

# IOP INFLUENCERS FROM NJIT

BY MICHELE HICKEY, M.S. PTC '14

**IGHLANDERS DON'T INFLUENCE CHANGE; THEY INNOVATE IT.** This has been the case ever since Newark Technical School first opened its doors in 1881. The accomplishments of NJIT alumni, past and present, are as high as the stars, as wide as the seas, and as deeply human as access to medicine in developing countries. And yet, our graduates have their feet planted firmly on the ground as they craft original and effective solutions for business and industry, trade, government, healthcare, and more.

This spring, we decided it was high time to celebrate those alumni presently leading their fields while shaping how we live and interact with each other and the world. In fact, we would wager that one or more of the individuals on this list have effected change in your own life as well. Think about that the next time you brew your morning joe from a single-cup coffee maker.



#### R. GERALD "JERRY" BAILEY M.S. CE '70

Although retired from his role as president for the Arabian Gulf for Exxon, Jerry Bailey continues to pursue a life-long commitment to environmentally responsible oil production. He brings more than 55 years of experience in all aspects of the international and domwublished researcher and soughtafter adviser who is a member of the U.S. Middle East Policy Council, the Society of Petroleum Engineers and the American Institute of Chemical Engineers. He has received the Lifetime Achievement Award for Engineering from the University of Houston.



#### RAYMOND A. CASSETTA B.S. IE '70

**R**ay Cassetta founded Cassetta Brandon Associates, building it into the largest public sector labor relations consultancy in New Jersey. He provided expert testimony in Federal District Court cases to help end discriminatory job placement in the steel, paper and tobacco industries, and in the 1990s served as labor relations consultant during the State of New Jersey takeover of the Newark Public School System. Cassetta continues to serve as an expert witness in federal labor relations cases. He chairs the NJIT Martin Tuchman School of Management Board of Visitors, and he recently sponsored the university's new Ray Cassetta Financial Analysis Laboratory. Cassetta also founded the Strategic Management Showcase at NJIT, which enables students to demonstrate their business expertise in real-time, simulated environments.

# At NJIT I learned the value of leading a goal-oriented life, and that success comes through perseverance and hard work.

Raymond A. Cassetta



#### SUKLA CHANDRA M.S. CHE '96

As managing director of GE Ventures India, Sukla Chandra is responsible for Technology Transfer and Licensing collaborations for GE Technologies in India. In her prior role at the company, Chandra was responsible for developing and executing multi-generation product and commercialization strategies for GE's Rural Electrification Platform. She drove measurable progress toward providing basic access to electricity in remote parts of the world. Chandra serves on the board of the Alliance for Rural Electrification, based in Belgium, and has served as director, Patents and Analytics Centre of Excellence at the John F. Welch Technology Centre. In addition, Chandra, who also holds several patents, has co-led the GE Women's Network Initiatives for India for the past five years.



#### KENNETH M. COLAO B.S. CE '77

Named EY's 2017 Entrepreneur of the Year<sup>®</sup> in Real Estate, Hospitality and Construction in New York, Ken Colao, founder and president of CNY Builders, manages projects valued at over \$400 million in the United States, Europe and Asia. The recognition was particularly sweet for Colao, who had built an earlier construction company, York Hunter, into a \$400 million business only to lose it all in the aftermath of 9/11. Through his work at CNY Builders, Colao has completed construction worth more than \$3.3 billion, including projects in the hospitality, commercial, residential, interiors, institutional, science, government and cultural sectors. Among the more than 40 hotels that Colao has built during his career to date is the new Central Park Marriott in New York City, the tallest stand-alone hotel in the Western Hemisphere.



#### C. STEPHEN CORDES B.S. IE '72

**C**. Stephen Cordes is a retired equity partner of Clarion Partners, LLC, a leading investment advisory firm headquartered in New York City specializing in real estate with approximately \$40 billion in assets under management. He was chief operating officer of the firm, and a member of its Board of Directors, management executive committee and investment committee. He was also portfolio manager of the Lion Gables Apartment Fund, a \$3 billion closed-end value-added sector fund. His career also includes investment management at Clarion Partners, Jones Lang LaSalle, CIGNA, and the City of Newark. A 2009 recipient of NJIT's Edward F. Weston Medal for Professional Achievement, he has also served as an NJIT trustee and chair of the Albert Dorman Honors College Board of Visitors.



