Air Force Scientific Advisory Board Biography Book



2019-2020

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Table of Contents

Se	ection 1: Mission of the Board	5
Se	ection 2: Member Biographies	
•	Dr. James S. Chow	7
•	Dr. Nils R. Sandell	3
•	Dr. Natalie W. Crawford	
•	Gen Donald J. Hoffman, USAF (Ret)	10
•	Dr. Andrew G. Alleyne	11
•	Dr. Michael J. Bear	12
•	Dr. Suzanne M. Beers	13
•	Mr. Aaron R. Blow	14
•	Dr. Robert J. Bontz	15
•	Dr. Rodney D. W. Bowersox	16
•	Dr. Mark E. Campbell	17
•	Dr. Melissa G. Choi	18
•	Dr. David J. Coombs	19
•	Dr. Steven T. Cummings	20
•	Dr. Llewellyn S. Dougherty	21
•	Dr. Robert V. Duncan	22
•	Dr. Philip A. Fawcett	23
•	Lt Gen Terry L. Gabreski, USAF (Ret)	24
•	Lt Col Dennis P. Gilbert, Jr., USAF (Ret)	25
•	Dr. Samuel Graham Jr.	26
•	Dr. Jonathan E. Green	27
•	Dr. Eric K. Hall	28
•	Dr. Peter A. Hancock	29
•	Dr. Ryan K. Hersey	30
•	Dr. Juliana J. Hsu	31
•	Dr. Eric K. Jones	32
•	Dr. Ann R. Karagozian	33
	Dr. Leo C. Kempel	34

•	Dr. Brian Michael Kent	35
•	Dr. Tadayoshi Kohno	36
•	Mr. William (Glenn) Kuller	37
•	Gen Lester L. Lyles, USAF (Ret)	38
•	Dr. Kevin C. Massey	39
•	Mr. Thomas E. McNeil	40
•	Dr. Todd D. Murphey	41
•	Dr. Kenneth R. Olson	42
•	Dr. Alfred Anthony (Tony) Pandiscio	43
•	Dr. Patric L. Patterson	44
•	Dr. Alan J. Pue	45
•	Dr. Helen L. Reed	46
•	Dr. William C. Regli	47
•	Mr. David W. Robbins	48
•	Dr. Kevin J. Saeger	49
•	Dr. Lara S. Schmidt	50
-	Dr. Gregory E. Shannon	52
•	Mr. Gregory J. Simer	53
•	Dr. Katherine M. Simonson	54
•	Dr. Annette L. Sobel	55
•	Dr. Lindley T. Specht	56
•	Dr. Stefanie Tompkins	57
•	Dr. Vyshnavi Suntharalingam	58
•	Mr. Lee A. Venturino	59
•	Dr. Steve Warner	60
•	Dr. Peter M. Wegner	61
•	Mr. Alan R. Wiechman	62
•	Dr. Yadunath B. Zambre	63
Se	ction 3: Air Staff and Secretariat Biographies	64
•	Lt Gen Duke Z. Richardson	65
•	Dr. Richard J. Joseph	68
•	Lt Col Elizabeth D. Sorrells	70
•	Mr. Evan G. Buschmann	72

•	Lt Col Melissa M. Tallent	72
•	Maj Jed E. Sherman	73
•	MSgt Aileen L. Griffith	73
•	SrA Jaedon A. Clarke	7 4
•	Mr. Raymond H. McJonathan	7 4
•	Mr. Nicholas A. Stern	75
•	Mr. Steven B. Chambers	75
•	Ms. Kimia L. Blackwell	76
•	Ms. Erika Castedo	76
•	Ms. Sanaa A. Lasher	77
•	Mr. Phillip W. Burnham	77
•	Col Brian K. Beachkofski	78
•	Lt Col Jennifer L. Dahms	79
•	Lt Col Jonathon I. Henry	79
•	Maj Lloyd "Tom" Hunsaker	80
•	Capt Matthew C. Renner	80
•	Capt Young-Jun (Y.J.) Yoon	81
Se	ection 4: Membership Departure List	82

Section 1: Mission of the Board

The Air Force Scientific Advisory Board (SAB) was established by General "Hap" Arnold to assist the Air Force in maintaining its "vision into the future" of technology-enabled capabilities. Since 1944, the SAB has served as the Air Force's principle external advisory body for science and technical matters relating to its mission - to fly, fight and win in Air, Space and Cyberspace. The Board provides a link between the Air Force and the nation's scientific community and provides independent scientific and technical advice to Air Force leadership.

The SAB accomplishes its mission by conducting studies on topics deemed critical by the Secretary and Chief of Staff of the Air Force, by conducting reviews of the Science and Technology portfolio in the Air Force Research Laboratory, and by providing independent technical reviews where needed by SecAF, CSAF, Major Commands, and the Air Force Research Laboratory. The SAB's mission supports the Air Force in achieving its central strategy of adapting and responding faster than potential adversaries.

SAB members are among the nation's top civilian scientists and engineers from industry, national labs, federal funded research and development centers, academia, and retired general officers. Members are selected to obtain the best, independent advice possible and on the basis of preeminence in scientific fields of interest and importance to the Air Force. It is the broad technical expertise, experience, leadership, and vision of its members that are essential to the Board's ability to provide the type of advice that the Air Force relies on from the SAB.

The Board exists to complement, but not duplicate, the work of the Assistant Secretary of the Air Force for Acquisition, the Air Force Research Laboratory, and other Air Force activities that deal with science and technology issues. The Board is chartered by the Secretary of Defense and reports directly to the Secretary of the Air Force and to the Air Force Chief of Staff.

The SAB operates as a Federal Advisory Committee under the Federal Advisory Committee Act, therefore the Board's function is purely advisory. The Board presents its findings and recommendations to the Secretary and Chief of Staff of the Air Force, as well as other senior leaders. All decisions or actions taken on Board advice or recommendations are made solely by full-time, salaried officers or employees of the Air Force.

United States Air Force - Scientific Advisory Board 2019-2020	
Section 2: Member Biographies	
	6

Dr. James S. Chow RAND Corporation Chair, USAF Scientific Advisory Board

EDUCATION

Stanford University

Ph.D., Mechanical Engineering (Fluid Mechanics), 1994 M.S., Aero/Astro, 1989

University of California at San Diego

B.S., Mechanical Engineering, 1988



WORK EXPERIENCE

RAND Corporation

Director, Force Modernization and Employment, Project AIR FORCE, 2018- Present Senior Engineer, Engineering and Applied Sciences, 2003-2018
Assistant to the President for Research on Counterterrorism, 2004-2011
Program Director (Acting), Force Modernization and Employment, 2008
Associate Program Director, Force Modernization and Employment, 2006-2010
Manager, Technology and Applied Sciences, 2000-2003
Engineer, Technology and Applied Sciences, 1997-2003

Institute for Defense Analyses

Research Staff Member, Systems Evaluation Division, 1994-1997

NASA Ames Research Center

Fellowship Researcher, Fluid Mechanics Laboratory, 1990-1994

AREAS OF EXPERTISE

Defense systems analysis; management and leadership; future systems and force modernization; aircraft survivability; countering anti-access/area denial, military operations modeling and simulation.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Chief of Staff of the Air Force Award for Exceptional Public Service; Affiliated Faculty Member, Pardee RAND Graduate School; Member, AIAA; Member, Association of Old Crows.

Dr. Nils R. Sandell Independent Consultant Vice Chair, USAF Scientific Advisory Board

EDUCATION

Massachusetts Institute of Technology
Ph.D., Electrical Engineering, 1974
Massachusetts Institute of Technology
M.S., Electrical Engineering, 1971
University of Minnesota
B.S., Electrical Engineering, 1970



WORK EXPERIENCE

Independent Consultant 2016-Present

Defense Advanced Research Projects Agency
Director, Strategic Technologies Office, 2013-2016

Independent Consultant 2010-2013

BAE Systems

Vice President, Advanced Information Technologies, 2004-2010 ALPHATECH INC.

President and CEO, 1979-2004

Massachusetts Institute of Technology

Associate Professor, Electrical Engineering and Computer Science, 1976-1979 Assistant Professor, Electrical Engineering and Computer Science, 1974-1976

AREAS OF EXPERTISE

Command and Control; Communications; Guidance, Navigation & Control; Information Fusion and Management; ISR, Tracking and ID; Low Observables; Modeling, Simulation and Analysis; S&T Management; Systems Engineering.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Eta Kapa Nu; Tau Beta Pi.

