



Dr. **Ronald M. Segal** is currently the Chief Technology Officer for the U.S. Army Futures Command. Dr. Segal served as Director and Woodward Professor of Systems Engineering at Colorado State University (CSU) from 2007 and Special Assistant to the Chancellor for Strategic Initiatives from 2013 to 2019 (currently on Leave of Absence from CSU). The Systems Engineering graduate program was developed to address increasing complexity and competition in national and economic security areas and now has approximately 130 Ph.D. students, 90 percent U.S. citizens, and for AY 2018-19 was Ranked #1 for Engineering Ph.D. Programs having an Online option. From 2010 to 2013, he was Vice President and Enterprise Executive for Energy and the Environment at CSU and The Ohio State University, a unique, shared position between two Land-Grant universities. Dr. Segal also held the position of Vice President for Energy, Environment, and Applied Research with the CSU Research Foundation from 2007 to 2010.

Dr. Segal has had an extensive career in government service, academia, research, and the private sector. He graduated with a Bachelor of Science in Math and Physics from the U.S. Air Force Academy in 1974 as a distinguished graduate. He received a Master of Science in Physics from The Ohio State University in 1975 and a Ph.D. in Electrical Engineering from the University of Colorado in 1982. His active-duty assignments included instructor pilot and Department of Physics faculty member at the U.S. Air Force Academy. He entered the Air Force Reserve in 1982 with the 901st Tactical Airlift Group at Peterson Air Force Base, Colorado, serving in a variety of operations positions. From 1987 to 2001, he served at Air Force Space Command in several assignments within Force Enhancement, Plans, Operations, the Space Warfare Center, etc., and as Mission Ready Crew Commander for satellite operations for the Global Positioning System, Defense Support Program and Midcourse Space Experiment. A command pilot with more than 4,000 flying hours, he retired from the Air Force Reserve in 2005 as a Major General, last serving as the Reserve Assistant to the Chairman of the Joint Chiefs of Staff.

Dr. Segal joined NASA as an astronaut in 1990, making his first shuttle flight in 1994 aboard the Space Shuttle Discovery. Dr. Segal was Co-Principal Investigator and Program Manager for the Wake Shield Facility which was a primary payload on this mission, a first for a member of the Astronaut Corps. From November 1994 to March 1995, he was NASA's Director of Operations, Russia, responsible for managing NASA activities supporting astronaut and cosmonaut training for flight on the Russian Mir space station and also became the first American to do EVA training in the Russian Hydrolab. He completed his second shuttle flight in 1996 as payload commander for the third shuttle/Mir docking mission aboard Atlantis, completing his astronaut tenure with 420 hours in space.

From 1982 to 2013, Dr. Segal was a faculty member in the Department of Electrical and Computer Engineering at the University of Colorado at Colorado Springs with a rank of professor since 1990, and Emeritus Professor since 2014. In addition to teaching and research activities, he was Technical Director of the Laser and Aerospace Mechanics Directorate at the U.S. Air Force Academy's F.J. Seiler Research Laboratory, and Assistant Director of the Space Vacuum Epitaxy Center, including management of the Wake Shield Facility Flight Programs at the University of Houston. Dr. Segal was the Dean of the College of Engineering and Applied Science at the University of Colorado from 1996 to 2001, adding six degree programs to the College and a remote offering of the Masters of Engineering in Space Operations.

In August 2001, Dr. Sega was appointed as Director of Defense Research and Engineering, Office of the Secretary of Defense, serving as the chief technology officer for the Department and the chief adviser to the Secretary of Defense and Under Secretary of Defense for Acquisition, Technology and Logistics for scientific and technical matters. Major Science and Technology (S&T) initiatives included: the National Aerospace Initiative, Surveillance and Knowledge Systems, and Energy and Power Technologies. Rapid reaction efforts included the Combating Terrorism Technology Task Force. Disruptive technology investments were made in areas such as small responsive satellites, hypersonics, and quantum technologies. Dr. Sega led the development of the National Defense Education Program. He co-chaired the whole-of-government study on critical skills and co-chaired forums with commercial satellite companies. Integrating efforts, within and outside of DoD, included moving the Defense Technical Information Center to the Office of DDR&E to develop a responsive global digital database, and expanding the Space Partnership Council.

Dr. Sega was Under Secretary of the Air Force, Washington, D.C. from 2005 to 2007. He was responsible for all actions of the Air Force on behalf of the Secretary of the Air Force and was acting Secretary in the Secretary's absence. In addition to support of the Secretary, his specific portfolio responsibilities included the AF space programs, R&D, and was the senior energy official. Designated the Department of Defense Executive Agent for Space, Dr. Sega developed, coordinated and integrated plans and programs for space systems and the acquisition of all DoD space major defense acquisition programs. He instituted a "Back-to-Basics" approach to space systems acquisition which was applied to GPS III after extensive interagency coordination. Under his tenure, policy inputs were made for the National Space Strategy, an Operationally Responsive Space organization was stood up, policy changes were made for existing national launch ranges, a U.S. Space Industrial Base study was conducted, and orbital launch activities were expanded at Wallops, VA, and Kodiak, AK. Dr. Sega initiated and facilitated an international space partnership with Australia involving significant collaboration on the Wideband Global SATCOM (WGS) constellation. Dr. Sega also led the Air Force team that won the overall Presidential Award for Leadership in Federal Energy Management for 2006.

Dr. Sega has authored or co-authored 150 technical publications, has served on numerous local, regional, national and corporate advisory and governance boards since leaving government service in 2007. Examples include six years on the Air University Board of Visitors, chairing the Air Force Institute of Technology Subcommittee, and eight years on the United States Army Science Board, recently chairing studies on the "Future of Army Aviation" (2015), "Multi-Domain Battle" (2017) and "Multi-Domain Operations" (2018). Dr. Sega served as a director on for-profit corporation boards and on boards for non-profit organizations including the Alaska Aerospace Corporation and the United States Space Foundation.

Dr. Sega has also participated in several national studies including chairing the 2010 National Academy study entitled: "Controlling Cost Growth of NASA Earth and Space Science Missions," and Vice-Chair of the 2012 Academy study entitled: "NASA's Strategic Direction and the Need for a National Consensus". Dr. Sega is a Member of the International Society of Astronautics, a Fellow of the American Institute of Aeronautics and Astronautics, and a Life Fellow of the Institute of Electrical and Electronics Engineers.