#### NICHOLAS M. DENICHILO P.E. B.S. CE '73, M.S. CE '78

Nick DeNichilo brings more than 40 years of experience to his role as president and CEO of Mott MacDonald Group, NA. Under his leadership, the firm has more than tripled in size and has emerged as an important player in the premier league of North American consulting firms. DeNichilo is frequently quoted by *Engineering News-Record, Civil Engineering*, and other industry publications, and is well-known for his expertise regarding safe engineering practices, technical innovation and the importance of designing for resilience during severe weather. He has received many awards, including the John I. Parcel-Leif J. Sverdrup Civil Engineering Management Award, the ASCE Outstanding Projects and Leaders (OPAL) Award and the George Warren Fuller Award, which recognizes distinguished service in the water field.

## We stand at the forefront of a profession that plans, designs, constructs and operates the built environment while serving as stewards and advocates for the protection and restoration of the natural environment.



#### ALBERT A. DORMAN B.S. ME '45, '99 HON

Founding chairman and first CEO of the multinational firm AECOM, now numbering more than 90,000 employees, and namesake of the Albert Dorman Honors College at NJIT, Albert Dorman's career includes numerous highlights, including service in the U.S. Army Corps of Engineers at the end of World War II and his work on the design and construction of Disneyland. In fact, he is the civil engineer on record for the theme park. Dorman is a dedicated supporter of his community, notably having served as trustee of the National Foundation for Advancement in the Arts, and director of the California and Los Angeles Chambers of Commerce, among numerous other positions. Among the many awards and recognitions he has earned — including election to the National Academy of Engineering in 1998 -Dorman is a Distinguished Member of the American Society of Civil Engineers, as well as a Fellow of the American Institute of Architects. He is the only individual ever to have achieved this dual distinction.

Nicholas M. DeNichilo



#### ROBERT S. DOW B.S. CE '69, '14 HON

**R**obert Dow's accomplishments include competing on the U.S. Olympic Fencing Team in the 1972 Summer Games in Munich, as well as a highly successful career as a financial analyst. When he became head of Lord Abbett's fixed-income division in 1982, fixed income represented less than 10 percent of the firm's assets under management. By the time he was named chief investment officer in 1995, he had helped grow fixed-income holdings to more than half of the firm's assets. Named managing partner of Lord Abbett in 1996, Dow helped to place the company among the 30th largest investment management concerns in the U.S.



#### GERARD J. "JERRY" FOSCHINI B.S. EE '61

Jerry Foschini is a Bell Labs pioneer who holds 18 patents in point-to-point and network communication systems for wired, wireless and optical applications. He has published more than a hundred papers and journal articles, and he has been named a Fellow of the Institute of Electrical and Electronics Engineers (IEEE) for his contributions to communications theory. His Bell Laboratories Layered Space-Time (BLAST) concept is one of the most widely examined techniques in wireless communications research today. In 2002, Bell Labs' patent on BLAST was named by MIT's *Technology Review Magazine* as one of five "patents to watch." That same year, Foschini received the Thomas Alva Edison Patent Award. In 2008, Foschini received the IEEE Alexander Graham Bell Medal.



KIRAN GILL EMBA '07

Kiran Gill and her co-workers at Professional Associates in Regulatory Services (PARS) Environmental, Inc. purchased the company from its founders to provide continued support for clients of the full-service environmental consulting firm. Now president and CEO of PARS, Gill has overseen the company's growth from five employees to more than 50, and has increased revenue from \$500,000 to over \$13 million. She has been recognized in NJBIZ's Top Forty Under 40 Business Leaders and Best 50 Women in Business lists, and was named New Jersey Small Business Person of the Year by the U.S. Small Business Administration. The Society of Indo-American Engineers and Architects honored her in 2013 for her leadership of a woman- and minority-owned business enterprise.

