

FLORIDA INVENTORS HALL OF FAME

4th Annual Induction Ceremony & Gala

Friday, September 8, 2017 = Hilton Tampa Downtown = 211 North Tampa Street = Tampa, Florida

DENNIS A. ROSS

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August 21, 2017

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Dr. Paul R. Sanberg Florida Inventors Hall of Fame 3702 Spectrum Boulevard, Suite 165 Tampa, Florida 33612

Dear Dr. Sanberg,

It is with great pleasure that I extend my congratulations to the Florida Inventors Hall of Fame on its fourth annual induction ceremony and gala. This is an initiative that spans the entire state, furthering the growth of industry and encouraging funding of the Florida innovation sector.

Since its founding in 2013, the Florida Inventors Hall of Fame has brought outstanding innovative talent within our state to the forefront and recognized its importance not only to Florida but the nation as well. This year is no different as you celebrate the eight inventors being inducted.

I applaud the following Floridians for their contributions that have led to the betterment of society: Issa Batarseh, inventor of the compact high efficiency solar panel; voltage scaling pioneer Michael Deluca; Kenneth Ford, artificial intelligence and human-centered computing designer; physician and inventor of a revolutionary disposable punch biopsy tool Phillip Frost; Richard Gitlin, creator of the DSL; Thomas Maren, physician and scientist whose research resulted in the first topical treatment for glaucoma; and Florida Tech engineering team Dwayne and Mary McCay for improving healthcare safety.

One of our country's greatest strengths is the innovation of its citizens. Organizations such as the Florida Inventors Hall of Fame remind us of this and I commend your efforts in honoring these outstanding inventors.

Sincerely, Rep. Dennis A. Ross

Member of Congress





Congressional Record

United States of America

PROCEEDINGS AND DEBATES OF THE 115^{th} congress, first session

House of Representatives HON. GUS M. BILIRAKIS OF FLORIDA Extension of Remarks Florida Inventors Hall of Fame 2017 Thursday, July 17, 2017

Mr. Speaker, I rise today to honor the eight inventors who have been recognized as the 2017 Inductees of the Florida Inventors Hall of Fame. In order to be named as an Inductee, these inventors were nominated by their peers nationwide and have undergone the scrutiny of the Florida Inventors Hall of Fame Selection Committee. As a result, their innovations have been identified as significantly impacting the quality of life, economic development, and welfare of their communities, the citizens of Florida, and the United States.

The Florida Inventors Hall of Fame was founded in 2013 by Paul R. Sanberg, Senior Vice President for Research, Innovation and Knowledge Enterprise, and Judy Genshaft, President, at the University of South Florida. It was recognized by the Florida Senate with Senate Resolution 1756, adopted on April 30, 2014. Its mission is to encourage individuals of all backgrounds to strive toward the betterment of Florida and society through continuous, groundbreaking innovation by celebrating the incredible scientific work that has been or is being accomplished in Florida and by its citizens.

Nomination to the Florida Inventors Hall of Fame is open to all Florida inventors (living or dead) who are or have been residents of Florida. The nominee must be a named inventor on a patent issued by the United States Patent and Trademark Office. The impact of the inventor and his or her invention should be significant to society as a whole, and the invention should have been commercialized, utilized, or led to important innovations.

The 2017 Inductees of the Florida Inventors Hall of Fame are: Issa Batarseh, director of the Florida Power Electronics Center at the University of Central Florida in Orlando, for inventing low cost, high efficiency micro-inverters for photovoltaic (PV) applications that led to the creation of the first compact single solar PV panel; Michael J. DeLuca, electrical engineer and intellectual property counsel for NextEra Energy, Florida Power & Light, in Juno Beach, for his groundbreaking technology known today as "voltage scaling," which significantly increased the battery life of portable communication devices; Kenneth M. Ford, co-founder and CEO of the Florida Institute for Human and Machine Cognition, in Pensacola and Ocala, for his pioneering work in artificial intelligence and human-centered computing, and for his significant contributions to the United States and Florida's technology and research communities; Phillip Frost, physician, inventor, and current CEO of OPKO Health in Miami, who invented a revolutionary disposable punch biopsy tool, as well as various therapeutic methods for treating psoriasis, heart and respiratory diseases; Richard D. Gitlin, State of Florida 21st Century World Class Scholar and Distinguished University Professor at the University of South Florida in Tampa, for development of the original digital subscriber line (DSL) and his subsequent inventive research and development in digital communications, broadband networking, and wireless systems that transformed communication technology; Thomas H. Maren, (1918-1999), physician, Graduate Research Professor at the University of Florida (UF) in Gainesville, and charter member of the UF College of Medicine faculty, who made underlying discoveries that resulted in the invention and commercialization of Trusopt[®], the first topical treatment for glaucoma; and T. Dwayne McCay and Mary Helen McCay. Dwayne McCay, President of the Florida Institute of Technology (FIT) in Melbourne, and Mary Helen McCay, whose novel approaches in the area of metallurgical engineering, specific to laser-induced surface improvement (LISI), have greatly contributed to increased patient safety and improved medical outcomes in facilities nationwide.

Innovation and invention are the building blocks of our nation. I applaud these highly accomplished individuals and the organizations that support them in their quest to change the world in ways that truly benefit humanity. Furthermore, it is because of the perseverance of these inventors that future generations are encouraged to reach beyond their limits and push the boundaries of innovation.



NOW OPEN! FLORIDA INVENTORS HALL of FAME EXHIBIT

Indoor Exhibit Open Monday - Friday, 8 am - 6 pm Outdoor Exhibit Open 24 hours

> 3802 Spectrum Boulevard Tampa, FL 33612



Welcome to the 4th Annual Induction Ceremony and Gala of the Florida Inventors Hall of Fame. We are honored to have you with us this evening.

The Florida Inventors Hall of Fame was founded in 2013 to honor and celebrate those inventors whose achievements have advanced the quality of life for Floridians, our state, and our nation. The Hall of Fame encourages individuals of all backgrounds to strive toward the betterment of Florida and society through continuous, groundbreaking discoveries.

The Florida Inventors Hall of Fame was recognized on April 30, 2014, with a resolution passed by the Florida Senate to honor outstanding Florida inventors. The resolution, adopted at the request of Senator Jeff Brandes, recognizes the Florida Inventors Hall of Fame "for its commitment to honoring inventors and celebrating innovation, discovery, and excellence in this state."

Nomination to the Florida Inventors Hall of Fame is open to all Florida inventors (living or deceased) who are or have been residents of Florida and whose connection to Florida has informed their inventive work. The nominee must be a named inventor on a patent issued by the United States Patent and Trademark Office. The impact of the inventor and his or her invention(s) should be significant to society as a whole and should have been commercialized, utilized, or have led to important innovations.

Each year inductees are nominated by their peers through an open nomination process. The nominations are reviewed by our Selection Committee comprising distinguished experts in relevant fields of innovation throughout the state. Nominees elected to the Hall of Fame are inducted at our annual gala, where their achievements are honored and their influence on society acknowledged and celebrated.

It is a privilege to serve with the other members of our Advisory Board, an outstanding and diverse group of leaders and inventors representing public corporations, private businesses, research universities, nonprofit institutes, governmental agencies, and other organizations. We appreciate their guidance and support.

On behalf of the FIHF Advisory Board, we thank President Judy Genshaft and the University of South Florida for their vision and collaboration in founding and hosting the Florida Inventors Hall of Fame.

We also thank the Florida High Tech Corridor Council, our Corporate Partner, whose continued support has been instrumental in the success of the Florida Inventors Hall of Fame.

And, finally, we thank our valued sponsors, new and returning, for helping make this evening possible.

Paul R. Sanberg Chair, Advisory Board Florida Inventors Hall of Fame If we worked on the assumption that what is accepted as true really is true, then there would be little hope for advance.

-Orville and Wilbur Wright



MASTER OF CEREMONIES Bill Green

OPENING REMARKS

Paul R. Sanberg Chair, Florida Inventors Hall of Fame Advisory Board President Judy Genshaft University of South Florida System

Andrew Hirshfeld Commissioner for Patents United States Patent and Trademark Office

INDUCTION CEREMONY

Commissioner Hirshfeld Dr. Sanberg

• INDUCTEES •

Issa Batarseh, Ph.D., PE

University of Central Florida professor and director of the Energy System Integration Division at the Florida Solar Energy Center, for inventing low cost, high efficiency microinverters for photovoltaic (PV) applications that led to UCF becoming the first university to design and market the microinverter for a single solar PV panel *Orlando*

Michael J. DeLuca, J.D.

Electrical Engineer, IP attorney, and prolific inventor, for his groundbreaking "voltage scaling" technology that significantly improves the battery life of portable computerized devices, as well as his electric power, augmented reality, and digital camera inventions

Juno Beach

Kenneth M. Ford, Ph.D.

Co-founder and CEO of the Florida Institute for Human and Machine Cognition, for his pioneering work in artificial intelligence and human-centered computing, and his significant contributions to the United States and Florida's technology and research communities

Pensacola

Phillip Frost, M.D.

Highly respected physician, internationally recognized businessman, and one of the nation's leading philanthropists for inventing a revolutionary disposable punch biopsy tool, as well as developing various therapeutic methods for treating psoriasis, and heart and respiratory diseases

Miami

RICHARD D. GITLIN, SC.D.

