



BIOGRAPHY



UNITED STATES AIR FORCE

SHERY L. WELSH

Dr. Shery Welsh, a member of the Senior Executive Service, is Director, Air Force Office of Scientific Research (AFOSR), Arlington, Virginia. In this role, she leads the management of the Department of the Air Force's global basic research investment. AFOSR has a staff of 200 scientists, engineers and administrators in Arlington and foreign technology offices in London, Tokyo, Santiago, Chile and Melbourne, Australia. Dr. Welsh ensures the success of a nearly \$500 million a year basic research investment portfolio and the transition of resulting discoveries to other components of the Air Force Research Laboratory, defense industries and other Defense Department components. The AFOSR's annual investment in basic research is distributed among roughly 300 academic institutions worldwide, 100 industry-based contracts, and more than 250 internal AFRL research efforts.



Dr. Welsh brings over 34 years of experience from the DoD as a federal employee for the Department of the Air Force and the Missile Defense Agency. In her previous role, she served as the Director, Science & Technology, for the Missile Defense Agency. She sought out cutting-edge technology from across the world within industry, DoD, and the National Laboratories to advance state-of-the-art technologies to benefit the warfighter. Other assignments in the Missile Defense Agency include Chief Engineer for the Airborne Laser Program, Director of Target and Countermeasure Requirements, Chief Scientist for the Interceptor Knowledge Center and Chief Engineer for the Advanced Technology Program Office. Dr. Welsh's 20 years working for the Air Force afforded her the opportunity to work many programs such as the C-130U Gunship, C-17, Joint Strike Fighter, F-16, B-2, F-22, Airborne Laser, and the Wide-body Aerial Sensor Platform.

Her accomplishments include published articles in major scientific journals, two Rising Star Awards from the Missile Defense Agency, and Engineer of the Year from the Air Force as well as serving as a part-time professor at the University of Alabama in Huntsville.

EDUCATION

1998 Bachelor of Science Materials Science and Engineering, Wright State University, Dayton, Ohio
2000 Master of Science Materials Science and Engineering, Wright State University, Dayton, Ohio
2007 Air War College, U.S. Air Force Civilian, Wright-Patterson Air Force Base, Ohio
2014 Ph.D. Materials Science, University of Alabama (Tri-Campus Program), Tuscaloosa
2018 Federal Executive Institute, Leading in a Democratic Society, Charlottesville, Va.

CAREER CHRONOLOGY

1. April 2001–May 2005, U.S. Air Force F-22 Structures Engineer, F-22 Program Office, Wright-Patterson Air Force Base, Ohio
2. May 2005–February 2007, Joint U.S. Air Force and Missile Defense Agency Structural Integrity Technical Advisor, Airborne Laser Program, Kirtland AFB, N.M.
3. February 2007–July 2008, Missile Defense Agency Chief Engineer, Airborne Laser Program, Kirtland AFB, N.M.

4. July 2008–August 2010, Missile Defense Agency Director, Target and Countermeasure Requirements, Engineering Directorate, Redstone Arsenal, Ala.
5. July 2014–April 2017, Missile Defense Agency Chief Scientist, Interceptor Knowledge Center, Engineering Directorate, Redstone Arsenal, Ala.
6. April 2017–October 2018, Missile Defense Agency Hypersonics Analysis of Alternatives Study, Engineering Directorate, Redstone Arsenal, Ala.
7. October 2018–February 2019, Missile Defense Agency Acting Chief Engineer and STEM Co-Lead, Advanced Technology Program Office, Redstone Arsenal, Ala.
8. November 2018–April 2020, Missile Defense Agency Director, Science & Technology, Redstone Arsenal, Ala.
9. April 2020–present, Director, Air Force Office of Scientific Research, Arlington, Va.

AWARDS AND HONORS

2006 Missile Defense Agency (MDA) Rising Star Award
2008 Missile Defense Agency Ballistic Missile Defense Program Conference Speaker
2008 Missile Defense Agency (MDA) Rising Star Award
2012-2014 National Science Foundation Research Project Lead at the University of Alabama in Huntsville
2016-2017 Naval Postgraduate School Master's Capstone Project Board Member
2018 Missile Defense Agency Redesigned Kill Vehicle Alternate Guidance Unit Module coin presentation
2019 Keynote Speaker for University of Alabama in Huntsville engineering graduation
2019 Keynote Speaker, Suits for Scholars Program
2019 Moderator/Speaker at the National Space and Missile Materials Symposium and Commercial and Government Responsive Access to Space Technology Exchange conference
2020 Missile Defense Agency Ground-based Midcourse Weapon System SBIR/STTR Certificate of Appreciation
2020 Missile Defense Agency Advanced Technology Program Office "Duckie" Award

PUBLICATIONS

Air Force Aircraft Structural Integrity Program Conference Speaker (3X)
June 2014, Atomic Scale Study of the Influence of Grain Boundary Character on Segregation and Oxidation in Commercially Pure Nickel, Doctoral Thesis
January 2015, Understanding the Evolution of Grain Boundary Character During Abnormal Grain Growth in Low Strain Nickel 200, Co-Author, Conference Poster, Ninth Technical Post-Doctoral Technical Showcase, Sandia National Laboratory
Atom Probe Grain Boundary Characterization in Ni200, First Author and Presenter, Microscopy and Microanalysis Conference
June 2016, An Examination of Abnormal Grain Growth in Low Strain Nickel-200, Co-Author, Metallography, Microstructure, and Analysis
February 2016, Influence of Grain Boundary Character and Annealing Time on Segregation in Commercially Pure Nickel, First Author, Journal of Materials
November 2016, Influence of Anneal Time on Σ 3 Boundary Segregation in Commercially Pure Nickel, First Author, Metallography, Microstructure, and Analysis
2000, Published Modeling & Simulation article, Wright-Patterson AFB OH Major Shared Resource Center Journal

PROFESSIONAL DEVELOPMENT AND MEMBERSHIPS

DAWIA certifications: Systems Planning, Research, Development & Engineering, Level III; Acquisition Corps Certified; Program Management Level III
OSD-level Lean Six Sigma Black Belt Process Improvement Certification
Million Women Mentors, Member
Society for Women Engineers, Member
Participant and Support of STEMJourneys.org
Naval Postgraduate School Master's Capstone Project Board Member

(Current as of February 2021)