# Be flexible — don't fall in love with your 'design.' Be a good listener — you never know where great ideas might come from. Above all, learn to be a good team player.



#### JORDAN HU M.S. CIS '89

Jordan Hu launched RiskVal Financial Solutions, LLC in 2001, with initial backing by Cargill. Current RiskVal partners include Bloomberg, Nasdaq, Thompson Reuters, and UBS. One of the first major fixed-income trading data platforms, RiskVal is now among the most significant. RiskVal offers more than 200 different trading strategies, along with more than 15 years of high-quality historical data. The firm has earned wide recognition in its industry, including the Custody Risk Global Awards 2015 Risk Technology Vendor of the Year Award, and in 2017 Hu received the 26th annual Overseas Entrepreneurs Award organized by the National Association of Young Entrepreneurs, a public policy nonprofit founded in 1972 and headquartered in Taiwan.

Anita J. La Salle

#### ANITA J. LA SALLE B.S. ME '64, M.S. ME '71

Anita J. La Salle is a program director in the National Science Foundation's (NSF) Division for Computer and Network Systems. Previously, she was acting deputy division director for the Computing and Communication Foundations Division. She also served in the Division for Undergraduate Education, as a consultant to the Directorate for Education and Human Resources, and as the directorate for Computer and Information Science and Engineering. La Salle is professor emeritus from American University in Washington, D.C., where she served as chair of the Computer and Information Science Department and as chair of the Information Technology Department. When asked about her proudest achievements, La Salle points to her current role as part of the team that manages NSF's Innovation Corps, a program that trains researchers from academia to commercialize their innovations and create startup companies using lean-startup principles.



#### RAYMOND J. McGOWAN B.S. CHE '64

**R**ay McGowan's career in the chemical industry began while he was a student at Newark College of Engineering. As a technician at Mobil Chemical's Research Laboratory, he earned patents for a gas-phase ethylene polymerization process and for a catalyst system to purify terephthalic acid. He quickly moved through several leadership roles at the company and by 1994 he was serving as president of Mobil Chemical Company, executive vice president of Mobil Oil Corporation and chairman of Mobil's Business Leadership Forum, a powerful team of Mobil's top 26 executives. McGowan co-chaired the transition team that oversaw the 1999 merger of Mobil and Exxon, helping to create one of the world's largest and most successful chemical companies. He stayed with ExxonMobil Chemical Company until his retirement in 2001. He has been a director and treasurer of the American Chemistry Council's Center for Health Research, chairman of the American Red Cross Treasure Coast Region in Florida, and a director of United Way. At NJIT, McGowan serves as a member of the Board of Overseers.



#### CAROLYN M. MERKEL M.S. MGMT '97

Carolyn Merkel is a founding partner of Mariner Analytical, LLC, a consulting firm providing sciencebased advice to clients developing innovative food and nutritional products and technologies. The firm's client list spans the world and includes Fortune 50 companies. Prior to forming Mariner Analytical, Merkel was part of the research and development team at McNeil Nutritionals, where she helped develop SPLENDA\* sweetener. Merkel has numerous publications and patents to her credit, in fields ranging from main group synthetic chemistry to taste attributes of sweeteners, and she has been a member of Sigma Xi since 1984. She is a 1994 recipient of the YWCA Tribute to Women in Industry Award, and received the 2003 Distinguished Alumna Award from Ramapo College.

### Once you enter the workforce, recognize that advancing your knowledge about your area of expertise has not ended after college, but in a sense, has only begun.



#### JOHN J. MOONEY M.S. CHE '60, '07 HON

As co-inventor of the three-way catalytic converter, John Mooney has helped reduce carbon monoxide emissions by billions of tons since the 1970s. The technology that he and partner Carl Keith created transformed emission-control throughout the world by removing three major pollutants hydrocarbons, carbon monoxide and oxides of nitrogen from car exhaust. Until that time, it was not thought possible that all three could be removed by a single catalyst. Mooney has been presented with the American Institute of Chemical Engineers 1999 Arthur Dehon Little Award for Innovation, the Finnish Academies of Technology's 2001 Walter Ahlstrom Prize, the U.S. Patent and Trademark Office's 2002 National Medal of Technology and Innovation, and the American Institute of Chemical Engineers 2005 Kazutoshi Fujimura Life Time Achievement in International Chemical Engineering Award.