State of Florida 21st Century World Class Scholar and University of South Florida Distinguished Professor, for his innovative research and development in digital communications, broadband networking, and wireless systems that transformed communications technology

Татра

Thomas H. Maren, M.D. (1918-1999)

Physician, University of Florida Graduate Research Professor and charter member of the UF College of Medicine faculty who made the underlying discoveries behind Trusopt^{*}, the first commercialized topical treatment for glaucoma *Gainesville*

T. Dwayne McCay, Ph.D. & Mary Helen McCay, Ph.D.

Florida Institute of Technology scientist couple whose novel approaches in laser-induced surface improvement have greatly contributed to increased patient safety and improved medical outcomes in facilities nationwide *Melbourne*





Bill Green On-Air Guest Trainer & Special Event Host, HSN

Bill Green is HSN's On-Air Guest Trainer & Special Event TV Host. He is also one of most successful male sales professionals on television in electronic retailing and is now responsible for the development and implementation of HSN's On Air Guest Training Programs. Bill personally trains and coaches all on air guests, celebrities and guest experts who present their products across all retail categories. Bill was born in Miami, Florida as a first generation American of Greek and Jewish heritage. He has served for over 23 years as one of the television hosts and personalities for HSN, the world's pioneer of electronic retailing. As a multi-category host, Bill has professionally and credibly presented just about every type of merchandise in the retail industry and became one of the most well versed, and well "liked" and "followed" male show hosts by viewers of all demographics, with a strong expertise in fine fashion jewelry and watches, electronics, home fashions, home organization, kitchen, cooking and culinary, women's apparel, accessories and shoes, do-it-yourself, outdoor lawn and garden, crafts and scrapbooking, and more. His unique, entertaining, sometimes comical yet sincere and down-to-earth personality connects with viewers and keeps them coming back for more. Since its inception, Bill has served as master of ceremonies for the Florida Inventors Hall of Fame.



Paul R. Sanberg

Chair, Florida Inventors Hall of Fame Advisory Board 2015 Inductee, Florida Inventors Hall of Fame

Dr. Paul R. Sanberg is senior vice president for research, innovation and knowledge enterprise, Distinguished University Professor, and executive director of the Center of Excellence for Aging and Brain Repair at the University of South Florida, and founder and president of the National Academy of Inventors (NAI). He holds over 150 U.S. and foreign patents. His work has been instrumental in translating new pharmaceutical and cellular therapeutics to clinical trials and commercialization for Tourette syndrome, stroke, ALS, Alzheimer's, Huntington's, and Parkinson's disease. He is the author of more than 650 scientific publications and 14 books, with over 28,000 citations to his published work. He is a Charter Fellow of the NAI, 2015 Medalist of the Florida Academy of Sciences, Fellow of the American Association for the Advancement of Science, American Institute for Medical and Biological Engineering, and Royal Societies of Chemistry, Public Health and Medicine, and AAAS-Lemelson Invention Ambassador.



President Judy Genshaft

University of South Florida System Florida Inventors Hall of Fame Advisory Board

Dr. Judy Genshaft serves as president of the University of South Florida System, one of the world's most comprehensive metropolitan research universities. USF ranks among the Top 50 research universities nationwide in total research expenditures, according to the National Science Foundation, and among the Top 10 public universities in the nation receiving U.S. patents. Serving nearly 50,000 students, the three institutions of the USF System — USF in Tampa, USF St. Petersburg and USF Sarasota-Manatee — have an annual economic impact of \$4.4 billion. USF is a Charter Member Institution of the National Academy of Inventors.



Andrew H. Hirshfeld, Esq.

Commissioner for Patents, U.S. Patent and Trademark Office (USPTO) Florida Inventors Hall of Fame Advisory Board

As Commissioner for Patents, Andrew Hirshfeld manages and leads the patent organization as its chief operating officer. He is responsible for managing and directing all aspects of this organization which affect administration of patent operations, examination policy, patent quality management, international patent cooperation, resources and planning, and budget administration. In his previous role as Deputy Commissioner for Patent Examination Policy, Hirshfeld served as an authority on patent laws, rules, and examining practice and procedure, and provided administrative oversight and direction for the activities of the Office of Petitions, Office of Patent Legal Administration, and the Office of the Manual of Patent Examining Procedure. Hirshfeld established patent examination and documentation policy standards for the Commissioner for Patents. Prior to serving as Deputy Commissioner for Patent Examination Policy, he was the Chief of Staff to the Under Secretary of Commerce for Intellectual Property and Director of the USPTO. Hirshfeld began his career at the USPTO in 1994 as a Patent Examiner.

is pleased to join in recognizing and congratulating the 2017 inductees of the Florida Inventors Hall of Fame

Congratulations!

"To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advance in science." — Albert Einstein

> UNITED STATES PATENT AND TRADEMARK OFFICE

FLORIDA INVENTORS HALL OF FAME INDUCTEES



FLORIDA INVENTORS HALL OF FAME



2017

Issa Batarseh, Ph.D., PE

Director, Energy System Integration Division, Florida Solar Energy Center (FSEC) Professor of Electrical and Computer Engineering, University of Central Florida Orlando

• 31 Patents •

Dr. Issa BatarseH received his Ph.D. and M.S. in electrical engineering and B.S. in computer engineering and science from the University of Illinois at Chicago. In a career spanning over three decades in education and research, Batarseh has served in numerous academic and administrative positions at the University of Central Florida (UCF) and abroad. Currently he is professor of electrical engineering at UCF and serving as director of the Energy System Integration Division at FSEC. In 1998 he established UCF's Florida Power Electronics Center and has been serving as center director since then.

In addition to educational activities, Batarseh has pursued power electronics research that focuses on the development of advanced systems for solar energy conversion to reduce costs and improve power density, efficiency, and performance. His team is working on developing innovative power electronic systems to enable the conversion of energy collected in solar panels into domestic electricity grids. Batarseh's contributions in solar energy conversion are significant. In 2006, his work culminated in the conception of the world's first grid-tied microinverter architecture for photovoltaic (PV) applications at the modular level. He has been recognized for developing and commercializing the first low cost, high efficiency microinverter (AC Module) from academia. The technology, developed by Batarseh and his team at UCF, has made significant contributions in smart solar energy conversion. To date, he is a co-inventor on 31 U.S. patents for the commercialization of products and author of more than 350 refereed articles and 2 books, with approximately 8500 citations to his published work. He has also secured nearly \$15 million for research in energy conversion and integration technologies.

As a passionate entrepreneur and innovator, Batarseh co-founded two successful solar-focused start-up companies: Petra Systems and Advanced Power Electronics Corp. (APECOR), both of which are now operating nationally and internationally. Petra Systems launched in 2007 by licensing Batarseh's patents from UCF, and establishing its initial R&D activities in UCF's Research Park. The fundamental qualities of Petra Systems that have led to its success are reflected in the initial investment of \$54 million of venture capital. Petra designed and manufactured the first smart-grid interactive solar power system for installation on utility distribution poles and enabling smart city solutions. The Florida-based APECOR is a leading designer of solar chargers for military applications. Batarseh serves both companies as a founding board member and technical advisor.

Batarseh is a fellow of the National Academy of Inventors (NAI), American Association for the Advancement of Science, and Institute of Electrical and Electronics Engineers; a registered professional engineer in Florida; has been a board member of the Electrical and Computer Engineering Department Heads Association and Fulbright Commission; and member of NASA Electrical Power TDT; and co-founded the UCF NAI Chapter, where he also serves as president.



FLORIDA INVENTORS HALL OF FAME



2017

Michael J. DeLuca, J.D.

Electrical Engineer and IP Counsel, Florida Power & Light NextEra Energy Juno Beach • 150 Patents •

MICHAEL J. DELUCA is a long time Floridian and inventor on 150 U.S. patents in a variety of fields including electric power systems, wireless communications, advanced user interfaces, augmented reality, and digital camera technologies, many with global license and litigation exposure.

During his first 10 years as an electrical engineer at Motorola in Plantation, Florida, DeLuca realized that his problem solving abilities were producing a number of significant patents. He became involved in the patent process and was persuaded to become a patent attorney. Nevertheless, his passion remains for engineering, inventing, and inspiring fellow inventors. He has contributed to both technology and intellectual property (IP) advancements as an Integrated Circuit design director, joint venture general manager, IP counsel in corporate and law firm settings, and executive positions with telecommunication and green energy startup ventures.

DeLuca is being recognized for his groundbreaking "voltage scaling" invention. Voltage scaling takes advantage of the inverse square relationship between voltage and power, the proportional relationship between computer clock speed and energy, and the observation that computers in portable devices spend most of their time idling. DeLuca's team was first to conceive and implement a computer system able to synchronously scale its voltage supply with its dynamic clock speed, operating high and fast upon demand but low and slow when idle, radically improving battery life.

Voltage scaling was invented in the late 1980s, when the United States was engaged in an epic competition to recapture the worldwide quality leadership title from Japan. Voltage scaling was first introduced in Motorola pagers designed and manufactured in Boynton Beach, Florida, for export to the highly discriminating Japanese market. "This leap frog technology helped us to again produce compelling U.S. made products," said DeLuca. "We not only incorporated the power of the newly emerging microcomputer but did so with significantly better battery life — helping America recapture our leadership title." Today, voltage scaling is essential to virtually every cellphone and laptop device.

Inventing for numerous assignees including Motorola, SiriusXM, Google, BlackBerry, Interoperable Technologies, Vuzix, and PhotoNation, DeLuca sees patentable opportunities in almost any area of focus. Today at NextEra Energy in Juno Beach, Florida, he enjoys inspiring the next generation of inventors to expand their innovative abilities in the introduction of large scale solar and wind energy programs. His continuing contributions in the advancement of clean and renewable energy technologies promise to benefit Floridians with a cleaner and greener environmental future.