Dr. Natalie W. Crawford RAND Corporation EXCOM Member

EDUCATION

Pardee RAND Graduate School, Santa Monica, California Public Policy Analysis, Honorary Ph.D., 2018

Michigan State University

Engineering, Honorary Ph.D., 2016

University of California, Los Angeles

Graduate Study, Engineering & Applied Mathematics, 1966-1967

B.A., Mathematics, 1961



WORK EXPERIENCE

RAND Corporation

RAND, 1964-Present

RAND Senior Fellow, 2006-Present

Project AIR FORCE Distinguished Chair in Air and Space Policy, 2014-Present

Vice President and Director Project AIR FORCE, 1997-2006

Associate Director, Project AIR FORCE, 1995-1997

Director, Force Modernization & Employment Program, Project AIR FORCE, 1993-1995

Director, Force Structure & Force Modernization Program, Project AIR FORCE, 1992-1993

Director, Theater Force Employment Program, Project AIR FORCE, 1988-1993

Associate Director, Theater Forces Program, Project AIR FORCE, 1986-1988

North American Aviation

Programmer Analyst, 1961-1964

Air Force Scientific Advisory Board

Co-Chairman, 1996-1999

Vice Chairman, 1990-1991

Member, 1988-2003; 2005-2014; 2015-Present

AREAS OF EXPERTISE

Conventional standoff weapons; night/adverse weather attack capabilities; tactical aircraft; aircraft survivability; munitions and targets; tactical air requirements; avionics; aero performance; aircraft survivability; electronic combat; weapons effects; off-board sensor support to combat operations; power projection force structure and assessments; theater air defense; force modernization; space systems; information operations; low observables; directed energy; space situational awareness.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

AIAA Honorary Fellow (2017), AIAA Fellow (2011); Project AIR FORCE Distinguished Chair in Air & Space Policy (2014); United States Air Force Academy Thomas D. White National Defense Award (2012); Air Force Association Lifetime Achievement Award (2011); OSD Medal for Exceptional Public Service (2006); NDIA Combat Survivability Lifetime Achievement Award (2006); RAND Medal for Excellence (2006); Lifetime Achievement Award, Air Force Analytic Community (2003); Lt Gen Glenn Kent Leadership Award (2003); Decoration for Exceptional Civilian Service, USAF (2003, 1995); Vance R. Wanner Memorial Award, Military Operations Research Society (2003); Kelly Johnson Award, San Fernando Valley Engineers Council (1998); Woman of the Year, Santa Monica Chamber of Commerce Women's Business Council (1997); Santa Monica High School Hall of Fame (1995); YMCA Woman of the Year, (1983); Who's Who in the West; Member, JPL Advisory Council (2002 – 2009); Member, Sandia Nuclear Deterrence External Advisory Board (2007 --); Member, National Academy of Engineering (2001).

Gen Donald J. Hoffman, USAF (Ret) Consultant EXCOM Member

EDUCATION

University of California, Berkeley
M.S., Electrical Engineering, 1975
US Air Force Academy
B.S., Electrical Engineering, 1974



WORK EXPERIENCE

Self-owned company

Consultant, 2012-Present

US Air Force

Commander, Air Force Material Command, 2008-2012 Military Deputy for Acquisition, HQ Air Force, Pentagon, 2005-2008 Director of Requirements, Air Combat Command, 2002-2005 Commander, 31st Fighter Wing, 2001-2002

AREAS OF EXPERTISE

Defense Weapon System Requirements, Research, Acquisition, Test, and Sustainment; Strategic Planning; Personnel Management and Training.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Air Force Association; American Solar Energy Society.

Dr. Andrew G. Alleyne University of Illinois, Urbana-Champaign S&T Review Chair

EDUCATION

University of California, Berkeley
Ph.D., Mechanical Engineering, 1994
University of California, Berkeley
M.S., Mechanical Engineering, 1992
Princeton University
B.S.E., Aerospace Engineering, 1989



WORK EXPERIENCE

University of Illinois, Urbana-Champaign

Director, NSF POETS Engineering Research Center, 2015-Present Associate Head for Undergraduate Programs in MechSE, 2014-2015 Associate Dean for Research, College of Engineering, 2008-2012

ETH Zurich

Visiting Professor, 2012 University of Colorado at Boulder

FIRST Faculty, 2010

University of Illinois, Urbana-Champaign

Ralph & Catherine Fisher Professor, College of Engineering, 2002-Present Professor, Mechanical Science & Engineering, 2004-Present Professor, Coordinated Science Laboratory, 2004-Present

Delft University of Technology

Prof of Vehicle Mechatronics, Faculty of Design, Engr & Production, 2003

AREAS OF EXPERTISE

Guidance, Navigation & Control Systems; Vehicle Dynamics; Manufacturing Systems, Hydraulics and Pneumatics; Energy/Power Systems; Thermal Management Systems.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

American Society of Mechanical Engineers, Fellow; Institute of Electrical and Electronic Engineers, Fellow; Society of Automotive Engineers; National Fluid Power Association; International Federation of Automatic Control, American Association for the Advancement of Science; Defense Science Study Group.

Dr. Michael J. Bear BAE Systems

EDUCATION

George Mason University
Ph.D., Computational Physics, 1998
M.S., Applied Physics, 1994
Purdue University
B.S., Applied Physics, 1985

*

WORK EXPERIENCE

BAE Systems

Technical Director, C4ISR Solutions, 2015-Present Systems Engineering Lead, C4ISR Solutions, 2008-2015 BAE Systems/Lockheed Martin Managing Engineer for ASIC Design, Space Products, 2000-2007 Lockheed Martin

Technical Lead of IP Development, Space Products, 1998-2000 Lockheed Martin/Loral

Technical Lead of Device Modeling, Space Products, 1995-1998 Loral/IBM

Technical Lead of Reliability Engineering, Space Products, 1990-1995

AREAS OF EXPERTISE

Resilient system design (cyber/physical); Sensor systems; Embedded Cyber; Trusted and assured electronics; Semiconductor/material physics of failure; Plasma and semiconductor modeling; Multi-scale simulations; Radiation effects; Space environments.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

American Physical Society; Institute of Electrical and Electronic Engineers; American Association for the Advancement of Science; Virginia Tech ECE Industry Advisory Board; BAE Systems Chairman's Award; US Patent Award; Chief of Staff of the Air Force Award for Exceptional Public Service; Phi Beta Kappa.

Dr. Suzanne M. Beers The MITRE Corporation

EDUCATION

Georgia Institute of Technology
Ph.D., Electrical Engineering, 1996
New Mexico State University
M.S., Electrical Engineering, 1994
New Mexico Highlands University
M.B.A., Business, 1986
Ohio State University
B.S., Mechanical Engineering, 1983
Miami University
B.S., Physics, 1982



WORK EXPERIENCE

The MITRE Corporation

OSD Test & Evaluation Portfolio Manager, Z610 OSD Portfolio Division, 2014-Present Developmental Evaluation Framework Tech Lead, J610 OSD Project Division, 2013-Present T&E Group Leader & DASD(DT&E) Space & Missile Defense Task Lead, J610, 2010-2013 DOT&E Project Lead, Center for Acquisition & System Analysis Tech Center, 2008-2010 United States Air Force

Commander, Air Force Operational Test & Evaluation Center, Detachment 4, 2006-2008
Deputy Director, System Engineering Group, National Reconnaissance Office, 2005-2006
Deputy Commander, 50th Network Operations Group, 2004-2005
Chief, AFSCN Sustainment Division, Space & Missile Systems Center, 2001-2004
Deputy Chief, Analysis and Engineering Division, Space Warfare Center, 1999-2001
Advisor to the Chief Scientist, Air Force Operational Test & Evaluation Center, 1996-1999
PhD Student, Air Force Institute of Technology (Georgia Tech), 1994-1996
Advisor to the Chief Scientist, Air Force Operational Test & Evaluation Center, 1993-1994
Cheyenne Mountain Upgrade Test Manager, 1992-1993
SRAM II Lead Analyst & MILSTAR Survivability Analyst, 1990-1992
Ground Launch Cruise Missile Operator & Instructor, 1987-1990
Nuclear Systems Physicist, Air Force Weapons Laboratory, 1983-1987

AREAS OF EXPERTISE

Test & Evaluation; Systems Engineering; Control Theory; Digital Communication; Digital Signal Processing; Fuzzy Logic; Decision Support; Operations Research; System Analysis; AF Missile Operations; Space System Operations; Ground Control Station Sustainment; Nuclear Weapons; Cybersecurity.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Fellow, Military Operations Research Society; T&E Executive Committee, National Defense Industrial Association.

Mr. Aaron R. Blow MITRE Corporation

EDUCATION

California State University at Northridge M.S., Physics, 2002 Rensselaer Polytechnic Institute B.S., Physics, 1996

WORK EXPERIENCE

MITRE

Director, Air Force Space, Cyber, and Intelligence Programs, 2007-Present MIT Lincoln Laboratory

Technical Staff, ISR Division, 2005-2007

MITRE

Director, Air Force Strategic and Special Capabilities, 2002-2005 XonTech, Inc.