Raymond J. McGowan



#### JOHN H. OLSON B.S. CE '61, M.S. EM '66

John Olson began his career with Public Service Electric and Gas Co. After completing his master's degree, he joined the investment firm of E.F. Hutton & Co. in New York City and became the assistant manager of their headquarters office. In 1972, he joined Reynolds Securities which, through a series of acquisitions and mergers, eventually became Morgan Stanley in 1993. He counts his rise on Wall Street and becoming a managing director at Morgan Stanley — a role he held for 36 years — as his proudest career achievement. Olson retired in 2002 as head of the company's northeast region. Throughout his career and into his retirement, he has generously contributed his time and expertise in alumni and executive leadership roles at NJIT. In 1987, Olson was awarded the Alumni Association Service Award and, in 1995, he received the Weston Distinguished Alumnus Award.



#### GENERAL ELLEN M. PAWLIKOWSKI B.S. CHE '78, '13 HON

When General Ellen M. Pawlikowski began her military career in the Reserve Officers' Training Corps at NJIT, she wasn't planning beyond her first four years. In 2015, she became the third female ever to receive a fourth star in the United States Air Force. In her role as head of the Air Force Materiel Command, General Pawlikowski oversees the 80,000 people who keep the Air Force's weapon systems ready for war. General Pawlikowski has earned the Defense Superior Service Medal with two oak leaf clusters; the Legion of Merit; the Defense Meritorious Service Medal with two oak leaf clusters; the Air Force Commendation Medal with oak leaf cluster; the Air Force Achievement Medal; and the Air Force Individual Recognition Ribbon. In 2014, she was elected to the National Academy of Engineering.



JUDEA PEARL M.S. EE '61

Judea Pearl is a professor of computer science and statistics at UCLA, where he directs the UCLA Cognitive Systems Laboratory. He is credited with inventing Bayesian networks, a mathematical formalism for defining complex probability models, for which he earned the Association for Computing Machinery's 2011 A.M. Turing Award. Pearl's work revolutionized artificial intelligence, and became an important tool for many other branches of engineering and the natural sciences. In 2018, Pearl will publish *The Book of Why: The New Science of Cause and Effect*, a summation of 30 years of research. Pearl and his wife founded the Daniel Pearl Foundation in memory of their son, Daniel Pearl, who was murdered in Pakistan in 2002.

# **Problem solving and critical thinking** — skills I learned as a freshman at NJIT — are the foundation for the technical skills I use every day in my job.



#### MARJORIE A. PERRY EMBA '05

Marjorie Perry, president and CEO of MZM Construction & Management, is listed in *NJBIZ* as one of New Jersey's Best 50 Women in Business and is included on their list of Top 25 Entrepreneurs in New Jersey. In 2011, MZM was named to the publication's Business of the Year Hall of Fame. In addition to construction and construction management, MZM provides services to the waste management, transportation and renovation industries. Signature projects include the New Jersey Performing Arts Center, MetLife Stadium, Newark Liberty International Airport, and the NJ TRANSIT Hudson-Bergen Light Rail. Perry has served on the New Jersey Economic Development Authority, and in 2012 was honored by the state's Small Business Administration as New Jersey Small Business Person of the Year. General Ellen M. Pawlikowski



#### SANTO POLITI M.S. EE '90

Santo Politi is co-founder and the managing general partner of Spark Capital, a technology venture fund with more than \$3 billion under management and offices in San Francisco, New York and Boston. Politi is currently on the boards of Behalf, Colu, Cybereason, eToro, Lightmatter, Superpedestrian, Tashtego, and Uncommon. His past investments include Adap.TV (AOL), Admeld (Google), CT-100 (CBS), IPWireless (General Dynamics), Lexity (Yahoo), Oculus (Facebook) and OneRiot (Walmart), Broadbus (Motorola), Big Band (IPO), Aether Systems (IPO), Digital Think (IPO) and Novatel Wireless (IPO). Politi's experience includes serving as a general partner at Charles River Ventures, president of Blockbuster Entertainment, as well as in engineering and management positions at Matsushita Electric Industrial and Weston Instruments.