2017

Kenneth M. Ford, Ph.D. Co-founder and CEO, Florida Institute for Human and Machine Cognition

Pensacola

• 2 Patents •

DR. KENNETH M. FORD is co-founder and chief executive officer of the Florida Institute for Human and Machine Cognition (IHMC), a not-for-profit research institute headquartered in Pensacola, Florida, with a second location in Ocala.

Under Ford's leadership IHMC has grown into one of the nation's premier research organizations with world-class scientists and engineers investigating a broad range of topics related to building technological systems aimed at amplifying and extending human cognition, perception, locomotion, and resilience. Ford is the author of hundreds of scientific papers and six books. His research interests include: artificial intelligence, cognitive science, human-centered computing, and entrepreneurship in government and academia. He received his Ph.D. in computer science from Tulane University.

Ford holds two U.S. patents. His first patent is for a revolutionary method of knowledge modeling and sharing that became IHMC's popular concept mapping software. These CmapTools are currently being used by millions of people around the world in education, government and other communities to interact with and explore domains of knowledge. His second patent is for a technology called the Process Integrated Mechanism (PIM), which enables the coordinated behavior of distributed systems.

Ford's contributions to the United States and Florida's research communities are far-reaching. He was asked by NASA in 1997 to develop and direct its new Center

of Excellence in Information Technology at the Ames Research Center in Silicon Valley, where he also served as associate center director. Subsequently, in July 1999, Ford was awarded the NASA Outstanding Leadership Medal. He then returned to private life in Florida and to IHMC.

In October 2002, President George W. Bush nominated Ford to serve on the National Science Board, and in 2005, he was appointed and sworn in as a member of the Air Force Scientific Advisory Board. He later became a member of the NASA Advisory Council and on October 16, 2008, Ford was named as chairman – a capacity in which he served until October 2011.

Ford was awarded NASA's Distinguished Public Service Medal, the highest honor the agency confers, in August 2010. In February 2012, Ford was named to a two-year term on the Defense Science Board and in 2013, he became a member of the Advanced Technology Board, which supports the Office of the Director of National Intelligence.

Ford is a fellow of the Association for the Advancement of Artificial Intelligence, a charter Fellow of the National Academy of Inventors, and a member of the Association for Computing Machinery, the IEEE Computer Society, and the National Association of Scholars. In 2012, Tulane University named Ford its Outstanding Alumnus in the School of Science and Engineering. The Association for the Advancement of Artificial Intelligence named Ford the recipient of the 2015 Distinguished Service Award and, that same year, he was elected as a fellow of the American Association for the Advancement of Science.



FLORIDA INVENTORS HALL OF FAME



2017

Phillip Frost, M.D.

CEO and Chairman, OPKO Health Miami

• 9 Patents •

Dr. PHILLIP FROST is a respected physician, internationally recognized businessman, and one of the nation's leading philanthropists. Frost's collegiate career began in the arts as a French literature major at the University of Pennsylvania. He then attended Albert Einstein Medical College, studying dermatology. His training in dermatology was completed at the University of Miami-Jackson Hospital. After five years as a faculty member at the University of Miami, he was instrumental in the founding of Mount Sinai Medical Center's dermatology program in South Florida.

Through his experience in medical practice, Frost played a key role in the development of skin patch administration of medications. Since then, his contributions to the state of Florida and society include an original invention of a disposable punch biopsy tool, still widely used today. He has also developed various therapeutic methods for treating psoriasis and heart and respiratory diseases. Frost has been granted nine U.S. patents that assist in the treatment of allergic rhinitis, mast cell disorders, diabetes, and autoimmune diseases.

His innovative ideas and business foresight have impacted healthcare in the U.S. and abroad. Prior to becoming CEO and chairman of OPKO Health, Frost began his medical career as a lieutenant commander in the U.S. Public Health Service at the National Cancer Institute. In 1966, he went on to teach at University of Miami School of Medicine, and then served as chairman of the Department of Dermatology at Mount Sinai Medical Center of Greater Miami from 1972 to 1986. During his tenure at Mount Sinai, he took control of his first pharmaceutical company, Key Pharmaceuticals. He turned this near bankrupt company into an innovative and profitable organization that was acquired by Schering-Plough in 1986.

Frost continued to practice dermatology until 1990, during which time he created the IVAX Corporation. IVAX became

an international success and was sold for \$7.4 billion to Teva Pharmaceuticals, in 2016. Today, Frost's leadership at OPKO Health continues to strategically transform clinical research into novel drug therapies and diagnostic products. OPKO Health is the nation's third largest clinical diagnostic laboratory with production and distribution assets world-wide. One of the trademark products created by OPKO's team of scientists is the 4Kscore[™] test that is currently being used to help predict the presence of prostate cancer. Frost is also a director of Cocrystal Pharma, Inc., a publicly traded biotechnology company developing new treatments for viral diseases, and Sevion Therapeutics, Inc., a clinical stage company which discovers and develops next generation drug products for the treatment of cancer and immunological diseases.

Previously, Frost served on the Board of Regents of the Smithsonian Institution, as a trustee of the Scripps Research Institute, on the board of directors for the Miami Jewish Home for the Aged, chairman of the board for Temple Emanu-El (Miami Beach, Florida), and chairman of the department of dermatology at Mount Sinai Medical Center of Greater Miami, and chairman of the board of trustees at the University of Miami.

For over 50 years, both Phillip Frost and his wife, Patricia Frost, have made a lasting impact on the future of science, art, innovation, and entrepreneurship in south Florida. By sharing their success with the wider community and helping inspire a new generation of inventors through institutions such as the University of Miami's Frost School of Music, Frost Art Museum at Florida International University, Phillip and Patricia Frost Museum of Science, the Frost Institute of Chemistry and Molecular Sciences at the University of Miami, and the Frost Scholars program at Oxford University in England, they provide unparalleled opportunities for the best and brightest scholars from Florida.

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2017 INDUCTEE

Richard D. Gitlin, Sc.D.

State of Florida 21st Century World Class Scholar Distinguished University Professor Agere Systems Endowed Chair, Department of Electrical Engineering, University of South Florida

Татра

• 65 Patents •

DR. RICHARD D. GITLIN has produced technologies that have revolutionized communications and technology worldwide. He holds 65 U.S. patents and is responsible for the co-invention of the Digital Subscriber Line (DSL) in 1988. DSL technology resulted in the ability to send megabits per second on copper and allowed Internet access over telephone networks revolutionizing how humankind has transmitted information ever since. He also initiated 56K modem development, helped create Globespan (an early DSL chip vendor), is the co-inventor of multicode CDMA (used in 3G HSDPA wireless); pioneered MIMO spatial processing (now used in 3G/4G/5G and WiFi wireless); and is the co-inventor of adaptive equalizer to compensate for polarization dispersion in fiber optic systems, among many other significant contributions. The impact of Gitlin's inventions is so extensive, it affects anyone who uses a computer or a smart phone, and the economic benefit is in the billions of dollars.

He is a member of the National Academy of Engineering, a fellow of the IEEE, a Bell Laboratories Fellow, and a Charter Fellow of the National Academy of Inventors. Gitlin is also a co-recipient of the IEEE 2005 Thomas Alva Edison Patent Award and the IEEE S.O. Rice prize, the co-author of a seminal textbook in electrical engineering, and he has published more than 150 papers.

Gitlin's career as an inventor, educator and global technology leader began on an impressive note. He entered college at the age of 16 and earned an undergraduate degree with honors from the City College of New York, and his Master's and Doctor of Science degrees in Electrical Engineering from Columbia University. He went on to work for more than 45 years in leadership and distinguished positions in the communications and networking industry. He was at Bell Labs/Lucent Technologies for 32 years, performing and leading pioneering research and development in digital communications, broadband networking, and wireless systems, including serving as senior vice president for communications and networking.

Currently, Gitlin is a State of Florida 21st Century World Class Scholar, a Distinguished University Professor and the Agere Systems Chaired Distinguished Professor of Electrical Engineering at the University of South Florida (USF). He continues to be a leading thinker in American innovation, especially in advancing wireless and cellular systems. His current research direction is the intersection of communications with medicine, and he has created an interdisciplinary team that is focused on wireless networking and in vivo miniature wirelessly controlled devices to evolve minimally invasive surgery, the vectorcardiogram (a personalized, diagnostic-quality ECG), and other cyber-physical health care systems.

True to his devotion to education, Gitlin has actively involved USF students in this ground-breaking research and is a much admired faculty member among both undergraduates and graduate students. His commitment to educating the next generation of engineering leaders is evidenced in his co-authorship of *Data Communications Principles*, an electrical engineering textbook published in 1992 that was the standard text for data communications students for a decade, and mentoring his students and colleagues, both in their research and in advancing their professional careers.



FLORIDA INVENTORS HALL OF FAME



2017

Thomas H. Maren, M.D.

Graduate Research Professor, University of Florida Chair, Department of Pharmacology, UF College of Medicine Gainesville (1919–1999)

• 2 Patents •

DR. THOMAS H. MAREN came from a family of teachers in New York City. Entering Princeton University at age 16, Maren was a chemistry major with a strong interest in literature. Upon graduation in 1938, he took an additional year obtaining a master's degree from Princeton in English literature. But Maren was strongly attracted to scientific research. He took a job as the sole researcher for a small pharmaceutical company, Wallace Labs of New Jersey, working on formulations of deodorants and depilatories. He convinced the lab director to allow him to pursue his own independent research on anti-parasitics using compounds developed in Wallace labs. This work was noticed by a prominent faculty member at the Johns Hopkins School of Public Health, who recruited Maren to his research program developing medications to treat parasitic diseases.