Senior Analyst, Special Studies Division, 1997-2002

AREAS OF EXPERTISE

Systems Analysis; Mission Analysis; Space Systems; Intelligence, Surveillance, and Reconnaissance Systems; Signal Processing; Radar System Development; Hyperspectral Systems; Remote Sensing; Communications; Cyber; Multi-Sensor Fusion; Algorithm Development; Multi-Static Radar; Target Detection and Identification; Agile Acquisition; Command and Control; Systems Engineering; Modeling and Simulation; Electronic Warfare.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Member AFA; AUSA; NDIA.

Dr. Robert J. Bontz Northrop Grumman, Aerospace Systems

EDUCATION

University of Utah
Ph.D., Theoretical Astrophysics, 1980
Northland College
B.A., Physics & Mathematics, 1974

WORK EXPERIENCE

Northrop Grumman Aerospace

Director/Technology Integration, Advanced Programs, 2013-Present

Institute for Defense Analyses

Project Director, SED, 1985-2013

Center for Naval Analyses

Research Scientist, 1981-1985

University of Utah

Instructor, Dept. of Physics, 1980-1981

AREAS OF EXPERTISE

Air Vehicle Design; Multi-Spectral Signature Control; Advanced Sensors; Advanced Weapons; Electronic Warfare; Special Technologies; Military Utility Assessment.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Defense Science Board Consultant.



Dr. Rodney D. W. Bowersox Texas A&M University

EDUCATION

Virginia Polytechnic Institute and State University Ph.D., Aerospace Engineering, 1992 Virginia Polytechnic Institute and State University M.S., Aerospace Engineering, 1990 Virginia Polytechnic Institute and State University B.S., Aerospace Engineering, 1988



WORK EXPERIENCE

Texas A&M University, College Station TX
Department Head, Aerospace Engineering, 2013-Present
Professor, Aerospace Engineering, 2007-Present
Ford I Professor 2014-Present
Associate Professor, Aerospace Engineering, 2002-2007
The University of Alabama, Tuscaloosa AL
Associate Professor, Aerospace Engineering, 2000-2002
Assistant Professor, Aerospace Engineering, 1997-2000
Air Force Institute of Technology, Aeronautics and Astronautics, WPAFB OH
Assistant Professor, Aerospace Engineering, 1993-1997

AREAS OF EXPERTISE

Hypersonic viscous (transitional and turbulent) flows; thermochemical non-equilibrium gaseous flows; theoretical hypersonic turbulence modeling and numerical simulation; hypervelocity wind tunnel testing; laser diagnostics; experimental methods; aerodynamics; aero-propulsive flows; scramjets; unsteady flows.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

DoD Vannevar Bush National Security Science and Engineering Faculty Fellow, 2017-2022; American Society of Mechanical Engineers Fellow; American Institute of Aeronautics and Astronautics Associate Fellow; Associate Editor, Journal of Propulsion and Power; Hypersonic Technologies and Aerospace Planes Program Committee Member; US National Committee Member of the International Society of Air Breathing Engines; American Chemical Society Member; American Physical Society Member; Optical Society of America Member; Technical Advisory Board, National Aerospace Solutions, Inc.

Dr. Mark E. Campbell Cornell University

EDUCATION

Massachusetts Institute of Technology

Ph.D., Control/Estimation, Aeronautics and Astronautics, 1996

Massachusetts Institute of Technology

M.S., Aeronautics and Astronautics, 1993

Carnegie Mellon University

B.S., Mechanical Engineering, 1990



WORK EXPERIENCE

Cornell University

Professor, Sibley School of Mechanical and Aerospace Engineering, 2011-Present Associate Professor, Sibley School of Mechanical and Aerospace Engineering, 2004-2011 Assist Professor, Sibley School of Mechanical and Aerospace Engineering, 2001-2004 University of Sydney

Australian Research Council Int'l Fellow, Australian Centre of Field Robotics, 2006-2005 Insitu Group

Visiting Research Scientist, Research and Development, 2005-2001 University of Washington

Assist Professor, Sibley School of Mechanical and Aerospace Engineering, 1997-2001

AREAS OF EXPERTISE

Spacecraft technologies; control systems; sensor fusion; autonomy; UAV technology; robotics; sensor networks; mixed initiative and human-machine systems.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Associate Fellow AIAA; Member ASME; Fellow IEEE; Member SPIE; Member ASEE.

Dr. Melissa G. Choi MIT Lincoln Laboratory

EDUCATION

North Carolina State University
Ph.D., Applied Mathematics, 1999
Ithaca College
B.A., Mathematics, 1994

WORK EXPERIENCE

MIT Lincoln Laboratory

Assistant Director, 2019 - Present
Division Head, Homeland Protection and Air Traffic Control 2014-2019
Assistant Division Head, ISR and Tactical Systems, 2013-2014
Group Leader, Active Optical Systems, 2012-2013
Group Leader, Systems and Analysis, 2009-2012
Assistant Group Leader, Systems and Analysis, 2008-2009
Assistant Group Leader, Advanced System Concepts, 2006-2008
Technical Staff, Advanced System Concepts, 1999-2006



AREAS OF EXPERTISE

Systems analysis; modeling and simulation; intelligence, surveillance & reconnaissance (ISR); active optical systems (laser radar); EO/IR sensor systems; RF sensors; multi-INT architectures; PNT.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Society for Industrial and Applied Mathematics (SIAM), Phi Kappa Phi, Pi Mu Epsilon.

Dr. David J. Coombs Raytheon

EDUCATION

University of Rochester
Ph.D., Computer Science, 1992
University of Rochester
M.S., Computer Science, 1988
Michigan State University
B.S., Computer Science, 1986



WORK EXPERIENCE

Raytheon Company

Technical Director, R&D, Intelligence, Information, and Services (IIS), 2014-Present Intelligence Advanced Research Projects Activity (IARPA)

Program Manager, Smart Collection Office, 2011-2014

SET Corporation

Director of Robotics Technologies, 2004-2011

Science Applications International Corporation (SAIC)

Director of Computer Vision, Reconnaissance & Surveillance Operation, 2001-2004

Cytometrics

Manager of Image Analysis, 2000-2001

National Institute of Standards and Technology (NIST)

Computer Scientist, Intelligent Systems Division, 1991-2000

AREAS OF EXPERTISE

Technology development; applied research and development; advanced prototype development; sensor processing; perception; computer vision; real-time video and image processing; exploitation; LADAR; EO/IR; 3D shape; robotics; unmanned systems; UxVs; mission management; planning; guidance navigation and control; tracking; user interface; autonomy; command interfaces; system integration; space technologies; cyber technologies; analytics.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Institute of Electrical and Electronics Engineers (IEEE); IEEE Computer Society; Association for Computing Machinery (ACM).

Dr. Steven T. Cummings Raytheon - Retired

EDUCATION

Rensselaer Polytechnic Institute

Ph.D., Controls and Systems Engineering, 1995

Clarkson University

Master of Engineering, Communications/Radar, 1981

Clarkson University

B.S., Electrical and Computer Engineering, 1979

WORK EXPERIENCE

Raytheon Company

VP Technology Development & Execution, Space & Airborne Systems, 2010-2018 Principal Engineering Fellow, Integrated Defense Systems, 1985-2010

Hughes Aircraft Company

Group Head, Radar Systems Group, 1981-1985

AREAS OF EXPERTISE

Controls; Systems; Radar; Sensor Netting; C2BMC; Defense Planning; Ballistic Missile Defense; High Energy Laser Weapon Systems; Robotics.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

AIAA; Clarkson Dean's Leadership Council.



Dr. Llewellyn S. Dougherty Center for Elegant Design

EDUCATION

Air Force Institute of Technology

Ph.D., Digital Systems Engineering, 1978

Massachusetts Institute of Technology

MS, Aeronautics and Astronautics, 1968

US Air Force Academy

BS, Engineering Sciences, 1967

WORK EXPERIENCE

Consultant 2011-present

Raytheon Corporation

Vice President, Special Programs, Raytheon, 2004-2011

Chief Scientist, Raytheon Space and Airborne Systems, 2002-2004

Director of Technology, Raytheon Electronic Systems, 1999-2002

Director of Technology, Raytheon Systems Company, 1998-1999

Hughes Aircraft Company

Director of Technology, Hughes Sensors and Communications Systems Segment, 1994 - 1998

Director, Advanced Technology Programs, Hughes Radar Systems, 1993-1994

Assistant Division Manager, Reconnaissance Systems Division, Hughes Radar Systems, 1992-1993

Defense Advanced Research Projects Agency

Technical Assistant to the Director, 1990-1992

DARPA Program Manager, Deputy Director and Acting Director, Aerospace and

Strategic Technology Office, 1987-1990

US Air Force

Deputy Director of Engineering, B2 Program Office, 1983-1987

Program Element Monitor, HQ USAF, 1979-1983

Avionics Systems Engineer, AF Avionics Laboratory, 1975-1976

Flight Test Engineer, AF Missile Development Center, 1968-1973

Thiokol Chemical Corp

Associate Engineer (Solid Rocket Propulsion), 1967

AREAS OF EXPERTISE

Command and control, communications, ISR systems, digital computers, real-time systems, systems architecture, systems engineering, systems safety, solid rockets, military aircraft development, defense acquisition, low observables, special operations, avionics systems and sensors (radar; EO/IR; lasers; CNI); information warfare; mission analysis; signal processing; system security and anti-tamper, special program security.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

IEEE, Life Member.



