Florida Inventors Hall of Fame Announces 2023 Inductees

Florida Inventors Hall of Fame celebrates 10 years and will induct 10 inventors who have shaped our everyday lives.

TAMPA, Fla (May 1, 2023) – Ten Florida inventors inducted into the Florida Inventors Hall of Fame demonstrate that a personal drive to improve the human condition is a powerful force for transformation. Among them are Jonathan Rothberg who pioneered the next generation of human DNA sequencing, enabling low-cost decoding of human and other living organisms' genomes; and Daniel Joseph whose advances in special effects and illusion at Walt Disney Imagineering have revolutionized the theme park experience at Disney theme parks around the world.

Together, the contributions of the 2023 Inductees include groundbreaking discoveries that have transformed medicine and healthcare, computer technology and semiconductors, optics and photonics, communications, nuclear energy, and modern color technology.

"The 2023 Inductees are a testament to American innovation. Each inductee has a remarkable inventor's story with distinct backgrounds across sector, industry, area of invention, time, and locations throughout Florida," said Paul R. Sanberg, Chair of the Florida Inventors Hall of Fame Advisory Board.

The 2023 class also includes: James Cairns whose underwater electrical, fiber-optic connector technologies revolutionized the fields of Oceanography, Marine Geology and Seismology; Jason Eichenholz whose pioneering innovations in lidar are propelling the self-driving vehicle industry; David Flinchbaugh who invented

the UroCycler® which has significantly reduced fatal catheter-associated urinary tract infection; Ophir Frieder whose disruptive advances in health monitoring, predictive medical and well-being treatment methods drastically improve patient outcomes; William Hauswirth who developed Luxturna®, the first gene therapy drug to prevent blindness; Deepika Singh whose discoveries in chemical/mechanical polishing of super-hard semiconductors significantly advanced the 5G communications infrastructure; Krishna Singh whose landmark inventions provided the foundational structure for modern nuclear power energy; and Gary Starkweather (deceased) who invented the world's first laser printer, leading the frontier of the field of color management technology.

"When you look at the life of any inventor, you will see someone who has had to face untold challenges and overcome adversity to make their invention a reality. However, they are unwilling to let fear or failure stop them from moving forward. It's that kind of perseverance that reflects the spirit of an inventor. And it's that spirit that is reflected in these remarkable inductees," said Sanberg, who also serves as the President of the National Academy of Inventors.

The 2023 Inductees constitute the ninth class to be inducted into the Florida Inventors Hall of Fame. They collectively hold more than 1,100 U.S. patents and come from across industry, academia, and government. Since its founding in 2013, the Florida Inventors Hall of Fame has inducted 68 inventors, who collectively hold over 5,100 U.S. patents.

"With Florida consistently ranking in the top 10 for states with the most patents issued every year," said Elizabeth Dougherty, the Eastern Regional Outreach Director for the U.S. Patent and Trademark Office, "it is an honor to join the Florida Inventors Hall of Fame in recognizing these outstanding Florida inventors and celebrating the journeys that each of them has taken to get to this point."

Inductees are selected annually through a nomination process open to all inventors (living or deceased) with a connection to the state of Florida. The nominations are reviewed by a Selection Committee made up of distinguished experts in relevant fields of innovation.

The 2023 class of distinguished inventors will be formally inducted into the Florida Inventors Hall of Fame at the 10th Anniversary Induction Ceremony and Gala on Friday, Oct. 6, 2023 at the Tampa Marriott Water Street in Downtown Tampa.

The 2023 Inductees of the Florida Inventors Hall of Fame are:

JAMES L. CAIRNS
Founder and Executive Director of the Cairns Foundation, and CEO of Abyssal Systems, Inc, Dr. Cairns' pioneering underwater electrical/electronic fiber-optic connector technologies allowed circuits to be successfully and seamlessly mated and de-mated reliably within the harsh environment of the deep ocean. His innovations revolutionized anti-submarine warfare and subsea surveillance, expanded the industry of ocean energy production, and significantly advanced the fields of Oceanography, Marine Geology and Seismology. He co-founded two Florida technology companies which he later sold to Lockheed Corporation and Teledyne Technology Corporation, respectively. He holds 62 U.S. patents and received the Marine Technology Society's Compass-Rolex Distinguished Lifetime Achievement Award and Lockheed Martin Award for Excellence in Marine Science and Engineering. In 2017, he was inducted into the Offshore Energy Center Hall of Fame for Pioneering Technology.