Maren's creative and medically important research was recognized, and he was recruited into the Johns Hopkins Medical School in 1946. During his medical training at Hopkins, he carried out research in the lab of the distinguished pharmacologist E. K. Marshall, M.D., Ph.D., on drugs affecting renal function. Having obtained his medical degree, Maren went to work at the research labs of American Cyanamid taking advantage of his expertise in renal drugs. This led to his interest in the medical effects of the inhibition of carbonic anhydrase, a prominent enzyme in renal function, respiration, and fluid secretion. These topics guided him through his entire research career until his death in 1999.

In 1955, Maren was recruited to be the first chair of the Department of Pharmacology and Therapeutics in the new medical school at the University of Florida (UF). Here he was a major influence in developing the medical curriculum and recruiting faculty. Continuing his research on the application to medicine of inhibition of carbonic anhydrase, he accumulated more than 200 research publications over a career of nearly 45 years at UF. His work elucidated the physiology of renal acidification, cerebrospinal fluid formation, and respiration, among other topics.

Maren is most known, however, for demonstrating to the medical community the treatment of glaucoma through the use of eye drops containing carefully designed inhibitors of carbonic anhydrase. His research produced the underlying discoveries behind Trusopt*, the first commercialized topical treatment for glaucoma. When the royalties from Maren's patent became available to him, he was a generous benefactor, establishing endowed chairs at the UF College of Medicine and Johns Hopkins School of Medicine, funding a conference center at the Mount Desert Island Biological Lab in Maine, and supporting programs to promote reading efficiency among disadvantaged young students in Gainesville.







2017

T. Dwayne McCay, Ph.D.

President and CEO, Florida Institute of Technology Melbourne

Mary Helen McCay, Ph.D.

Director, National Center for Hydrogen Research Florida Institute of Technology Melbourne

• 15 Patents •

DRS. T. DWAYNE AND MARY HELEN MCCAY have committed their lives to scientific advancement and education for the betterment of humankind. They have been issued 15 jointly held U.S. patents, mostly in the areas of metallurgical engineering and materials science. Additionally, between them, they have authored approximately 200 technical publications, including two books.

Collaborative research conducted by the McCays has led to patents in a number of important areas. Their patented method for marking, tracking, and managing hospital instruments is designed to improve healthcare safety. Other patents have focused on enhancing the performance of materials, including: a laser bonding process; an apparatus for laser alloying induced improvement of surfaces; an apparatus and method for producing an improved laser beam; a method for joining dissimilar metals or alloys; a method for producing alloyed bands or strips on pistons for internal combustion engines; and a method for increasing the wear resistance in an aluminum cylinder bore.

Dr. Dwayne McCay holds a B.S., M.S., and Ph.D. in Engineering and Mathematics from Auburn University, and became the fifth president of the Florida Institute of Technology July 1, 2016. His previous 13 years at the university included service as provost, chief academic officer, executive vice president and chief operating officer. He is also a professor in physics and space sciences and mechanical and aerospace engineering at the university. His commitment to enriching the STEM-related offerings of Florida Tech is positively impacting the education and business community, especially given the university's strategic location at the eastern end of Florida's High Tech Corridor.

Before joining Florida Tech in 2003, he was vice president for research and information technology for The University of Tennessee System, overseeing statewide research and information technology and the UT-Battelle management contract for the Oak Ridge National Laboratory. He also served The UT Space Institute as Alumni Distinguished Service Professor of Engineering Science, program chair of engineering science and mechanics, and campus chief executive officer. His early career included leadership at the NASA Marshall Space Flight Center. There, in the Structures and Propulsion Laboratory, he was chief of the Propulsion Division; branch chief of Turbomachinery and Combustions Devices Branch and of the Propulsion Analysis Branch; and senior aerospace engineer of the Auxiliary Propulsion Branch. He played a leadership role in oversight of the space shuttle fleet's main propulsion systems. He also served at the Air Force Rocket Propulsion Laboratory as senior research physical scientist and ARO, Inc. as a research engineer.

Dr. Mary Helen McCay is a native of southeast Florida. She attended Florida State University where she received her B.S. and M.S., becoming the first female to be awarded a degree in engineering from FSU, and the University of Florida, where she earned her Ph.D. in metallurgical engineering. Watching launches from Florida's shores instilled in her a desire to pursue engineering and to join NASA and the space program. During her NASA career, she was a payload specialist astronaut (alternate), was principal investigator on a Microgravity Laboratory I flight experiment, and three other flight experiments. She earned NASA's Exceptional Scientific Achievement Medal in 1982.

Her research interests while at NASA included the influence of the gravitational force on single crystal growth, directional solidification, and casting. This involved optical observations of the phenomena as well as investigating the grain structures and substructures in metallic alloys. Other interests were failure analysis and the influence of the environment (hydrogen, corrosive mediums, etc.) on material properties.

She is the director for the National Center for Hydrogen Research and a professor of mechanical engineering at Florida Tech. Prior to her service at Florida Tech, she was chair of the Center for Laser Applications and received the Chancellor's Award for Creativity in Research at the University of Tennessee and the American Museum of Science and Energy Technical Achievement Award.

2017 Selection Committee ____



Randy E. Berridge

Florida High Tech Corridor Council Chair, Florida Inventors Hall of Fame 2017 Selection Committee

Randy Berridge has held the position of president of the Florida High Tech Corridor Council since its formation in 1996. He recently announced his retirement. Berridge will continue as a member of the Florida High Tech Corridor Council serving in an advisory and planning support role. He is also president of the Berridge Consulting Group Inc. Previously, Berridge held several positions with AT&T Corporation, including chair of the Central Florida AT&T Management Council; district manager of public relations for the Florida division; manager of legal and divestiture planning; and coordinating supervisor of budgets, forecasts, planning, human resources and telephone manufacturing. Berridge currently serves on the boards of the National Academy of Inventors and the Florida Inventors Hall of Fame and is an emeritus board member of the Astronauts Memorial Foundation. He has previously served on the boards of the Enterprise Florida Stakeholder Council, Florida Chamber Foundation, Leadership Florida, Florida Research Consortium, Southern Association of Colleges and Schools Commission on Colleges (SACSCOC), the Foundation for Florida's State Colleges, Kids House of Seminole County, National Center for Simulation, Metro Orlando Military Affairs Commission, National Entrepreneur Center, Career Source Florida, Orlando Economic Partnership, Tampa Bay Partnership, Tampa Bay Technology Forum, University of Central Florida Foundation, University of Florida Center for NanoBio Sensors, University of South Florida Tampa Bay Tech Incubator, and University of Central Florida's Incubator Network.



Elizabeth Lea Dougherty

Director of Inventor Education, Outreach, and Recognition Office of Innovation Development, United States Patent and Trademark Office

Elizabeth Dougherty is director of inventor education, outreach, and recognition in the Office of Innovation Development at the United States Patent and Trademark Office (USPTO). She oversees programs that support the independent inventor community, small businesses, entrepreneurs, and the intellectual property interests of colleges and universities. Currently, Dougherty is on a special assignment to the USPTO Office of Government Affairs where she is coordinating outreach to the Congressional Caucuses of the 115th Congress. She received a juris doctorate from the Columbus School of Law at the Catholic University of America in 1996. Dougherty is a member of the Virginia Bar, Giles S. Rich American Inn of Court, Pauline Newman American Inn of Court, the American Bar Association, Federal Circuit Bar Association, American Intellectual Property Law Association, Patent and Trademark Office Society, Supervisory Patent Examiners and Classifiers Organization, Women in Science and Engineering, and Prince George's County Historical Society.



Andrés G. Gil

Vice President for Research and Economic Development, Dean of the University Graduate School Florida International University

Dr. Andrés G. Gil became vice president for research at Florida International University (FIU) in 2008, and subsequently vice president for research and economic development and dean of the Graduate School. He also served as associate vice president for research and as director of research development in the College of Health and Urban Affairs at FIU. He is also a professor in the Robert Stempel College of Public Health and Social Work. His research interests primarily focus on adolescent substance use and mental health and health disparities. His research has been funded by NIH Institutes and foundations and has appeared in top tiered journals. He has been a member of several Initial Review Groups for NIH, including for the Center for Scientific Review, NIMH, NIAAA, and SAMHSA. He has also been a member of the Advisory Council for NIAAA. He has held leadership positions in various organizations, including LCAT, SURA and APLU.



Sharon A. Heise

Associate Director Institute for Human & Machine Cognition

Dr. Sharon Heise is associate director at the Florida Institute for Human and Machine Cognition (IHMC) in Pensacola. As a member of IHMC's senior leadership team, Heise oversees all aspects of IHMC research initiatives. She previously served 20 years in the U.S. Air Force, where she was most recently director of mathematics and information sciences at the Air Force Office of Scientific Research. She holds a Ph.D. in control engineering from Cambridge University, U.K. She is a graduate of the Program for Senior Executives in National and International Security at the Kennedy School of Government, Harvard University.