Dr. Robert V. Duncan Texas Tech University

EDUCATION

University of California, Santa Barbara Ph.D., Physics, 1988 Massachusetts Institute of Technology (MIT) S.B., Physics, 1982

WORK EXPERIENCE

Texas Tech University

President's Distinguished Chair in Physics, 2017-Present Senior Vice President for Research, 2014-2017

University of Missouri

Vice Chancellor for Research, 2008-2013

University of New Mexico

Professor of Physics, then Associate Dean for Research, 1996-2008

Sandia National Laboratories

Physicist, then Group Leader (Distinguished Member of Technical Staff), 1988-1996

AREAS OF EXPERTISE

Low-Temperature, Condensed Matter Physics; Critical Phenomena; Self-Organized Criticality; Metrology; Heat Transport; Orbital Measurements and Hardware Design; Biomedical Instrumentation Development; Research Administration; Physics Education; Technical Innovation and Invention.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Fellow, and Member of the National Board of Directors of the NAI (2015 – date); Invitee to the Erice Seminars, World Federation of Scientists, Erice, Sicily (2009 – date); Member of the University of Missouri System Commission (2016); Member of the Executive Committee of the Council on Research Policy and Graduate Education, Association of Public and Land-Grant Universities (2011 – 2013). Chair, National Academy of Science's Panel on Fundamental Physical Sciences in Space (2011); National Academy of Sciences Panel Member to Review the Experimental Program to Stimulate Competitive Research, EPSCoR (2012 – 2013). Member of the Visiting Committee to Consider Curriculum Performance and Revisions at the United States Military Academy at West Point (2012 – 2013); Review Committee Member, Materials Programs at the Naval Research Laboratories (2011); Founding Director, New Mexico Consortium's Institute at Los Alamos National Lab (2006). Fellow (and Life Member) of the American Physical Society (2006); Gordon and Betty Moore Distinguished Scholar, Caltech (2004 – 2005); International Steering Committee for Quantum Fluids and Solids (2003 – 2008). Chair, Instrumentation and Measurement Topical Group, American Physical Society (2002); NASA Flight Principal Investigator, Critical Dynamics in Microgravity (1992 – 2006).



Dr. Philip A. Fawcett The Aerospace Corporation

EDUCATION

Georgia Institute of Technology
Ph.D., Aerospace Engineering, 1992
Georgia Institute of Technology
M.S., Aerospace Engineering, 1990
Georgia Institute of Technology
B.S., Aerospace Engineering, 1989



WORK EXPERIENCE

The Aerospace Corporation

General Manager, Electronic Programs Division, 2018-Present
Principal Director, Imagery Programs Division, 2015-2018
Principal Director, Electronic Programs Division, 2013-2015
Principal Director, Advanced Research and Engineering Directorate, 2008-2013
Brookings Institute Congressional Fellow, Office of Congressman Tim Ryan, 2007-2008
Systems Director, Special Projects Directorate, 2001-2007
Senior Project Engineer, Systems Engineering and Technology Directorate, 1998-2001
Project Engineer, Space Warfare Center, 1996-1998
Member of the Technical Staff, Titan Program Office, 1992-1996

AREAS OF EXPERTISE

Experimental Aerodynamics; Launch Vehicles; Intelligence, Surveillance, & Reconnaissance; Space Systems; Intelligence Missions; Systems Engineering; Project Management; Concept Development; Technology Development and Planning; Government Acquisition Processes.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Sigma Xi Scientific Research Honor Society; Georgia Tech AE School Senior Advisory Council.

Lt Gen Terry L. Gabreski, USAF (Ret) Independent Consultant

EDUCATION

Louisiana State University
B.A., History, 1973
Golden Gate University
Master's Degree, Public Administration, 1978

WORK EXPERIENCE

Pratt and Whitney

Consultant, 2013-Present

Northrup Grumman

Consultant, 2012-2014

AF Scientific Advisory Board

Combating Sexual Assault in the US Air Force Study, 2013-2014

AF Scientific Advisory Board Member, 2017-Present

National Museum of the United States Air Force

Heritage Board of Directors, 2010-Present

Falcon Foundation

Governing Trustee/Board of Trustees, 2011-Present

Rand Corporation

Adjunct Staff, 2011-Present

USAF Active Duty, 1974-2010

AREAS OF EXPERTISE

Sustainment, logistics, aircraft maintenance, training, program management.



Lt Col Dennis P. Gilbert, Jr., USAF (Ret) Duke Energy

EDUCATION

University of Southern California, Viterbi School of Engineering M.S., Systems Management, 1988

Louisiana Tech University

B.S., Management Information Systems, 1984

Defense Systems Management College

Advanced Program Management, 1998



Duke Energy

Vice President, Chief Information Security Officer, 2018-Present

Exelon Corporation

Vice President, Chief Information Security Officer, 2014-2018

Office of the Secretary of Defense

Senior Advisor for Cybersecurity to the Chief Information Officer, 2012-2014

Booz Allen Hamilton

Principal, Federal Sector Cybersecurity, 2008-2012

FGM Inc.

Vice President, Business Development, 2005-2008

United States Air Force

National Reconnaissance Office; Mission Integration Office, 2003-2005

Office of the Secretary of Defense; Command, Control, and Communications, 2000-2003

Secretary of the Air Force (Acquisition); Space Control & Advanced Technology, 1997-2000

Space and Missile Systems Center; Advanced Systems Program Office, 1994-1997

Aeronautical Systems Center; B-2 System Program Office, 1989-1994

Air Force Systems Command Headquarters, 1985-1989

AREAS OF EXPERTISE

Cybersecurity operations, architecture, data protection, governance and risk; cyber technologies; Operational Technology (OT)/Industrial Control Systems (ICS) cybersecurity; information warfare; information operations; space control; special communications; electronic warfare; energy and power technologies; systems engineering; program management; defense acquisition.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Air Force Association (Life Member); AFCEA; Edison Electric Institute (EEI) Science & Technology Executive Advisory Committee; Electricity Subsector Coordinating Council (ESCC) Cyber Mutual Assistance Executive Committee; American Gas Association (AGA) - Leadership Council; AGA Security Committee; Security Innovation Network (SINET) - Honorary Chair; Information Systems Audit and Controls Association (ISACA); University of North Carolina Charlotte (UNCC) - Cooperative Research Center for Cybersecurity Analytics & Automation - Industry Advisory Board.



Dr. Samuel Graham Jr. Georgia Institute of Technology

EDUCATION

Georgia Institute of Technology
PhD, Mechanical Engineering, 1999
Georgia Institute of Technology
MS, Mechanical Engineering, 1995
Florida State University
BS, Mechanical Engineering, 1993



WORK EXPERIENCE

Georgia Institute of Technology

Department Chair, Woodruff School of Mechanical Engineering, 2018- Present Associate Chair for Research, 2016-2018
Professor, 2013-Present
Courtesy Appointment, 2009-Present

School Of Materials Science and Engineering Georgia Institute of Technology

Associate Professor, 2008-2013

Assistant Professor, Mechanical Engineering, 2003-2008

George W. Woodruff School of Mechanical Engineering

Georgia Institute of Technology

Oak Ridge National Laboratories

Joint Appointment, 2009- Present

Sandia National Laboratories

Senior Member of Technical Staff, 1999-2003

AREAS OF EXPERTISE

Heat transfer, thermal metrology; materials characterization; thermal management; RF electronics, flexible electronics; organic electronics, electronics packaging.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

ASME Fellow, Member of IEEE, MRS, AAAS, Member of the ESRF Advisory Board for Sandia National Laboratories, Defense Science Study Group (2014-2016), NSF Career Award, NAE Japan-US Frontiers of Engineering Symposium participant, NAE U.S. Frontiers of Engineering Symposium participant, SME M. Eugene Merchant Outstanding Young Manufacturing Engineer Award.