JASON EICHENHOLZ
Co-Founder and Chief Technology Officer of Luminar Technologies, Dr. Eichenholz is a serial entrepreneur and recognized trailblazer in laser and optics enabled innovations, product development and commercialization. His discoveries have led to advanced applications in science, environment, industry and medicine. Most notably, his innovations in Lidar are revolutionizing the self-driving vehicle industry. His advances in sensing technology will become the core platform to enable safe, fully-autonomous vehicles. Eichenholz holds 82 U.S. patents,

many of which have been licensed and/or commercialized into a variety of applications from battlefield explosives detection and fundamental science discoveries to early cancer detection and environmental studies. He is a Fellow of SPIE—the International Society for Optics and Photonics, and a Fellow of Optica (formerly the Optical Society of America).

DAVID FLINCHBAUGH
CEO of Technology Applications International, and CTO of Advanced Medical Innovations, Dr. Flinchbaugh is a trained nuclear physicist, health physicist and prolific inventor across a number of scientific sectors. Among his leading inventions are: a) the UroCycler® which has been clinically proven to reduce 91% of fatal catheter-associated urinary tract infections; b) ROSA, the world's first Nuclear Service Robot—a complex, high-tech robotic system for the maintenance, decontamination, and refueling of nuclear reactor electric power generation facilities; and c) the first imaging laser radar system (as CEO and founder of Laser Optical Corp); among other breakthrough innovations. Flinchbaugh holds 11 U.S. patents and founded four Florida companies. He is a Fellow of IEEE, Laser Institute of America, Optica (formerly the Optical Society of America), and the Society of Manufacturing Engineers. He also received the Medical Excellence Award, the Association for the Advancement of Medical Instrumentation Award, and the DaVinci Award.

OPHIR FRIEDER
Professor, Georgetown University and Georgetown Medical Center, and scientific advisor to several companies, Dr. Frieder's inventions in scalable information processing systems have transformed health informatics. In the medical arena, he is especially recognized for developing behavioral health monitoring used to prevent self-harm; and predictive medical and well-being treatment methods optimizing effective treatments while minimizing adverse effects. His advances have been incorporated into national programs that have enabled services such as the recently announced National Suicide Prevention Hotline. In communications, he developed mood/sentiment detection approaches for online marketing and social media interaction; and in-home electronics his inventions include interactive picture frames. Frieder holds 111 U.S. Patents. He is a Fellow of the American Association for the Advancement of Science, Association for Computing Machinery, American Institute for Medical and Biological Engineering, IEEE, and the National Academy of Inventors; and is a Member of Academia Europaea and the European Academy of Sciences and Arts.

WILLIAM HAUSWIRTH
The Rybaczki-Bullard Professor of Ophthalmology, at the University of Florida's College of Medicine, Dr. Hauswirth's pioneering work in gene therapy has contributed to restoring vision to the functionally blind for the last few decades. Most significantly, his groundbreaking development of Luxturna® was the first gene therapy drug to treat children and adults with inherited retinal disease. Hauswirth holds 20 U.S. patents, which have been licensed to more than a dozen companies. He is the co-founder of AGTC, a company which develops gene therapies to transform the lives of patients with rare inherited diseases—especially those that cause blindness. He was named Florida Scientist of the Year, and recognized in *Time Magazine* for the "Third Most Important Science Discovery of 2009." His awards include election as Fellow of ARVO-Association for Research in Vision and Ophthalmology, the Alcon Award for Vision Research, Foundation Fighting Blindness Trustees Award, and the John Kayser International award for Retinal Research, as well as several Lifetime Achievement Awards.

DANIEL JOSEPH
Principal Special Effects Designer and Illusion Developer at Walt Disney Imagineering, Mr. Joseph has revolutionized modern design and implementation of special effects, transforming them into three-dimensional, immersive and interactive experiences. A trained Industrial Designer, Joseph's advances in special effects have been created, designed, and installed for Walt Disney World, Disneyland, and Disney Parks around the world. Most notably he led the efforts to bring to life the Hatbox Ghost for the Haunted Mansion at Disneyland's 60th Anniversary, as well as Sorcerers of the Magic Kingdom, Test Track, Magic Kingdom expansion, and both Trader Sam's tiki bars, to name a few. Additionally, he has applied his industrial design to create interactive museum exhibits for such prestigious facilities as The Franklin Institute; and consulted on product development for medical equipment to improve safety and usability. Joseph holds 30 U.S. patents. One of his design patents was featured in *PC Magazine*'s article called "The Best Inventions of 2011 – So Far."