David R. Makufka

Manager Technology Transfer Office, John F. Kennedy Space Center NASA Kennedy Space Center Liaison

David Makufka has more than 33 years of experience in aerospace engineering, design and development, technology transfer, and the creation of public-private partnerships at NASA's John F. Kennedy Space Center (KSC), including the management of KSC's Technology Transfer Office since 2006. In this role, he manages the implementation of the Center's technology transfer program, including oversight of intellectual property management and technology licensing; establishing cost-shared technology development partnerships with non-NASA participants; and providing strategic guidance for patent protection and technology investments. He has directly led or assisted in the execution of dozens of patent and copyright license agreements and has created numerous joint development partnerships with industry, academia, and other government organizations for the development of technologies to meet NASA's mission needs and provide benefit to the nation. Makufka is a graduate of the Pennsylvania State University with a B.S. in mechanical engineering.



David P. Norton

Vice President for Research University of Florida

Dr. David P. Norton is vice president for research at the University of Florida (UF). Previously, he served as associate dean for research in the College of Engineering and professor in the Department of Materials Science and Engineering. He has 28 years of experience in science and technology research, having served 11 years as a research scientist at Oak Ridge National Laboratory (ORNL) prior to joining UF as a faculty member in 2000. Throughout his career at ORNL and UF, he has published over 350 refereed journal articles with more than 11,000 citations. He is an inventor on 10 patents and has presented more than 70 invited presentations at national and international conferences. Norton is a fellow of the American Physical Society, American Vacuum Society, and American Association for the Advancement of Science (AAAS), and Charter Fellow of the National Academy of Inventors. He holds B.S. and Ph.D. degrees in electrical and computer engineering from Louisiana State University.



Gary K. Ostrander

Vice President for Research Florida State University

Dr. Gary K. Ostrander is vice president for research, president of the Research Foundation, and professor of medicine at Florida State University. He completed his Ph.D. at the University of Washington and postdoctoral training at the UW Medical School. He previously served as a faculty member and administrator at Oklahoma State University, Johns Hopkins University, and the University of Hawaii. His research initially focused on exploiting novel aspects of the biology of fishes to address fundamental questions of cancer biology. Recently, his efforts have been aimed at understanding the worldwide deterioration of coral reef ecosystems. He has authored/ co-authored more than 85 peer-reviewed publications and edited or authored five books.

Paul R. Sanberg

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M.J. Soileau

University Distinguished Professor of Optics and Photonics, Electrical and Computer Engineering and Physics University of Central Florida 2016 Inductee, Florida Inventors Hall of Fame

From 1998 until 2016, Dr. M.J. Soileau led the University of Central Florida's (UCF) sponsored research activities and management of interdisciplinary centers and institutes as the vice president for research and commercialization. Today, he is a professor of optics and photonics, electrical and computer engineering, and physics at UCF. He is known for his pioneering research in nonlinear interaction of laser pulses with optical materials and for leading the development of the internationally recognized Center for Research and Education in Optics and Lasers (CREOL) at UCF as its founding director. Soileau holds six U.S. patents, the applications of which have contributed to the advancement of high energy laser optics used by the United States Department of Defense. He is a Fellow of the American Association for the Advancement of Science (AAAS), IEEE Photonics Society Life, Optical Society of America (OSA), International Society for Optics and Photonics (SPIE), and the National Academy of Inventors. In 2016, Soileau was inducted into the Florida Inventors Hall of Fame.



Jack Sullivan, Jr. President and CEO

Florida Research Consortium

Since 2003, Jack Sullivan has been president and CEO of the Florida Research Consortium (FRC), a strategic partnership between Florida's research assets and the business community, focused on enhancing progressive research programs in Florida to promote quality economic growth. Sullivan joined the FRC after a successful private sector career, and he continues to manage a portfolio of commercial and agricultural real estate. Sullivan's current volunteer service includes the not-for-profit boards of BioFlorida and the Florida Chamber Foundation. He earned a B.A. from Davidson College and MBA from Vanderbilt University.

Advisory Board

Randy E. Berridge See page 26



Senator Jeffrey P. Brandes

Florida State Senator 24th District

Florida State Senator Jeff Brandes represents Florida Senate District 24, in Pinellas county. He was originally elected to the Florida House of Representatives in 2010, was subsequently elected to the Florida Senate in 2012, and has been re-elected since. Senator Brandes serves as the chairman of the Senate Appropriations Subcommittee on Transportation, Tourism, and Economic Development. He also serves on a number of other committees including the Senate Committee on Community Affairs and Criminal Justice. Previously, Senator Brandes served on the Meet the Need.org Board of Directors from 2010 to 2012. Prior to that, he served in the U.S. Army Reserves as a transportation officer from 1996 to 2007. During his time in the Army Reserves, he served a tour of duty in Iraq from 2003 to 2004. Currently, Senator Brandes is a member of Bay Cities Bank Board of Directors and is a member of Leadership St. Petersburg. He resides in St. Petersburg with his wife and three children.



Phoebe Cade Miles

President, Cade Museum

Phoebe Cade Miles founded the Cade Museum in 2004. She is also co-founder and vice-president of the Gloria Dei Foundation, a family-operated charity that awards grants to organizations that promote the common good in accordance with Christian principles. Both Gloria Dei and the Cade Museum Foundation were endowed with gifts by Miles' parents, Dr. Robert Cade and Mary Cade. Dr. Cade, a University of Florida researcher and physician who passed away in November 2007, was best known as the leader of the team that invented Gatorade in 1965. A native of Gainesville, Florida, Miles has lived much of her adult life overseas, accompanying her husband to official postings with the U.S. Army in Nuremberg, Germany, and with the U.S. State Department in Bridgetown, Barbados; Berlin, Germany; and Buenos Aires, Argentina. She has been married to Richard Miles, also of Gainesville, since 1985. They have three children, Christian, Cecelia, and Elena.



Curtis R. Carlson

Author, Inventor and Entrepreneurer

Dr. Curtis R. Carlson is founder and CEO of Practice of Innovation, a company dedicated to improving innovative performance. From 1988 to 2014, Carlson served as president and CEO of SRI International, a leader in creating major innovations, such as Siri, HDTV, and Intuitive Surgical. In 1973, he joined RCA Laboratories, which became part of SRI in 1987 as the Sarnoff Corporation. There, Carlson started and helped lead development of HDTV technology that became the U.S. standard, for which his team won the first of two Emmy[®] Awards. His BusinessWeek Top-10 book with William Wilmot, *Innovation: The Five Disciplines for Creating What Customers Want*, describes how SRI's proven innovation methodology can be applied to government and commercial enterprises. He is a member of the NAE initiative to recommend improved innovation practices for the NSF. He is a Charter Fellow of the National Academy of Inventors.



Kathy Castor

U.S. Representative Florida's 14th Congressional District

Kathy Castor is the U.S. Representative for Florida's 14th congressional district, serving in Congress since 2007. Castor is the first woman to represent Hillsborough and Pinellas counties in the U.S. Congress. She serves as the Vice Ranking Member of the influential House Energy & Commerce Committee. Before being elected to Congress, Castor served as a Hillsborough County Commissioner and chair of the Hillsborough County Environmental Protection Commission. She is a graduate of Emory University and Florida State University College of Law, former president of the Florida Association of Women Lawyers, and a partner in a statewide law firm.

Elizabeth Lea Dougherty

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Jonathan M. Ellen

President and Physician-in-Chief Johns Hopkins All Children's Hospital

Dr. Jonathan M. Ellen is president and physician-in-chief of Johns Hopkins All Children's Hospital, a member of Johns Hopkins Medicine and vice dean for All Children's Hospital and professor of pediatrics in Johns Hopkins University School of Medicine. He is leading the transformation of All Children's from a regional pediatric referral center to an academic children's hospital and national leader in research, teaching, and patient care. Ellen has worked with leaders of the University of South Florida, Morsani College of Medicine to strengthen the ACH-USF affiliation and their combined efforts in pediatric education and research. He is teaming up with a variety of community hospitals and providers in the Tampa Bay region and beyond to expand pediatric networks that ensure optimal care for children with complex and chronic medical conditions. He has received more than \$25 million in research awards from the Centers for Disease Control (CDC), NIH, and other agencies. Ellen has authored more than 200 peer-reviewed scientific articles and 30 reviews, editorials, and book chapters.

Kenneth Ford See page 17

Judy Genshaft See page 9



Gordon Gillette

President and CEO Tampa Electric & Peoples Gas and TECO Energy

Gordon L. Gillette is president and chief executive officer of Tampa Electric and president of Florida Operations, which includes TECO Peoples Gas System. He is responsible for the operations of both utilities, including Business Strategy and Renewables, Energy Supply, Electric and Natural Gas Delivery, Customer Care, Fuels Management, State and Community Relations, and Regulatory Affairs. Previously president of Tampa Electric & Peoples Gas and prior to that executive vice president and chief financial officer for TECO Energy, Gillette has held numerous leadership positions at TECO since 1981. A licensed Professional Engineer, Gillette is a member of the American Society of Mechanical Engineers and the Florida Engineering Society. He serves on the board of the American Gas Association, Enterprise Florida, the Florida Coordinating Group, and the Tampa General Hospital Foundation and Positive Coaching Affiliation. Past chair of the USF Foundation, he currently serves as co-chairman of the USF Foundation's Unstoppable Campaign.