Dr. Jonathan E. Green Northrop Grumman Mission Systems

EDUCATION

California Institute of Technology
Ph.D., Chemical Physics, 2007
California Institute of Technology
M.S., Applied Physics, 2005
University of California Irvine
B.S., Chemical Physics, 2002



WORK EXPERIENCE

Northrop Grumman

NG Fellow & Sector Architect for Disruptive Innovation, Chief Scientist Office, 2019-Present NG Fellow & Product Architect for Communications and SIGINT, CTO Office, 2017-2018 Head of Technology Strategy, Avionics and Tactical Networks, 2016-2017 Chief Engineer, Avionics and Tactical Networks, 2013-2016 Senior Systems Engineer, Advanced Systems and Products, 2009-2013 Lead Systems Engineer, Airborne SIGINT Systems, 2008-2009 Systems Engineer, Command and Control Systems, 2007-2008

California Institute of Technology

Undergraduate Research Fellow, Jet Propulsion Laboratory, 2001-2002

United States Army CA National Guard

Intelligence Sergeant, 40^{th} Infantry Div, 1998-2001

United States Army

Airborne Fire-Team Leader, 82nd Airborne Div, 1995-1998

AREAS OF EXPERTISE

Digital wireless communications; military tactical communications; Low Probability of Detection communications; RF systems; multifunction systems; electronic warfare; signals intelligence; RF emitter geolocation; quantum communications; physics-based model and simulation; technology strategy; disruptive innovation.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

IEEE Communications Society; Northrop Grumman Fellow; Northrop Grumman Technical Fellow Emeritus; Northrop Grumman Corporate Technology Council.

Dr. Eric K. Hall The Aerospace Corporation

EDUCATION

Georgia Institute of Technology
Ph.D., Aerospace Engineering, 1991
Georgia Institute of Technology
M.S., Aerospace Engineering, 1989
University of Delaware
Bachelor of Mechanical Engineering, 1988



WORK EXPERIENCE

The Aerospace Corporation

General Manager, Vehicle Systems Division, 2015-Present
Principal Director, Atlas V Operations, 2011-2015
Principal Engineer, Atlas V Operations, 2008-2011
Director, Structures Department, 2004-2008
Associate Director, Structures Department, 2002-2004
Manager, Space Structures Section, 2000-2002
Engineering Specialist, Structural Technology Department, 1997-2000
Member of Technical Staff, Structural Technology Department, 1991-1997

AREAS OF EXPERTISE

Technical and personnel management; vehicle engineering; mission assurance; risk assessment; launch operations; independent review teams; design and development of launch and space vehicles; large-scale deployable space structures; opto-mechanical systems; lightweight and deployable optical systems; technology development; composite spacecraft; precision structures; finite element analysis; adaptive/smart structures; vibration isolation; structures; and structural dynamics.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS Sr. Member, AIAA.

Dr. Peter A. Hancock University of Central Florida

EDUCATION

Loughborough University
D.Sc., Human-Machine Systems, 2001
University of Illinois
Ph.D., Human Performance, 1983
Loughborough University
M.Sc., Human Biology, 1978
Loughborough University
B.Ed., Education, 1976



WORK EXPERIENCE

University of Central Florida

Provost Distinguished Research Professor, 2001-Present
University Trustee Chair, 2012-Present
University of Minnesota
Associate Professor, 1989-2001
University of Southern California

AREAS OF EXPERTISE

Human Factors; Ergonomics; Modelling & Simulation; Applied Psychology; Neuroergonomics; Fatigue; Human-Robot Teams; Stress; Cognitive Workload; Trust; Human-Machine Interaction; Time.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Assistant Professor, 1983-1989

Aerospace Human Factors Association; Aerospace Medical Association; American Association for the Advancement of Science; American Psychological Association; American Society of Heating, Radiation and Air-Conditioning Engineers (Honorary Member); Association for Psychological Science; Augmented Cognition Society; Chartered Institute for Ergonomics - Human Factors (CIEHF); Human Factors and Ergonomics Society; Institute of Electrical and Electronics Engineers (IEEE); Institute of Industrial and Systems Engineers, (Honorary Member); International Academy of Aviation and Space Medicine; International Ergonomics Association; National Academy of Sciences, Committee on Neurosciences in the Army; National Research Council Committee on Interfaces for Ground and Air Military Robots; Psychologic Society; Royal Aeronautical Society; Society of Engineering Psychologists; Society for Human Performance in Extreme Environments.

Dr. Ryan K. Hersey Georgia Tech Research Institute

EDUCATION

Georgia Institute of Technology
Ph.D., Electrical and Computer Engineering, 2004
Pennsylvania State University
M.S., Engineering Mechanics, 2000
Pennsylvania State University
B.S., Engineering Science, 1998



WORK EXPERIENCE

Georgia Institute of Technology, Georgia Tech Research Institute
Chief, Intelligence, Surveillance, and Reconnaissance Division, 2016-Present
Head, Advanced Processing and Algorithms Branch, 2014-2016
Principal Research Engineer – 2014-Present
Senior Research Engineer, 2009-2014
Research Engineer II – 2004-2009
Georgia Institute of Technology, School of Electrical and Computer Engineering

Georgia Institute of Technology, School of Electrical and Computer Engineering Graduate Research Assistant, 2000-2004

Pennsylvania State University, Department of Engineering Science and Mechanics Graduate Research Assistant, 1998-2000 Undergraduate Research Assistant, 1996-1998

AREAS OF EXPERTISE

Sensors; distributed sensing; autonomous sensing; signal processing; physics-based modeling and simulation; machine learning and intelligent systems; open-system architectures; real-time processing; radar; synthetic aperture radar (SAR); ground moving target indication (GMTI); electronic warfare; electronic protection; SIGINT; automatic target recognition; ultrasonic non-destructive evaluation; ISR; fire-control systems.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

IEEE AESS Fred Nathanson Memorial Radar Award (2016); Senior Member IEEE (2013); Best Paper Award Tri-Service Radar Symposium (2011); Best Paper Award Tri-Service Radar Symposium (2009); Best Student Paper Award IEEE Radar Conference (2002); President's Fellow, Georgia Institute of Technology (2000-2004); Dean's Fellow, Pennsylvania State University (1998-2000).

Dr. Juliana J. Hsu Lawrence Livermore National Laboratory

EDUCATION

Massachusetts Institute Technology Ph.D., Physics, 1991 University of Hawaii at Manoa B.S., Physics, 1985 University of Hawaii at Manoa B.S., Mathematics, 1985



WORK EXPERIENCE

Lawrence Livermore National Laboratory

Deputy Program Director, Weapon Physics and Design, 2016-Present
Distinguished Member of Technical Staff Emeritus, 2016-Present
Distinguished Member of Technical Staff, 2013-2015
Group Leader, Primary Nuclear Design, Weapon Physics Design Division, 2012-2015
Lead Primary Designer, Joint W78/W88-1 Warhead Life Extension Program, 2010-2014
Point of Contact for Primary Design, Advanced Certification Campaign, 2007-2015
Lead Primary Designer, Reliable Replacement Warhead Program, 2005-2007
Designer on the Primary Design Team, W80-3 Left Extension Program, 1999-2005
Code Developer, ALE3D Code, 1996-1999

AREAS OF EXPERTISE

Nuclear Weapon Design; nuclear weapon physics; weapon systems design; high explosives; integrated experiments; simulation tools and application.

Dr. Eric K. Jones Systems & Technology Research

EDUCATION

Yale University

Ph.D., Computer Science, 1992 M.Phil., Computer Science, 1987 M.S., Computer Science, 1986

University of Otago, New Zealand

B.Sc. (Hons, 1st), Mathematics, 1984

B.A., Geography, 1983



WORK EXPERIENCE

Systems & Technology Research, LLC

Vice President, Analysis and Decision Systems, 2011-Present

BAE Systems, Inc.

Technology Group Director, Analysis and Decision Systems, 2009-2011

Division Manager, Intelligent Systems Division, 2004-2009

ALPHATECH, Inc.

Division Manager, Intelligent Systems Division, 2004

Associate Division Manager, Intelligence and Decision Systems Division, 2003-2004

Director, Knowledge-Based Systems, 2000-2003

Senior Member of the Technical Staff, 1997-2000

Victoria University of Wellington, New Zealand

Assistant Professor, 1992-1996

AREAS OF EXPERTISE

Command and control; multi-intelligence exploitation; natural language processing and text analytics; machine learning; artificial intelligence; model-based design; modeling and simulation; software and systems engineering technologies.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Association of Computing Machinery (ACM); Association for the Advancement of Artificial Intelligence (AAAI); Institute of Electrical and Electronic Engineers (IEEE).