JONATHAN ROTHBERG
Founder and Chair, 4 Catalyzer Corporation, Dr. Rothberg is the pioneer of next-generation human DNA sequencing, a method for high-speed DNA analysis that enables low-cost decoding of human and other living organisms' genomes. This breakthrough has transformed life science research, healthcare, agriculture, and the development of biofuels. Through his company Hyperfine, Rothberg also developed the revolutionary Swoop™ Portable Magnetic Resonance Imaging System with the mission of making MRI accessible to every patient, regardless of income or resources. Rothberg holds over 600 U.S. patents. He is a recipient of the National Medal of Technology and Innovation and a National Academy of Engineering Member. He was named a World Economic Forum's Technology Pioneer four separate times; an Ernst and Young Entrepreneur of the Year, and received *The Wall Street Journal's* First Gold Medal for Innovation. He holds an Honorary Doctorate of Science from Mount Sinai School of Medicine.

DEEPIKA SINGH
CEO of R&D Investment Holding, Dr. Singh is a pioneer in chemical mechanical planarization or polishing (CMP), having developed and incorporated novel chemistries in the polishing of a class of super-hard semiconductors based on silicon carbide and gallium nitride. She commercialized these discoveries through Sinmat, a company she co-founded in 2002, and they are currently being used by leading global companies in some of the fastest-growing markets involving the manufacturing of smartwatches, smartphones, advanced silicon carbide; and gallium nitride electronics for electric vehicles, 5G communications infrastructure, and advanced defense electronics. Singh holds 18 U.S. patents. She is a Member of the National Academy of Engineering and was recognized by President Barack Obama at a national press conference on Investing in the Clean Energy Economy. She has received the R&D 100 Award four times.

KRISHNA SINGH
Founder, President and CEO of Holtec International, Dr. Singh's innovations provide the foundational structure for modern nuclear power energy, including systems and equipment, safe storage, and transportation of spent fuel. His advances have allowed for operational nuclear power plants to run more efficiently and safely, which is critical given that approximately 20% of domestic electricity and 14% of global electricity rely on nuclear power. Singh holds 185 U.S. patents. He is a Member of the National Academy of Engineering and the Pan American Academy of Engineering, and recipient of the Thomas Alva Edison Award. He is also a Fellow of the National Academy of Inventors and the American Society of Mechanical Engineers.

GARY K. STARKWEATHER (Deceased)
Gary K. Starkweather is an American engineer who invented the world's first laser printer and pioneered the invention of color management technology. While working at Xerox, Starkweather invented the first scanning laser output terminal. As a result of his invention, Xerox launched the 700 laser printer, which would become the most commercially profitable product coming out of Xerox PARC. He was also a consultant to the film industry, helping the digital effects team on the first Star Wars movie in 1977. During his tenure at Apple, he helped lead the development of ColorSync technology. He went on to partner with Bill Gates and Microsoft to advance imaging displays. Starkweather holds 53 U.S. Patents. He received an Academy Award in 1994 for his work on color film scanning with Lucasfilm and Pixar. He is a National Inventors Hall of Fame Inductee, Member of the National Academy of Engineering, and was awarded the David Richardson Medal.

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About the Florida Inventors Hall of Fame

The Florida Inventors Hall of Fame (FIHF) recognizes and commends Florida inventors whose achievements have advanced the quality of life for Floridians, the state and the nation. Founded in 2013 and located at the University of South Florida Research Park in Tampa, FIHF was recognized by Florida Senate Resolution 1756

in April of 2014. FIHF encourages individuals of all ages and backgrounds to strive toward the betterment of Florida and society through continuous, groundbreaking innovation, and, by commending the incredible scientific work being accomplished in the state, to further the growth of Florida's innovation sector. FIHF is supported, in part, by the Florida High Tech Corridor Council.

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