#### PIERRE M. RAMOND B.S. EE '65

**D**istinguished Professor of Physics at the University of Florida and Director of the university's Institute for Fundamental Theory, Pierre Ramond played a chief role in the development of string theory, proposing the groundbreaking concept of supersymmetry. He has authored numerous books and articles on high-energy theory. Ramond is an elected fellow of the American Physical Society and is a Fellow of the American Academy of Arts & Sciences. In addition, he received the Oskar Klein Medal awarded by the Swedish Royal Academy of Sciences and Stockholm University, the Lise Meitner Prize, and the prestigious Dannie Heineman Prize for Mathematical Physics by the American Institute of Physics and the American Physical Society.



#### JERRY RIJ B.S. EE '72, M.S. EE '73

**D**uring his notable career, Lieutenant Colonel, United States Air Force (Ret.) Jerry Rij had an important role in virtually all aspects of a 12-year evolution of a first-of-its-kind space payload for specialized applications. During this assignment, Lt. Col. Rij was competitively selected as one of the original Manned Spaceflight Engineers (MSE) to support launch and deployment of unique space systems on the Space Shuttle. Although the MSE program was discontinued following the Challenger accident, his preparation for the mission provided a once-in-a-lifetime experience on the Space Shuttle and included underwater neutral buoyancy training using Commander James A. Lovell's space suit from Apollo Mission XIII.

# My mechanical engineering degree, with its applied problem solving focus, shaped the way I approach real-world issues today.

**Clifford M. Samuel** 



#### SAMIR SAINI B.S. CE '97

**S**amir Saini is Commissioner of the New York City Department of Information Technology and Telecommunications, where he oversees the foundational IT infrastructure and systems that affect every area of city life. Previously, as CIO for the City of Atlanta, Saini created Connect-Home, a federally-backed program that connects assisted housing residents to the internet. Known for his use of technology for responsive, customer-focused government, his work in Atlanta earned him recognition by *Government Technology* magazine in 2017 as a Top 25 CIO of Doers, Dreamers, Drivers. Before entering public service, Saini built his IT experience at major corporations such as General Electric and MGM Resorts International.



#### CLIFFORD M. SAMUEL B.S. ME '88

As senior vice president, Access Operations and Emerging Markets of Gilead Sciences, Inc., Clifford Samuel leads a team that makes Gilead's HIV/AIDS medicines available to patients in more than 130 countries, regardless of where they live or what economic means they have. Among his achievements, he enabled the company to bring HIV/ AIDS medicines to 10 million patients in a cross-section of countries defined as poor developing world countries, based on gross national income per capita, as well as a high HIV/AIDS disease burden. Samuel is currently under consideration for induction to the American Institute for Medical and Biological Engineering for "pioneering new approaches to providing medicines in developing countries."



#### THE HONORABLE PAUL A. SARLO B.S. CE '92, M.S. CE '95

Paul Sarlo is accomplished in two fields: construction engineering and politics. Among his achievements is the highly successful reconstruction of the Routes 4 and 17 interchange in Bergen County. Although it was his first major assignment when he joined Joseph M. Sanzari, Inc., he brought the \$50 million project to conclusion nearly two years ahead of schedule. Within seven years, he was managing the company. In 2003, Senator Sarlo was elected to the New Jersey State Senate in a decisive win even though he was considered the underdog against a long-time incumbent. Senator Sarlo currently chairs the Senate Budget and Appropriations Committee, and serves on the Joint Budget Oversight, Higher Education, Judiciary and Legislative Oversight Committees. The Senator's influence is, without a doubt, felt throughout the state: he is included in the 2017 NJBIZ Power 100 list.