Dr. Ann R. Karagozian University of California, Los Angeles

EDUCATION

California Institute of Technology
Ph.D., Mechanical Engineering, 1982
California Institute of Technology
M.S., Mechanical Engineering, 1979
University of California, Los Angeles
B.S., Engineering, 1978



WORK EXPERIENCE

University of California, Los Angeles

Distinguished Professor, Mechanical & Aerospace Engineering, 2016-Present Interim Vice Chancellor for Research, 2016-2017

Professor, Mechanical & Aerospace Engineering, 1993-2016

Associate Professor, Mechanical & Aerospace Engineering, 1988-1993

Assistant Professor, Mechanical & Aerospace Engineering, 1982-1988

Institute for Defense Analyses

Member, Board of Trustees, 2011-Present Mentor, Defense Science Study Group, 2014-Present Member, Defense Science Study Group, 1994-1995

Sandia National Laboratories

Consultant, 2003-2005

Pacific-Sierra Research Corporation

Consultant, 1985-1987

RAND Corporation

Consultant, 1979-1983

Aerospace Corporation

Associate Member, Technical Staff, 1978

Hughes Aircraft Company

Engineering Intern, 1976-1978

AREAS OF EXPERTISE

Fluid mechanics; combustion; air-breathing and rocket propulsion; energy generation systems.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Member of the U.S. National Academy of Engineering; Fellow of the American Physical Society; Fellow of the American Institute of Aeronautics and Astronautics; Fellow of the American Society of Mechanical Engineers; Air Force Decoration for Exceptional Civilian Service (2010, 2001); UCLA Samueli and TRW Excellence in Teaching Awards; Phi Beta Kappa; Tau Beta Pi; Combustion Institute; Society for Industrial & Applied Mathematics.

Dr. Leo C. Kempel Michigan State University Vice Chair, S&T Reviews

EDUCATION

University of Michigan
Ph.D., Electrical Engineering, 1994
University of Michigan
M.S., Electrical Engineering, 1990
University of Cincinnati
B.S., Electrical Engineering, 1989



WORK EXPERIENCE

Michigan State University

Dean of Engineering, 2014-Present
Acting Dean of Engineering, 2013-2014
Associate Dean for Research, 2008-2013
Associate Dean for Special Initiatives, 2006-2008
Professor, Electrical and Computer Engineering, 2006
Director, High Performance Computing Center, 2004-2006
Associate Professor, Electrical and Computer Engineering, 2002-2006
Assistant Professor, Electrical and Computer Engineering, 1998-2002

Air Force Research Laboratory

IPA (50%), Sensors Directorate, WPAFB, OH, 2004-2008 Mission Research Corporation

Senior Research Engineer, Valparaiso, FL, 1994-1998

AREAS OF EXPERTISE

Applied Electromagnetics; conformal apertures; computational electromagnetics; low observables; directed energy; modeling and simulations; materials for radio frequency applications.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Institute of Electrical and Electronics Engineers, Fellow; Applied Computational Electromagnetics Society, Fellow; Engineering Society of Detroit, Fellow.

Dr. Brian Michael Kent Applied Research Associates

EDUCATION

The Ohio State University

Ph.D. Electromagnetics-Math Minor/Electrical Engineering, 1984 The Ohio State University

M.S. RF Materials Metrology/Electrical Engineering, 1981 Michigan State University

B.S. Microwaves-Antenna/Electrical Engineering, 1980



Applied Research Associates

Chief Scientist, BRD Division, 2017-Present

Senior Scientist for EM/RF Sensing, ECD Division, 2014-2017

United States Air Force - Air Force Research Laboratory

Chief Technology Officer, 2013-2014

Chief Scientist, Sensors Directorate, 2011-2013

Chief Technologist (Acting), 2010-2011

Chief Scientist, Sensors Directorate, 2008-2010

Senior Scientist, Low Observables and Electromagnetics, 2006-2008

Research Fellow, Shuttle Investigation/Return-to-Flight Co-assignment (NASA), 2003-2006

Research Fellow (Low Observables), 1994-2006

RF Research Engineer (Various Assignments), 1977-1994

AREAS OF EXPERTISE

Radio Frequency (RF) Systems; RF Sensing; RF Antennas/Measurements; RF signal processing; RF Emissions; RF device technologies; RF Space sensing; Low Observable (LO) measurements; LO diagnostics; LO Sensor integration; LO design; LO Education/Training; Radar detection; Radar imaging; Synthetic Aperture Radar; Dynamic aircraft radar measurements; rocket ascent debris radar; Passive/active Electronic Warfare (EW); Passive RF Emissions Measurements.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

OPM Distinguished Presidential Rank Award Finalist; Michigan State University College of Engineering Distinguished Alumni; IEEE International Distinguished Lecturer; OPM Meritorious Presidential Rank Award, ARA Associate (Highest ARA Technical Award), Fellow of the Antenna Measurement Technique Association (AMTA); Fellow, Institute of Electrical and Electronics Engineers (IEEE); Fellow of the Air Force Research Laboratory; NASA Space Flight Awareness Award; Past President (AMTA); Feature Editor (IEEE/APS Magazine); Technical Reviewer (IEEE Transactions on Antennas and Propagation), Adjunct Professor of Electrical Engineering (Michigan State University).



Dr. Tadayoshi Kohno University of Washington

EDUCATION

University of California San Diego
Ph.D., Computer Science, 2006
University of California San Diego
M.S., Computer Science, 2004
University of Colorado
B.S., Computer Science, 1999



WORK EXPERIENCE

University of Washington

Professor, Computer Science & Engineering, 2016-present Associate Professor, Computer Science & Engineering, 2011-2016 Assistant Professor, Computer Science & Engineering, 2006-2011

Microsoft

Visiting Researcher, Microsoft Research, 2014-2014

Cigital

Cryptographer, Software Security Group, 2000-2001

Counterpane Systems

Cryptographer, Security Consultant Group, 1999-2000

AREAS OF EXPERTISE

Computer security; computer privacy; cyber security; applied cryptography; cloud security; cyber-physical systems security; cyber security for emerging technologies; embedded systems security; mobile device security; usable security; threat modeling; web security.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Inaugural Member, Forum on Cyber Resilience, The National Academies of Sciences, Engineering, and Medicine, 2014-present; Founding Member, IEEE Center for Security Design, 2014-present; Member, Defense Science Study Group, 2014-2015; Senior Member, Institute of Electrical and Electronics Engineers (IEEE), 2012-present; Steering Committee Member, USENIX Security Symposium, 2012-present; Steering Committee Member, Network and Distributed Systems Security Symposium, 2011-2014.

Mr. William (Glenn) Kuller Lockheed Martin

EDUCATION

Central Michigan University

M.S., Management, 1988

Defense Systems Management College - Program Manager, 1986

USAF Test Pilot School - Flight Test Engineer, 1982

University New Mexico

M.S., Mechanical Engineering, 1981

University of Utah

B.S., Mechanical Engineering, 1976



Lockheed Martin - Missiles and Fire Control

VP, Advanced / Special Programs, 2012-Present Director,

Advanced Program, 2005-2012

Program Manager, Classified Program, 2003-2005

Director, JASSM Development, 2000-2003

Hughes / Raytheon Missile Systems

Director, Air-Launched Strike, 1996-2000

Program Manager, AMRAAM (AIM-120B P31), 1994-1996 USAF

Multiple, 1972-1995

Director, F-117A Development System Program Office 1991-1994

Strategic Air Command, Officer - Airborne Reconnaissance - 1987-1990

Flight Test Engineer - Eglin AFB -1983-1986

Nuclear Criteria Group Secretariat - GPS Nuc Survivability 1976-1981 Enlisted

Airman — 1972-1976

AREAS OF EXPERTISE

Acquisition; Flight Test; Special Access Programs; Advanced Technology; Aircraft; Air Vehicles; Autonomy; Signature Management; Directed Energy, Systems Engineering; Conventional Weapons Technology / Missiles; Sensors; Cyber; Satellites / Spacecraft; Modeling and Simulation / Operational Analysis.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Air Force Association; Association of the United Army; Surface Navy Association; AIM (Assoc Fellow pending); Lockheed Martin Management Club.



Gen Lester L. Lyles, USAF (Ret) General Dynamics Corporation

EDUCATION

Urbana University

Honorary Doctorate of Law, 2009

New Mexico State University

Honorary Doctorate of Law, 2002

National War College

Master's Degree, 1985

Air Force Institute of Technology

M.S., 1981

Armed Forces Staff College

Master's Degree, 1981

Defense Systems Management College

Master's Degree, 1980

New Mexico State University

M.S., Mechanical Engineering, 1969

Howard University

Bachelor's Degree, Mechanical Engineering, 1968



General Dynamics Corporation

Director, Member of Nominating & Corporate Governance Committee and Member of Audit Committee, 2003-Present

BAE Systems Science & Technology, Inc.

Director, 2003-Present

DPL, Inc.

Director, Vice Chairman of Nominating & Corporate Governance Committee 2004-Present Member of Compensation Committee & Director of the Dayton Power & Light Company 2004-Present

United Services Automobile Association

Chairman, 2004-Present

AREAS OF EXPERTISE

Aircraft, air vehicles, and air platforms; Air breathing propulsion.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Air Force Scientific Advisory Board.



