Office of Naval Research
Science & Technology

Distinguished LECTURE SERIES

ONR 70TH ANNIVERSARY EDITION

in CELEBRATION *of* BLACK HISTORY MONTH

THE GLOBAL ENERGY AND ENVIRONMENTAL CHALLENGE

PRESENTED BY:

Dr. Lonnie G. Johnson

PRESIDENT & CEO, EXCELLATRON

DATE:

TUESDAY,
February 2, 2016
11:00 a.m. to Noon

LOCATION:

Office of Naval Research
875 N. Randolph St.
Arlington, Virginia
14th Floor Bobby Junker
Executive Conference Center

STREAM:

https://conference.apps.mil/webconf/onrdls

THE
GLOBAL ENERGY AND ENVIRONMENTAL CHALLENGE

Technological advancements have had a phenomenal impact on human existence. Energy use has become a primary indicator of standard of living. However, a large percentage of the world's population has not yet experienced many of the modern conveniences that we routinely take for granted. Consequently, other nations are now moving aggressively to improve the quality of life of their people. As they make progress, their needs for energy will continue to increase, creating more competition for available resources and greater impacts on the environment. Our national security depends on a healthy environment as well as a content and prosperous world population. Rapid deployment of advanced sustainable energy technology will be critical for maintaining global stability.

ABOUT
DR. LONNIE G. JOHNSON

Dr. Lonnie Johnson, a bonafide "rocket scientist," has just one mission—to ensure the world has enough energy for a prosperous future. Although he has devoted his life to solving some of the world's most complex technological problems, he is best known for his widely popular invention, the Super Soaker water gun. Dr. Johnson is a prolific inventor and holds more than 100 patents, the vast majority of which are energy related.

In 2000, realizing that a small startup company could not compete in a technology where larger, well-established companies were already beginning to focus, Johnson looked beyond Lithium ion, which was the emerging advanced battery technology at that time. With this "leap-frog" strategy, Excellatron has become a leading developer of the next two generations of battery technology, Ceramic Solid State Batteries and Lithium-Air batteries. Today, electric vehicles can run 100 miles on a single charge. However, with Excellatron's technology, an electric vehicle could potentially achieve 1,000 miles on a single charge. Excellatron currently receives support for its research from the U.S. Department of Defense (DoD).

An energy expert at the National Science Foundation has identified Dr. Johnson's battery and other energy-related inventions as being "possibly the greatest on earth." In 2011, Dr. Johnson was inducted into the Engineering Hall of Fame by the state of Alabama, the first African American to attain such an honor in the state's history. He was awarded the "Breakthrough Award" from Popular Mechanics magazine for an invention that converts heat directly into electricity. He has been featured in countless magazines and newspaper articles, and has appeared on numerous television programs.

Dr. Johnson holds a bachelor's degree in Mechanical Engineering, a master's in Nuclear Engineering and an honorary doctorate in Science from Tuskegee University. He served as a Space Nuclear Power Safety Officer in the U.S. Air Force, where he analyzed NASA space systems that used nuclear power sources. During active duty assignments in the Air Force, and tours as an employee at the Jet Propulsion Laboratory, he helped develop some of the nation's most advanced technological achievements—including the Galileo mission to Jupiter, the Mars Observer Project and the Cassini Mission to Saturn and the Stealth Bomber (B-2). He has received numerous honors including two Air Force Commendation Medals, an Air Force Achievement Medal and a number of NASA awards.

EXCELLATRON