William Scott Green

Senior Vice Provost and Dean of Undergraduate Education University of Miami

As senior vice provost and dean of undergraduate education, Dr. William Scott Green is responsible for developing and strengthening university-wide components of undergraduate learning. He has worked to enhance, devise, and appropriately support programs in such areas as study abroad, academic advocacy for underrepresented students, career services, learning assistance, civic engagement, undergraduate research, and the honors program. Green currently holds an appointment as professor of religious studies and senior fellow in the University of Miami's Sue and Leonard Miller Center for Contemporary Judaic Studies. He is former editor of the Journal of the American Academy of Religion, the leading scholarly periodical in religion. Among other professional activities, he served on the board of the Association of American Colleges and Universities and the Reinvention Center, a consortium of major research universities committed to improving undergraduate education.

Andrew H. Hirshfeld See page 9



John Hitt

President University of Central Florida

Dr. John C. Hitt became the fourth president of the University of Central Florida (UCF) on March 1, 1992. A physiological psychologist, he had prepared for this presidency throughout his career as a scholar, dean, provost, vice president for academic affairs, and interim university president. Under his leadership, enrollment at UCF has nearly tripled, the number of doctoral degrees awarded each year has increased eightfold, research funding has increased from \$28 million to \$133 million a year, and UCF has founded its own College of Medicine. In recent years, Hitt has received a number of prestigious awards and honors, such as induction in the National Center for Simulation Modeling and Simulation Hall of Fame and placement among the Orlando Sentinel's 25 Most Powerful People in Central Florida and *Orlando Magazine's* 50 Most Powerful People. He also received the Orlando Business Journal's first-ever Legacy Award and the Orlando Sentinel's 2005 Central Floridian of the Year Award.



Richard A. Houghten

CEO and Founder Torrey Pines Institute of Molecular Studies

Dr. Richard A. Houghten is CEO and founder of Torrey Pines Institute for Molecular Studies, a not-for-profit medical research organization. The Institute began operations in 1989 and has become internationally recognized for its scientific contributions. He has held positions at the University of California, San Francisco, Mount Sinai School of Medicine, and The Scripps Research Institute. Houghten serves as a Senate Appointee on the Biomedical Research Advisory Council for the state of Florida's Department of Health. His many awards include the 2004 Ralph Hirschmann Award in Peptide Chemistry by the American Chemical Society, the 2005 Bruce Merrifield Award by the American Peptide Society, and UCSD Connect's Athena Pinnacle Award for Empowering Women in the Workplace. He has over 500 publications, 81 U.S. and 47 foreign patents. Houghten is an American Association of Pharmaceutical Sciences Fellow, American Association for the Advancement of Science (AAAS) Fellow, and a Charter Fellow of the National Academy of Inventors.



Richard Jove

Director

Cell Therapies Institute, Nova Southeastern University

Dr. Richard Jove is Distinguished Research Professor and Cell Therapy Institute Director at Nova Southeastern University (NSU) in Fort Lauderdale. He also serves as chair of the Department of Biomedical Sciences in the new NSU M.D. College. Jove received his doctoral training at Columbia University and postdoctoral training at Rockefeller University. He began his career at the University of Michigan, Ann Arbor. Subsequently, Jove helped establish the Moffitt Cancer Center as professor and director of the Molecular Oncology Program. He then was deputy director of the National Cancer Institute Comprehensive Cancer Center and director of the Beckman Research Institute at City of Hope National Medical Center in Los Angeles. Jove was continuously funded by the NIH for nearly 3 decades, has published over 230 research articles, and has almost 50 patents issued and pending.



Paul Lemmo

Vice President Fire Control/Special Operations Forces Contractor Logisitics Support Services (SOF CLSS) Lockheed Martin Missiles and Fire Control

Paul Lemmo is vice president of Fire Control/SOF CLSS Line of Business for Lockheed Martin Missiles and Fire Control and manager and chair of the board of Lockheed Martin Systems, LLC. He leads the corporation's center of excellence for electro-optical, infrared, and radar targeting and navigation systems on rotary-wing and fixed-wing aircraft, advanced fire control and situational awareness systems for future platforms, ground systems, and passive attack and platform survivability systems. He has more than 28 years of experience in business development, engineering and program management. Prior roles include vice president of business development and strategy at two Lockheed Martin business areas: Information Systems and Global Solutions (IS&GS) and Mission Systems and Sensors (MS2). Lemmo is a graduate of the General Electric Edison Engineering Program and received a master's degree in electrical engineering from Drexel University and an MBA from The Wharton School of the University of Pennsylvania. He currently serves on the Florida High Tech Corridor Council as an executive board member



Alan List

President and CEO Moffitt Cancer Center and Research Institute

Dr. Alan List is president and chief executive officer of Moffitt Cancer Center in Tampa. He is internationally recognized for his many contributions in the development of novel, more effective treatment strategies for myelodysplastic syndrome (MDS) and acute myeloid leukemia (AML). List lectures nationally and internationally and is the author of more than 350 peer-reviewed articles. He is active in numerous professional organizations and serves on the International Board of Directors and the Executive Committee of the MDS Foundation, Inc. List is a Charter Fellow of the National Academy of Inventors and holds six patents.



Arthur Molella

Director Emeritus Smithsonian's Lemelson Center for the Study of Invention & Innovation

Dr. Arthur Molella is the Jerome and Dorothy Lemelson Director Emeritus of the Smithsonian Institution's Lemelson Center for the Study of Invention & Innovation at the National Museum of American History. He is the Center's founding director. He is also Senior Lecturer of History of Science and Technology at the Johns Hopkins University. Molella was head curator of the Smithsonian's Science in American Life exhibition and co-curator of the international exhibition, Nobel Voices, a celebration of the centeary of the Nobel Prize. He has published and lectured widely on the relations between science, technology, and culture. His publications include *Inventing for the Environment* (ed. with Joyce Bedi, MIT, 2003) and *Invented Edens: Techno-Cities of the 20th Century* (with Robert Kargon, MIT, 2008), and *World's Fairs on the Eve of War: Science, Technology, and Modernity, 1937-1942* (with Kargon, et al, Pittsburgh, 2015). He currently serves on the board of the National Inventors Hall of Fame, and is a former board member of the National Academy of Inventors.



Jeremy Montague Former President Florida Academy of Sciences

Dr. Jeremy Montague, professor of biology at Barry University, was the president of the Florida Academy of Sciences (FAS) from 2015-2017, having served previously as the FAS Program Chair (2003-2012) and FAS Secretary (2010-2015). He has been with Barry University since 1983. He earned his B.S. cum laude at SUNY College at Geneseo, M.S. at Kent State University, and his Ph.D. at Syracuse University. At the undergraduate level, he has taught introductory biology, botany, zoology, ecology, marine biology, and evolution; at the graduate level, he has taught biostatistics, experimental design, and epidemiology. He has authored or co-authored 33 peer-reviewed articles in professional journals, focusing mainly on statistical work in terrestrial ecology, marine biology, cell biology, and educational program assessment. He is secretary for the Barry University Chapter of the Sigma Xi National Honor Society (1998-present).



JoAnn Newman

President and CEO Orlando Science Center

Originally from Pennsylvania, JoAnn Newman has a bachelor's degree in industrial engineering from Penn State University and a master's degree in industrial engineering from Purdue University. She began her engineering career with AT&T Microelectronics in Allentown, PA and relocated with AT&T to Orlando, Florida in 1989 to start up a new semiconductor manufacturing facility. When she left the corporation, now known as Agere Systems, in 2003, she had risen to the position of vice president of manufacturing with responsibility for a staff of 650. Newman came to the Orlando Science Center in 2003. Prior to being named president and CEO in 2009, she served as director of exhibits, then vice president of operations and chief operating officer. During her time as president, the Orlando Science Center has seen tremendous growth with total attendance doubling and with the organization reaching over 600,000 people annually. Newman is dedicated to guiding the Orlando Science Center as a strong community partner for informal science education, family engagement and workforce development.



James J. Padilla

Former President and CEO, Ford Motor Company

James Padilla was an operations turnaround and product launch expert at Ford Motor Company for forty years. His responsibilities took him from being a chemical engineer during the gas crisis of the early 1970s to the White House working for the Secretary of Commerce, to president of the Ford South America Operations in Brazil, to Group Vice President of Global Manufacturing and Quality, culminating in successfully leading as COO and chairman of Automotive Operations. Padilla has followed his long and distinguished career at Ford Motor Company with new leadership roles in the alternative energy sector and continued involvement with higher learning and minority business development. He continues to be regarded as one of the leaders in the Hispanic community and in Detroit charitable institutions. In his board capacities, he continues to provide insights into industry trends and governmental affairs. He currently serves as chairman of the board for TPA, Inc., Michigan's largest capacity biodiesel producer, process technology provider and algal biodiesel research facility; National Council of La Raza, the largest national Hispanic civil rights and advocacy organization in the U.S.; University of Detroit Mercy; Fusion Future Foundation; and Focus: HOPE, a nationally recognized civil and human rights organization in Detroit.



Janet E. Petro

Deputy Director John F. Kennedy Space Center

Janet E. Petro is the deputy director of NASA's John F. Kennedy Space Center in Florida. Appointed to the deputy director position in April 2007, she shares responsibility with the center director in managing the Kennedy team of approximately 8,600 civil service and contractor employees, determining and implementing center policy, and managing and executing Kennedy missions and agency program responsibilities. She served a 12-month appointment at NASA Headquarters in Washington, D.C. as the deputy associate administrator and acting director for the Office of Evaluation. Petro began her professional career as a commissioned officer in the U.S. Army after graduating in 1981 from the U.S. Military Academy at West Point with a bachelor of science degree in engineering. She served in the U.S. Army's aviation branch with various assignments overseas in Germany. She also holds an MBA from Boston University's Metropolitan College.