Dr. Kevin C. Massey Leidos

EDUCATION

Georgia Institute of Technology
Ph.D., Aerospace Engineering, 1997
Georgia Institute of Technology
M.S., Aerospace Engineering, 1994
Georgia Institute of Technology
B.S., Aerospace Engineering, 1992



WORK EXPERIENCE

Leidos

Senior Supervisory Engineer, Hypersonics and High Speed Weapons, Leidos Innovation Center, 2018-Present

Raytheon

Director Science and Technology, US Business Development, 2016-2018 Defense Advanced Research Projects Agency (DARPA)

Program Manager, Tactical Technology Office, 2013-2016

RMIT University

Department Head for Aerospace and Aviation, School of Engineering, 2011-2013 Georgia Tech Research Institute

Senior Research Engineer, Aerospace, Transportation and Advanced Systems Lab, 2001-2011

AREAS OF EXPERTISE

Guided Projectiles; Smart Projectiles; Hypersonics; Lethality; Survivability; 6-DOF Simulation; Wind Tunnel Testing; Jet Noise; Aeroacoustics; Propeller Noise; Vibration; Flight Test; Signal Processing; Low Observables; Ground Vehicle Performance; Blast Testing; Systems Engineering; Jet Propulsion; Rocket Propulsion; Small Space; Ballistics; Flapping Wing Flight; Systems of Systems; IEDs, Rocket, Artillery and Mortars; Automobile Noise, Air Intake Systems; Flux Capacitors.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Associate Fellow AIAA; Technical Chair of AIAA Defense Forum (2017, 2018); AIAA Board of Directors (2012-2015); Fulbright Commission Selection Committee (2011-2013).

Mr. Thomas E. McNeil George Research Tech Institute (GTRI)

EDUCATION

Air Force Institute of Technology
M.S., Engineering Physics 1986
Georgia Institute of Technology
B.S., Applied Physics 1982

WORK EXPERIENCE

Georgia Institute of Technology, Georgia Tech Research Institute

Associate Director, Advanced Concepts Laboratory, 2018-Present

Division Chief, Signals and Systems, Advanced Concepts Laboratory 2013-2018

Principal Research Scientist, Signatures Technology Laboratory, 2010-2013

CommScope, Inc.

Director, Federal Programs, 2004-2010

OFS-Fitel

General Manager, Federal Systems, 2003-2004

Senior Manager, Customer Support Engineering, 2002-2003

Lucent Technologies

Senior Manager, Applications Engineering and Marketing, Network Products, 2000-2002

Senior Manager, Enterprise Networks Offer Management, Network Products, 1998-2000

Manager, Enterprise Networks Optical Offers, Network Systems, 1997-1998

Member of Technical Staff, Bell Laboratories, 1996-1997

Molex Fiber Optics

Regional Fiber Optic Sales Manager & Applications Engineer, 1995-1996

Computer Communications Specialists, Inc.

Senior Account Executive, 1994-1995

United States Air Force

Deputy Director, Studies & Analysis, US Air Force Information Warfare Center, 1993-1994

Chief, Electro-Optics Branch, US Air Force Electronic Warfare Center, 1990-1993

Assistant Professor of Physics and Course Director, US Air Force Academy, 1987-1989

Graduate Student, Air Force Institute of Technology, 1985-1986

Combat Survivability Design Engineer, Aeronautical Systems Division, 1982-1985

AREAS OF EXPERTISE

Modeling, Simulation and Analysis; Electronic Warfare; Information Operations; RF Systems; EO/IR Systems; Threat Systems Projection; Operational Analysis; Multi-Domain Operations; Advanced Kill-Chains; 5th and 6th Generation Capabilities; Systems Acquisition.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Institute of Electrical and Electronics Engineers (IEEE), Air Force Association (AFA), Association of Old Crows (AOC), Military Officers Association of America (MOAA).

Dr. Todd D. Murphey Northwestern University

EDUCATION

California Institute of Technology
Ph.D., Control and Dynamical Systems, 2002
University of Arizona
B.S., Mathematics, 1997

WORK EXPERIENCE

Northwestern University

Professor, Mechanical Engineering, 2017-Present Associate Professor, Mechanical Engineering, 2011-2017 Assistant Professor, Mechanical Engineering, 2009-2011

University of Colorado

Assistant Professor, Electrical and Computer Engineering, 2004-2008 Aerospace Corporation

Senior Technical Staff, Control Systems, 2003-2004

AREAS OF EXPERTISE

Robotics; automation; autonomy; control systems; human-in-the-loop systems; assistive and rehabilitative devices; machine learning.

PROFESSIONAL/SCIENTIFIC/HONORARY AFFILIATIONS

IEEE; ASME; AAAS.



Dr. Kenneth R. Olson The Johns Hopkins Applied Physics Laboratory

EDUCATION

University of Wisconsin

Ph.D. Dissertation: Time Dependent Neutral Particle Transport, 1999

M.S., Nuclear Engineering and Engineering Physics, 1996

B.S., Nuclear Engineering and Engineering Physics, 1994

WORK EXPERIENCE

Johns Hopkins University Applied Physics Laboratory

Program Manager: OSD/CAPE TACAIR Red Team, 2014-Present

Principle Analyst, IADS-CCT USAF ACC/A8Z, 2012-Present

Chief Analyst, OSD/CAPE TACAIR Red Team, 2008-2014

Modeling Lead, USN PMA-234 JATO modeling and simulation, 2008-2011

Principle Analyst, AFRL investigation of novel electronic attack systems, 2008-Present

Modeling SME, USN Naval CONEMPs / HICAP working group 2008-Present

Principle Analyst, USN Next Generation Jammer, 2009-Present

Massachusetts Institute of Technology, Lincoln Laboratory

Staff, MIT Rapid Capabilities Office Red Team, 1999-2007

Principle Analyst, USAF Red Team, Operation Iraqi Freedom after-action study, 2003-2005

Analyst, USAF Red Team, Operation Allied Force after-action study, 1999-2003

AREAS OF EXPERTISE

Survivability of legacy and advanced aircraft and weapons in an A2AD environment; Effectiveness of current and future electronic attack and protection; High fidelity engagement / mission level modeling effectiveness and optimization; Capabilities and limitations of ISR and reconnaissance systems; Vulnerability of PGM to threats; Capabilities and CONOPS of potential threat systems.

PROFESSIONAL/SCIENTIFIC/HONORARY AFFILIATIONS

Association of Old Crows, American Nuclear Society.



Dr. Alfred Anthony (Tony) Pandiscio Raytheon Company

EDUCATION

University of Massachusetts Amherst

B.S., Control Systems/Electrical Engineering, 1983 Harvard University

M.S., Control Systems/Applied Mathematics, 1986

University of Massachusetts Amherst

B.S., Control Systems/Electrical Engineering, 1983 Brown University

Ph.D., Control Systems/Electrical Engineering, 1994 M.S., Control Systems/Electrical Engineering, 1994



WORK EXPERIENCE

Raytheon Company

Technical Director, Systems Technology, Corporate, 2012-Present
Technical Area Director, Operations Analysis, Integrated Defense Systems, 2001-2012
Systems Engineering Department Manager, Integrated Defense Systems, 1999-2001
Section Manager Guidance, Navigation & Control, Integrated Defense Systems, 1995-1999
Standard Missile Block IV/IVA Guidance, Navigation & Control Lead, 1986-1999

AREAS OF EXPERTISE

Control Systems; Missile Guidance Navigation & Control; Sensor Netting; Operations Analysis; Estimation Theory; Air Defense Systems; Modeling & Simulation; Systems Engineering.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Member, IEEE; Past chairman of the Boston Chapter IEEE Control Systems Society.

Dr. Patric L. Patterson Utah State University

EDUCATION

Utah State University

Ph.D., Space Systems/Electrical Engineering, 2005 M.S., Electrical Engineering, 1990

B.S., Electrical Engineering, 1989

WORK EXPERIENCE

Space Dynamics Laboratory, Utah State University

Director, Advanced Concepts, 2015-Present

Director, Military Space & Technology Innovation, 1998-2015

Sensor Systems Engineer, 1997-1998

Experiment Director, U.S.A.F. Phillips Laboratory, 1993-1997

Electrical Engineer, 1992-1993

Utah State University Research Foundation

Chairman, AIAA/USU Conference on Small Satellites, 2000-present

Utah State University/Electrical and Computer Engineering Department

Adjunct Assistant Professor, 2008-present

Utah State University

 $Program\ Coordinator,\ NASA\ Affiliated\ Research\ Center,\ 1998-1999$

Chief of Staff, Rocky Mountain Space Grant Consortium, 1992-1993

Honeywell Inc.

Systems Engineer, 1990-1992

AREAS OF EXPERTISE

Space Systems; Small Satellite Technologies; Space Situational Awareness; Rendezvous and Proximity Operations; Laser Operations; Controls; Astrodynamics; EO/IR Sensors.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Chairman, AIAA/USU Conference on Small Satellites (2000-Present); Technical Committee Member, European Space Agency Small Satellites Systems and Services Conference (2008-Present); Scientific Program Committee Member, International Academy of Astronautics, Small Satellites for Earth Observation Symposium (2009-Present); Advisory Board Member, Electrical and Computer Engineering Department, Utah State University (2009-Present); Senior Member, International Academy of Astronautics, (2001-Present); Committee Member, AIAA Small Satellite Technical Committee (2015-Present); Council of Institutions Member, Universities Space Research Association (2009-2014); Committee Member, AIAA Space Systems Technical Committee Member (2002-2005).



