994 to January 1997, deputy secretary of defense from 1993 to 1994 and under secretary of defense for research and engineering from 1977 to 1981. He is known internationally in the arms control community for his many contributions to international security. Perry earned his bachelor’s and master’s degrees in mathematics at Stanford, where he is the Michael and Barbara Berberian Professor (emeritus) in the Department of Management Science and Engineering,
a senior fellow at the Freeman Spogli Institute, director of the Preventive Defense Project, and a former co-director of the Center for International Security and Cooperation. He received the Presidential Medal of Freedom in 1997 and was named Knight Commander of the British Empire in 1998.

**Calvin Quate | Hero 2012**

Calvin “Cal” Quate is the brilliant mind behind acoustic and atomic force microscopy. The scanning acoustic microscope, invented with a colleague in 1973, has resolution exceeding optical microscopes, revealing structure in opaque or even transparent materials that are invisible to optics. Quate received his PhD from Stanford in 1950 and joined the faculty in 1961. Today he is a Stanford professor emeritus of electrical engineering and applied physics. In 1985, Quate read about a new type of microscope that could examine electrically conductive materials. When he dreamed up a related instrument that would work on non-conductive materials — including biological tissue — the atomic force microscope (AFM) was born. AFM traces surface contours using a needle to maintain constant pressure against the surface to reveal atomic detail. AFM is the foundation of the $100 million nanotechnology industry.

**Sally Ride | Hero 2014**

Sally Ride (1951–2012) was the first American woman to fly in space. She became widely known for her passionate advocacy for science, technology, engineering and math (STEM) education. Ride earned bachelor’s degrees in physics and English, and master’s and doctoral degrees in physics at Stanford. She served on the commissions investigating the Challenger explosion in 1986 and the Columbia disaster in 2003. Ride was a professor of physics at the University of California-San Diego and director of the California Space Institute. She founded Sally Ride Science to motivate girls and boys to study science and to explore careers in STEM. She also co-wrote seven science books for children. Ride was a member of the President’s Committee of Advisors on Science and Technology, and the National Research Council’s Space Studies Board. She received the Presidential Medal of Freedom posthumously in 2013.

**Charles Simonyi | Hero 2015**

Charles Simonyi is a high-tech pioneer, philanthropist and space traveler. The co-creator of the first WYSIWYG text editor (Bravo), he was the chief architect of Microsoft Word, Excel and other widely used applications. Simonyi earned his PhD in computer science from Stanford. He is founder and CTO of Intentional Software, a maker of software to support idea generation and presentation. He was the fifth space tourist and the first ever space tourist to fly twice. He is a member of the U.S. National Academy of Engineering, the American Academy of Arts and Sciences, correspondent member of the Hungarian Academy of Sciences and the chair of the Board of Trustees of the Institute for Advanced Study in Princeton. He and his wife, Lisa,
have made numerous philanthropic contributions supporting the arts and sciences, and other charitable causes worldwide.

Fred Terman | Hero 2011

Fred Terman (1900–1982) was dean of the School of Engineering at Stanford from 1944 to 1958 and university provost from 1955 to 1965. He and President Wally Sterling are credited with putting Stanford among the ranks of the world’s top universities. Terman earned his bachelor’s and engineering degrees at Stanford before leaving for MIT to get his PhD. In 1925, he returned to Stanford to begin a career that would span the next four decades. As dean of the School of Engineering, Terman recognized that two forces — graduate study and government support of basic research — would reshape the workings of universities. The four editions of his Radio Engineering textbook were the electronics bible for more than two decades of students. He also foresaw that the local high-technology industry could provide financial assistance, intellectual support and professional stimulation for faculty and students alike. That helped create a spirit of innovation and entrepreneurship that sparked the rise of Silicon Valley.

Stephen Timoshenko | Hero 2012

Stephen Timoshenko (1878–1972) was a renowned expert, teacher and writer widely regarded as the “father” of applied mechanics in the U.S. So great was his influence that his active years in the field became known as “the Timoshenko era.” Timoshenko came to Stanford in 1936 and stayed for the next two decades. He authored 13 popular textbooks; the best known of these, “Strength of Materials,” was first published in Russia in 1911. His “Engineering Mechanics” text was translated into over 10 languages. Many of Timoshenko’s personal research and theoretical contributions became classical subject matter in engineering courses long after his death. In 1957, the American Society of Mechanical Engineers established the Timoshenko Medal in his honor.

Jerry Yang | Hero 2013

Jerry Yang co-founded Yahoo! Inc. in 1995. He served on the board of directors and as a key member of the executive management team until 2012. While at Yahoo!, he led a number of initiatives, including two of the biggest investments in the internet: Yahoo! Japan and Alibaba Group. Yang earned his bachelor’s and master’s degrees from Stanford University. Widely recognized as a visionary and pioneer in the Internet technology sector, he was named one of the top 100 innovators in the world under the age of 35 by the MIT Technology Review in 1999. Yang is on Stanford University’s Board of Trustees, where he is a vice-chair. Yang and his wife, Akiko Yamazaki, are well-known philanthropists who focus on higher education, conservation and the arts.