#### PHILLIP SCOTT, P.E, C.M.E. B.S. CE '98

Newark has become something of a second home to Phillip Scott. As director of the Department of Engineering for the City of Newark, Scott is Mayor Ras J. Baraka's representative on the Board of Trustees for the North Jersey Transportation Planning Authority. He also serves as the City's flood administrator for the Federal Emergency Management Agency (FEMA). Scott joined the Baraka administration in October of 2014. He is a licensed professional engineer, as well as a certified municipal engineer in the State of New Jersey. Prior to coming to work for the City of Newark, Scott spent more than 16 years as a consulting engineer for real estate development projects throughout New Jersey, primarily on projects for developments in Newark and the surrounding urban area.

# Believe in yourself, stay curious, and lead or be part of strong teams...and remember to give back to NJIT!





#### VIRGINIA C. SULZBERGER B.S. EE '62, M.S. EE '66

Virginia C. Sulzberger (née Thomas) served as directorengineering at the North American Electric Reliability Council (NERC) in Princeton, New Jersey, for 20 years, until she retired in 2006. At NERC, Sulzberger played a leadership role in the development of the first comprehensive Planning Standards for the high-voltage electric power transmission systems in North America (United States and Canada). Prior to her work at NERC, Sulzberger held engineering and planning positions at major corporations including Exxon Enterprises and PSE&G. She is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE), and in 2014 received the IEEE Power & Energy Society's Lifetime Achievement Award. In 2015, Sulzberger was elected to the National Academy of Engineering. She is the first U.S. female electrical engineer elected by the Academy into its Electric Power and Energy Systems Engineering section.



#### RICHARD P. SWEENEY B.S. IA '82, '18 HON

**D**ick Sweeney, inventor and business mind behind the original Keurig coffee system, learned about teamwork during his time in the U.S. Army as a leader on a Long Range Reconnaissance Patrol — service that included a 13-month tour in Vietnam. He joined the Keurig team in 1993, tasked with automating the company's brewer and coffee manufacturing processes. At Keurig, Sweeney led the development of several U.S. and international Keurig appliance, packaging and automation patents. In addition to its reputation for quality and innovation, Keurig is known for its socially responsible business practices, which includes investing in sustainably-grown coffee and involvement in social and environmental projects.



#### MARTIN TUCHMAN B.S. ME '62

From the start of his career, the namesake of NJIT's Martin Tuchman School of Management was influencing shipping and container technology and standards. While an automotive engineer at Railway Express Agency, Tuchman and his colleagues developed a new standard for intermodal containers and chassis, which allows for interchangeability of equipment in every mode — rail, truck and ship. The standard is still in use. He later helped form Interpool, one of the nation's leading container leasing corporations, and Trac Lease, now one of the largest chassis leasing companies in the United States. Tuchman has been named Entrepreneur of the Year by Ernst & Young, and received a Hero Medal at The Smithsonian Institute.



#### YING WU M.S. ME '01, '16 HON

**N**JIT alumnus Ying Wu — for whom the College of Computing is named — has been on the cutting edge of telecommunications since he graduated in 1988. After serving as a member of the Bell Labs technical staff, Wu founded Starcom Network Systems, which later merged with Unitech Telecom to form UTStarcom in 1995. This was followed by the founding of the company's China-based subsidiary, UTStarcom (China) Ltd. Wu led the company in developing the "Little-Smart" wireless communication system which made mobile phone services widely accessible, transforming the lives of more than 100 million people. In 1998, Wu was named Star of Asia by Businessweek and in 2003, he was identified by China Central TV as one of the Top 10 Most Influential Persons in China's economy. Wu also serves his native country as an economic development consultant.

Today's students are lucky. They are studying the latest knowledge while the world is facing the greatest-ever opportunity in technology. Make yourselves ready! *Ying Wu* 

ur greatest challenge, of course, was to select only 30 alumni for this list.

We are also prepared to acknowledge that there might be an influential NJIT alumna or

alumnus who has escaped our notice. If you would like to nominate a Highlander for our

2019 list of NJIT influencers, contact Michael K. Smullen, executive director of

Alumni Relations, at msmullen@njit.edu.