Grover C. Robinson IV

Commissioner, BBC District 4 Past President, Florida Association of Counties

Grover C. Robinson IV is a seventh generation Pensacolian who grew up in Escambia County's District 4. First elected to his home district in 2006, Robinson became a Florida Certified Commissioner in June 2008 and served as the Escambia County Board of County Commissioners' chairman in 2009-10 and 2015-16 and president of the Florida Association of Counties in 2014-15. Robinson received a bachelor of science degree in economics (summa cum laude) from Birmingham-Southern College.



Mark B. Rosenberg

President Florida International University

Dr. Mark B. Rosenberg is the fifth president of Florida International University (FIU). He brings over 35 years of experience in higher education leadership to this post. The author or co-editor of seven books and numerous scholarly articles in leading journals, Rosenberg was one of the principal architects of FIU's growth and expansion during the past decade and played a lead role in development of FIU's new Herbert Wertheim College of Medicine. From 2005-2008, he served as chancellor of the State University System of Florida and was instrumental in developing a new financial strategy to support the continuing development and expansion of the State University System. Rosenberg holds a Ph.D. from the University of Pittsburgh and a B.A. from Miami University of Ohio, where he was Phi Beta Kappa. He is a Fulbright Research Scholar and a member of the Council on Foreign Relations in New York.



Dennis A. Ross

U.S. Representative Florida's 15th Congressional District

Representative Dennis Ross is a staunch advocate on behalf of his constituents in central Florida. He is currently serving his fourth term in the U.S. House of Representatives. He studied organizational management at Auburn University's School of Business and earned his juris doctorate from Cumberland School of Law at Samford University in Alabama. Ross has worked in a private law firm, served as in-house counsel for Walt Disney World, and later started his own practice. He was elected to the state legislature in 2000, where he has represented central Florida for four terms.

Paul R. Sanberg, Chair

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Mark Sharpe

Executive Director Tampa Innovation Alliance

A Tampa native, Mark Sharpe became executive director of the Tampa Innovation Alliance in 2014. He previously was elected to the Hillsborough County Commission in Countywide District 7 seat in 2004. He was re-elected in 2006 and again in 2010 to serve his final four-year term. Sharpe was the Board's vice chairman from 2007-2011. Prior to his election, Sharpe served eight years as an active-duty officer in the U.S. Navy. He retired after two decades of service, which included 12 years in the U.S. Naval Reserves. Sharpe is chairman of the Hillsborough Metropolitan Planning Organization and an active member of the Hillsborough Area Regional Transit Authority (HART). He served on the boards of directors for the Tampa Hillsborough Economic Development Corporation and Tampa Bay Partnership and also represented the County Commission on the boards of the Museum of Science and Industry and Tourist Development Council. After being termed out in 2014, Sharpe accepted his current position with the Tampa Innovation Alliance, where he has continued his efforts to bring jobs and improve Hillsborough County.



Kristiina Vuori

President

Sanford Burnham Prebys Medical Discovery Institute

Dr. Kristiina Vuori is president of Sanford Burnham Prebys Medical Discovery Institute (SBP) and professor and Pauline & Stanley Foster Presidential Chair. She earned her M.D. and Ph.D. degrees at University of Oulu, Finland, received postdoctoral training at SBP, and was appointed to the faculty in 1996. She served as director of the Institute's NCI-designated cancer center in 2005-2013, and she has been president of SBP since 2010. Vuori was selected PEW Scholar in 1997, elected to the National Academy of Inventors in 2014, and is an investigator of a Stand Up To Cancer Dream Team. She serves or has served on boards of directors for the American Association for Cancer Research, California Institute for Regenerative Medicine, California Breast Cancer Research Program, and WebMD. She is co-founder of three biotechnology companies, and her research focuses on cancer metastasis. Presently, one approved drug and five therapies for cancer in Phase III trials stem from the work of SBP scientists.



• 2016 •



William S. Dalton, Ph.D., M.D.

Founder and CEO of M2Gen[®] Director, DeBartolo Family Personalized Medicine Institute at Moffitt Cancer Center Former President and CEO, H. Lee Moffitt Cancer Center and Research Institute, Professor of Oncology, University of South Florida Tampa

Dalton, former president and CEO of Moffitt Cancer Center and Research Institute, is the founder and current CEO of M2Gen[®], a subsidiary of Moffitt, recognized for his revolutionizing developments in cancer treatment. His research in molecular mechanisms of drug resistance led to the creation of Total Cancer Care[™]: personalized protocols for the treatment of cancer and information/decision tools used by clinicians worldwide. To date, Total Cancer Care[™] has impacted the lives of over 120,000 patients and includes one of the largest bio-repositories and data warehouses in the U.S., dedicated to the improvement of personalized medicine. Dalton is regarded as a health policy expert on the study and development of the most effective approaches to cancer research and serves at the state level in an advisory role to the Governor, the Chief Justice, and Legislature to promote the economic growth of Florida and improve the quality of life of the citizens of Florida.



D. Yogi Goswami, Ph.D.

Distinguished University Professor in Chemical Engineering Director of the Clean Energy Research Center University of South Florida Tampa

Goswami is a Distinguished University Professor in chemical engineering, and director of the Clean Energy Research Center, at the University of South Florida, known for his pioneering contributions and technology development related to solar energy and indoor air quality. Goswami's contributions in combined power/cooling cycles have impacted global research in a new class of thermodynamic cycles. He has invented nano-scale antenna technologies to convert sunlight to power and thermal energy storage technologies. He also founded Transformair, Inc., which is commercializing his technology to destroy indoor air pollutants including viruses, bacteria, mold, airborne fumes and allergens, helping allergy and asthma sufferers worldwide. Goswami has served as an advisor and given testimonies on energy policy and the transition to renewable energy to the U.S. Congress and various governments around the world. He has published 19 books and is the Editor-in-Chief of *Solar Energy* journal.



Alan George Marshall, Ph.D.

Professor of Chemistry Founding Director and Chief Scientist of the Ion Cyclotron Resonance (ICR) Program Florida State University Tallahassee

Marshall is a professor of chemistry and founding director and chief scientist of the Ion Cyclotron Resonance (ICR) Program at Florida State University, which has attracted \$50M in grant support to Florida. He co-invented and leads continuing development of the Fourier Transform Ion Cyclotron Resonance (FT-ICR) mass spectrometry that aids in the study of molecular structure and the composition of cells. Marshall's inventions created an entirely new arena of discovery in a broad range of fields, from petroleum analysis to biomedicine. His original patents spawned the first commercial instrument (Nicolet Instrument Corp.) and subsequent FT-ICR instruments from other companies, with more than 800 FT-ICR instruments installed worldwide.



Nicholas Muzyczka, Ph.D.

Professor of Microbiology Edward R. Koger Eminent Scholar for Cancer Research University of Florida Gainesville

Muzyczka is a professor of microbiology and Edward R. Koger Eminent Scholar for Cancer Research at the University of Florida (UF), recognized for his pivotal invention of the original patent for recombinant adeno associated virus (rAAV) vectors. Muzyczka's lab created a breakthrough with successful production of the AAV2 genome and AAV vectors. His research has led to potential therapies for neurodegenerative, pulmonary, cardiovascular, and eye diseases. In 1994 he became founding director of Powell Gene Therapy Center, making UF one of the leading institutions in AAV gene therapy. In 2001, Muzyczka founded Applied Genetic Technologies Corp (AGTC) a Florida based company that commercializes gene therapy applications.



Jacqueline W. Quinn, Ph.D.

Environmental Engineer and Research Scientist, Project Manager for Regolith & Environment Science and Oxygen Lunar Volatiles Extraction (RESOLVE) NASA Kennedy Space Center Titusville

Quinn is a NASA environmental engineer who leads diverse environmental chemistry research at the Kennedy Space Center and invented NASA's most licensed and recognized technology for groundwater remediation, Emulsified Zero Valent Iron (EZVI). Additional environmental remediation methods created by Quinn include AMTS and SPEARS, used for removal of cancer-causing PCBs (polychlorinated biphenyls) in materials, soils and sediments. Quinn's technologies have been licensed by companies throughout the United States and internationally. In 2005, she received both NASA's Commercial and Government Invention of the Year awards. Quinn received the Federal Lab Consortium's Award for Excellence in Technology Transfer in 2006, and was inducted into the Space Technology Hall of Fame in 2007.



Andrew V. Schally, Ph.D, MDhc (Multi), D.Sc.hc.

1977 Nobel Prize in Physiology or Medicine Distinguished Medical Research Scientist, Department of Veterans Affairs Distinguished Professor of Pathology, University of Miami Miller School of Medicine Chief of the Miami Veterans Affairs Medical Center Endocrine, Polypeptide and Cancer Institute, Miami

Schally is a Nobel Laureate and Distinguished Medical Research Scientist at the Department of Veterans Affairs, Distinguished Professor of pathology at the University of Miami, and chief of the Miami Veterans Affairs Medical Center Endocrine, Polypeptide and Cancer Institute. Schally received the 1977 Nobel Prize in Physiology or Medicine and was elected to the National Academy of Sciences in 1978 for his discovery of hypothalamic hormones. Subsequently he pioneered the application of analogues of hypothalamic hormones to cancer treatment, including the therapy of prostate cancer with agonists of LHRH used worldwide. Schally's patents are licensed to 5 companies and he is author or co-author of more than 2,400 publications.

