

LONNIE G. JOHNSON

Mechanical and Nuclear Engineer, Inventor

Lonnie G. Johnson has a lifetime of achievement and success, but he is best known for his invention and contribution to fun, the Super Soaker water gun, which has generated over \$1 billion in sales since 1990. Johnson conceived of a water gun powered by air pressure while conducting an experiment at home on a heat pump using water instead of Freon.



Johnson's inventing skills were apparent even as a boy. He learned from his father how to repair various household items, prompting him to create his own toys. During 1968, his senior year in high school, Johnson created a remote controlled robot, Linex, which earned him first place in a science competition at The University of Alabama sponsored by the Junior Engineering Technical Society (JETS). He attended Tuskegee University and earned a bachelor's degree in mechanical engineering in 1973, followed by a master's degree in nuclear engineering in 1975 and later an honorary Ph.D.

After graduation, Johnson entered the U.S. Air Force, serving as acting chief of the Space Nuclear Power Safety Section at the Air Force Weapons Laboratory, where he analyzed NASA space systems employing nuclear power sources. In 1979, he left the Air Force to accept a position at the NASA Jet Propulsion Laboratory in Pasadena, California, as a member of the system design team for the Galileo mission to Jupiter and its 16 moons. Johnson was responsible for integrating the nuclear power system into the design and invented the memory keep-alive power subassembly for the Galileo spacecraft. He returned to the Air Force in 1982 and was assigned to Strategic Air Command in Omaha, Nebraska, followed by a stint on the Stealth Bomber Program at Edwards Air Force Base in California. Over the course of his Air Force career, Johnson received numerous honors, including two Commendation Medals and the Air Force Achievement Medal.

In 1987, Johnson returned to the Jet Propulsion Lab, working on the Mars Observer Project and the Cassini mission to Saturn. During his career at the Jet Propulsion Lab, he received multiple achievement awards from NASA for his work in spacecraft system design. Meanwhile, after receiving the patent for his water gun invention, he spent much of the 1980s seeking a company to manufacture and market his toy. In 1989, he and Larami Corporation partnered and later that year the Super Soaker was unveiled to the public.

Johnson is currently president and founder of Johnson Research and Development Company, Inc., a technology development company and its spin-off companies, Excellatron Solid State, LLC and Johnson Electro Mechanical Systems LLC.

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Biography of keynote speaker

In 2008, Johnson received the Breakthrough Award from *Popular Mechanics* for his invention of the Johnson ThermoElectrochemical Converter System, an entirely new type of engine that converts heat directly into electricity. Articles on his inventions have appeared in the *The Atlantic*, *Time*, *The New York Times*, *Inventor's Digest* and *Popular Mechanics*.

He is board chairman of the Georgia Alliance for Children, a member of the board of directors of the Hank Aaron Chasing the Dream Foundation, and a member of the 100 Black Men of Atlanta, an organization that mentors young people through high school and college. He is a member of the FIRST Robotics Executive Advisory Board and the sponsor of two robotics teams. He has been identified as one of the 50 most influential African Americans in technology for 2011 and is featured in the National African-American Archives & Multicultural Museum. He is listed in the Black Inventors Online Museum. He holds well over 100 patents with others pending and in process. He is the author of several publications on spacecraft power systems. Johnson has been recently elected to the Alabama Engineering Hall of Fame.