M.J. Soileau See page 28





Henry Ford (1863-1947)

Inventor and Businessman Fort Myers

Ford revolutionized the way Americans traveled and shaped the course of the 20th century. Ford was an innovator who transformed the automobile from a luxury item to a practical means of transportation. The explosive growth that followed led to the modern roadways and transportation systems that we know today. Ford not only revolutionized industrial manufacturing and production, but continued to improve upon his initial designs and explore new fields of automotive technology. Like his friend, Thomas Edison, Ford was a firm believer in finding natural solutions to industrial problems, culminating in an international search for a plant which could produce natural rubber, with two experimental test sites in Florida, one of which—the Edison Botanic Research Corporation—was a collaborative effort with Thomas Edison and tire magnate Harvey Firestone. Ford also conducted aviation experiments and research development of the V-8 engine. Today, Ford's legacy of innovation and keen interest in research and education continues to inspire new generations.



Robert Grubbs, Ph.D.

2005 Nobel Prize in Chemistry Victor and Elizabeth Atkins Professor of Chemistry, California Institute of Technology Graduate, University of Florida Gainesville

Grubbs is a 2005 Nobel Laureate in Chemistry recognized for his contribution in the field of chemistry that has led to the creation of practical, sustainable new materials in medicine and the plastics industry. His Nobel Prize was for the development of the metathesis method in organic synthesis. Grubbs Catalyst is used worldwide in virtually any application involving metathesis chemistry (redistribution of bonds). During his initial discoveries, Grubbs was mentored in the field of organic chemistry while pursuing his B.S. and M.S. degrees at University of Florida (UF). In 1998 he received his Ph.D. in chemistry from Columbia University. Although he relocated thereafter, and has taught at CalTech since 1978, he continues to support UF Chemistry through mentoring and collaborations.



Robert Holton, Ph.D.

Matthew Suffness Professor of Chemistry Florida State University Tallahassee

Holton, a current Florida State University professor, is an American academic chemist who is known for his work regarding the chemical synthesis for Taxol, a widely-used and highly-effective anti-cancer drug. Besides Taxol, Holton was able to synthesize a range of other natural products as well. Most notable are Prostaglandin F2a, a naturally occurring prostaglandin used in medicine to induce labor; Narwedine, an important chemical reaction compound; Aphidicolin, an antibiotic with antiviral and antimitotical properties; Taxusin; and Hemibrevitoxin. Those accomplishments are a testament to Holton's dedication to science and medicine. His Taxol was the top selling anti-cancer drug in 1995 and generated over \$1.6 billion in revenues by the end of the decade. In addition, Taxol generated the largest patent payout in history for a single university (FSU).



Jerry Pratt, Ph.D.

Research Scientist, Florida Institute for Human & Machine Cognition Pensacola

Pratt leads a research group at the Florida Institute for Human and Machine Cognition that concentrates around the understanding and modeling of human gait and the applications of that understanding in the fields of robotics, human assistive devices, and man-machine interfaces. Current projects include Humanoid Avatar Robots for Co-Exploration of Hazardous Environments, FastRunner Robot, and Exoskeletons for Restoration of Gait in Paralyzed Individuals. Pratt's work in walking robotics is revolutionary and he has placed Florida on the world map in this highly competitive arena. He and his research team have several patents pending on robots that are believed at this time to be the fastest running robots in the world.

Paul R. Sanberg See page 8



Nan-Yao Su, Ph.D.

Distinguished University Professor of Entomology Fort Lauderdale Research and Education Center, University of Florida Davie

Su was recognized for the revolutionary impact of his reduced risk method for termite control as co-recipient with Dow AgroSciences for the Presidential Green Chemistry Challenge Award from the U.S. Environmental Protection Agency in 2000. His innovative research on population ecology of subterranean termites and slow-acting control agents gave Dow AgroSciences the confidence to move forward to co-develop and launch a monitoring-baiting system for population control of subterranean termites, commercially known as the *Sentricon System*. The *Sentricon System* has seen 20 years of success in the termite control market. First launched in 1995, the *Sentricon System* represented a paradigm shift in termite control and has profoundly changed the way subterranean termites are controlled worldwide.



Janet K. Yamamoto, Ph.D.

Professor, College of Veterinary Medicine, University of Florida Gainesville

Yamamoto is a professor of retroviral immunology in the University of Florida College of Veterinary Medicine's department of infectious diseases and pathology. In 1984, she established the HIV/AIDS BSL3 laboratory under the joint directive of the Schools of Medicine and Veterinary Medicine at the University of California-Davis, which became the Center for AIDS Research. She is the first to demonstrate, together with Nobel laureate Dr. Francoise Barré-Sinoussi, that interferon-gamma will not protect against HIV-1, and she has served as the consultant of the second FDA-approved HIV-1 Western blot for HIV-1 confirmatory test. Yamamoto co-discovered the feline immunodeficiency virus, FIV, the feline counterpart of HIV. She also invented the first commercial FIV vaccine sold by Pfizer-Zoetis and Boehringer. Her current research focus is on the development of a T-cell based HIV vaccine and she donates all of her patent royalty/licensing income to her research.

•*2014* •



Robert Cade, M.D. (1927-2007)

Professor Emeritus, University of Florida Gainesville

Cade developed Gatorade, which has protected countless amateur and professional athletes from heat-related injuries and has treated millions of people with dehydration diseases worldwide. Now owned by PepsiCo, Gatorade is listed by Forbes magazine as one of the world's 40 most powerful sports brands and has annual sales of more than \$4 billion. For the University of Florida (UF) and the citizens of Florida, the success of Gatorade has translated into more resources to support research. Since 1973, Gatorade has brought more than \$200 million to the university, enabling UF to invest in countless research projects.



Thomas Edison (1847-1931)

Inventor and Businessman Fort Myers

Edison is the most prolific inventor in U.S. history with 1,093 patents. No other inventor improved the standard of living of Americans in the 20th century as much as Edison. His inventions span diverse fields: electric lighting and power systems, batteries, recorded sound, and film. Edison contributed to both chemistry and botany with a project in Fort Myers to find a natural source of rubber to be grown in the U.S. during a national emergency. Credited for creating the first modern industrial research laboratory, Edison followed an empirical approach to scientific research and helped set the standard for how to invent. As the man of the millennium, Edison's research and business practices created the model for today's research laboratories, product development and invention processes.



William Glenn, B.E.E., M.S., Ph.D. (1926-2013)

Professor Emeritus, Florida Atlantic University Boca Raton

Glenn had a lifetime of innovations, achievements and contributions in the fields of high resolution imaging technology, electronic/optical physics and electrical engineering. A past VP/Director of Research at CBS Laboratories and Director of the NASA Imaging Technology Space Center, he developed high-definition digital imaging technology that had utility in military, aerospace, surveillance and consumer applications (Panavision). Glenn developed the High Definition Maximum Value (HDMAX) complementary metal-oxide Semiconductor (CMOS) camera, which exceeded the resolution and performance capabilities of all existing high definition television cameras. The camera was used by NASA at the international space station and versions of the HDMAX CMOS camera were developed for U.S. military use in coastline security and surveillance and by NASA for space-flight scientific observation, inspection and medical informatics.



John Gorrie, M.D. (1803-1855)

Inventor, Humanitarian, Physician Apalachicola

Gorrie invented the ice-making machine and is considered the father of air conditioning and refrigeration. Gorrie's invention began with an attempt to cure Yellow Fever during an outbreak in Apalachicola in 1841. Convinced that cold was a healer, he advocated the use of ice to cool sickrooms and reduce fever. Ice was shipped by boat from northern lakes until Gorrie's successful experimentations with the rapid expansion of gases to create refrigeration. The state of Florida honored Gorrie as a notable person in Florida's history by donating the statue of John Gorrie to the National Statuary Hall collection located in the United States Capitol Building, and naming a Florida state park and museum in his honor.



Shyam Mohapatra, M.S., Ph.D., MBA, FAAAAI, FNAI

Distinguished USF Health Professor, University of South Florida, and Research Career Scientist, James A. Haley VA Hospital Tampa

Mohapatra is recognized for his many inventions in the field of nanoscale biomedical diagnostics and therapeutics in cancers, asthma, viral infections, and traumatic brain injury. His inventions led to several customized cell-targeted nanoparticles with diverse drug payloads and a nano-HIV detection kit. Mohapatra cofounded TransGenex Nanobiotech Inc. (TGN), which specializes in manufacturing these nanoscale products. TGN is also commercializing products for 3D cancer cell culture technology and services for anti-cancer drug discovery and personalized cancer treatment (PCTx). TGN is establishing a Reference Lab for PCTx prescription in collaboration with Florida Medical Clinics. Mohapatra's research has brought the University of South Florida over \$20 million in extramural funds and includes inventions that have spun out companies. He is a Fellow of the National Academy of Inventors.



Shin-Tson Wu, Ph.D.

Pegasus Professor of Optics in CREOL, The College of Optics and Photonics University of Central Florida Orlando

Wu's contributions to liquid crystal research and the resulting patent portfolio for next-generation liquid crystal displays, adaptive optics, laser beam steering, biophotonics, and new photonic materials, have had a major impact on display technology worldwide. His most significant development to date is the mixed-mode twisted nematic LC cell, which is an integral part of high-resolution, high-contrast reflective and transflective LCDs, including direct-view, projection and wearable displays. Wu's technologies have enabled new types of optical beam control devices and have impacted many who have ever used an LCD product, such as a smart phone, computer screen and television. He is a Fellow of the National Academy of Inventors.

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