Dr. Alan J. Pue John Hopkins Applied Physics Laboratory

EDUCATION

University of Maryland
Ph.D., Electrical Engineering, 1981
Cornell University
M.Eng., Electrical Engineering, 1974
Cornell University
B.S., Electrical Engineering, 1973



WORK EXPERIENCE

John Hopkins Applied Physics Laboratory

Sector Chief Scientist, Air and Missile Defense Sector, 2010-Present Director, Interceptor Knowledge Center, Missile Defense Agency, 2008-2010 Supervisor, Guidance Navigation and Control Group, Air and Missile Defense Department, 2000-2008

Assistant Supervisor, Guidance and Navigation Group, Power Projection Department, 1996-2000

Assistant Supervisor, Missile Guidance, Control, and Navigation Group, Fleet Systems Department, 1994-1996

Section Supervisor, Navigation System Analysis Section, Missile Guidance, Control, and Navigation Group, Fleet Systems Department, 1987-1994

Assistant Section Supervisor, Inertial and Pointing Systems Section, Missile Guidance, Control, and Navigation Group, Fleet Systems Department, 1981-1987

Staff Member, Dynamics Analysis, Fleet Systems Department, 1974-1981

AREAS OF EXPERTISE

System Engineering; Weapon System Concept Development; Requirements Development; Missile Flight Test and Evaluation; Weapon System Performance Analysis; Guidance, Navigation, and Control System Design and Analysis.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS AIAA.

Dr. Helen L. Reed Texas A&M University

EDUCATION

Virginia Tech

Ph.D., Engineering Mechanics, 1981

Virginia Tech

M.S., Engineering Mechanics, 1980

Goucher College

A.B., Mathematics, 1977



Texas A&M University

Edward "Pete" Aldridge `60 Professorship, Aerospace Engineering, 2014-present

Regents Professor (in perpetuity), 2013/14-present

Presidential Professor for Teaching Excellence (in perpetuity), 2013-present

Department Head, Aerospace Engineering, 2004-2008

Professor, Aerospace Engineering, 2004-present

Chandah Space Technologies

Co-Founder, Chief Technology Officer, Board of Directors, 2012-present

Arizona State University

Professor, Mechanical & Aerospace Engineering, 1992-2004

Associate Professor, Mechanical & Aerospace Engineering, 1985-1992

Director, Aerospace Research Center, College of Engineering & Applied Sciences, 1993-1996

Tohoku University, Sendai, Japan

Associate Professor, Institute of Fluid Sciences, 1991-1992

Stanford University

Assistant Professor, Mechanical Engineering, 1982-1985

NASA Langley Research Center

Aerospace Technologist, 1977-1978

Mathematics Aid, 1976

AREAS OF EXPERTISE

Boundary-layer laminar-to-turbulent transition, aerothermodynamics, flow control – low speed to hypersonic; energy efficient aircraft; quiet supersonic platform; computational fluid dynamics; small-satellite design/operations; on-orbit rendezvous/proximity operations; space situational awareness.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

National Academies' Air Force Studies Board "US Air Force Development Planning Roundtable"; National Academies' "Intelligence Science & Technology Experts Group"; NATO STO AVT-ET-190: "Hypersonic Transition"; Consultant, Institute for Defense Analysis; Fellow, American Institute of Aeronautics & Astronautics; Fellow, American Society of Mechanical Engineers; Fellow, American Physical Society; American Astronautical Society; American Society for Engineering Education; Radio Amateur Satellite Corporation; American Radio Relay League; US Geospatial Intelligence Foundation; Virginia Tech "Aerospace & Ocean Engineering Advisory Board", "Academy of Aerospace & Ocean Engineering Excellence", "Committee of 100", and "Academy of Engineering Excellence."



Dr. William C. Regli The University of Maryland

EDUCATION

The University of Maryland
Ph.D., Computer Science, 1995
The University of Maryland
M.S., Computer Science, 1994
Saint Joseph's University
B.S., Mathematics, 1989



WORK EXPERIENCE

The University of Maryland at College Park

Director, Applied Research Laboratory for Intelligence and Security, 2018-Present

Director, Institute for Systems Research, 2018-2019

Professor, Department of Computer Science, 2018-Present

Defense Advanced Research Projects Agency (DARPA), United States Department of Defense

Special Assistant, Office of the Director, 2017

Acting Director, Defense Sciences Office, 2017

Deputy Director, Defense Sciences Office, 2014-2017

United States Department of Energy

Scientific Adviser, Office of Stockpile Services, 2010-2014; 2018-Present

Drakontas LLC

Founder and Scientific Adviser, 2003-Present.

Drexel University

Associate Dean for Research, College of Computing and Informatics, 2010-2014
Director, Applied Communications & Information Networking Institute, 2008-2010
Deputy Director, Applied Communications & Information Networking Institute, 2003-2008
Assistant, Associate and Full Professor of Computer Science, 1997-2014

AREAS OF EXPERTISE

Artificial Intelligence and Autonomy; Graphics, Modeling and Simulation; Engineering Design and Manufacturing; Military and wireless communications networks; Data-driven methods for science and engineering.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

IEEE (Fellow 2017); ACM (Senior Member); AAAI (Senior Member); AAAS.

Mr. David W. Robbins Leidos

EDUCATION

Rensselaer Polytechnic Institute M. Eng., Electrical Engineering, 1977 Rensselaer Polytechnic Institute B.S., Electrical Engineering, 1976

WORK EXPERIENCE

Leidos

Sr. Vice President and Director, Leidos Innovations Center, 2019-Present Sr. Vice President and Manager, Sensors and Phenomenology Operation, 2014 –2018 Vice President and Manager, Sensor Technology Division, 2005–2013 Vice President and Deputy Division Manager, Sensor Design Division, 1997–2005

PAR Government Systems

Vice President/San Diego Technology Center Manager, 1987–1997 Section Manager/Program Manager, 1977–1987

AREAS OF EXPERTISE

Space-based EO/IR sensing; satellite technology, IR search and track systems; radar, electronic warfare; signature control; unattended ground sensing; directed energy; portable radiography systems; DNA-based human ID; bio threat detection.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Institute of Electrical and Electronic Engineers, American Association for the Advancement of Science, Association of Old Crows, Air Force Association, Association for Unmanned Vehicle Systems International.

Dr. Kevin J. Saeger Los Alamos National Laboratory

EDUCATION

Massachusetts Institute of Technology
Ph.D., Aeronautics and Astronautics, 1989
Massachusetts Institute of Technology
M.S., Aeronautics and Astronautics, 1986
Tri-State University
B.S., Aerospace Engineering, 1984



WORK EXPERIENCE

Los Alamos National Laboratory

Division Leader, Intelligence and Space Research, 2010-Present Group Leader, Decision Applications Division, 2005-2010 Various, Decision Applications Division, 2001-2005

Office of the Secretary of Defense/Program Analysis and Evaluation Director (SES), Planning and Analytical Support, 1997-2001 Director (GS-15), Simulation and Analysis Center, 1996-1997 Analyst, Land Forces Division, 1995-1996

Institute for Defense Analyses

Staff Member, System Evaluation Division, 1989-1996

AREAS OF EXPERTISE

Space Systems; Survivability; Remote Sensing; Modeling and Simulation; Weapons Effects; Structural Mechanics; Materials; C4ISR; Optimization; Nuclear Detection; Operations Research; Systems Analysis; Space Situational Awareness.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Associate Editor, Military Operations Research Journal.

Dr. Lara S. Schmidt RAND Corporation

EDUCATION

The American University
Ph.D., Mathematical Statistics, 2001
West Virginia University
M.S., Mathematics, 1993
Shepherd College
B.S., Mathematics, 1991



WORK EXPERIENCE

The Aerospace Corporation

Principal Director, Strategic and Global Awareness Directorate, 2019-present RAND Corporation

Director, RAND Homeland Security Operational Analysis Center FFRDC, Strategy, Policy and Operations Program, 2016-Present

Associate Director, RAND Project AIR FORCE FFRDC, 2011-2016

Associate Director, Force Modernization and Employment, 2010-2011

Senior Statistician, 2003-Present

U.S. Naval Observatory

Mathematician, 1995-2003

AREAS OF EXPERTISE

Intelligence analysis and threats to national security space systems. Policy and technology analysis to include the following areas: offensive and defensive cyberspace operations; risk analysis; operational employment of technology and effects on warfighting operations; methodological approaches to policy analysis; cyber-manpower analyses; space and satellite systems; atomic timekeeping; GPS and navigation; cybersecurity of industrial control systems; cyber effects estimation; quality assurance; weapon system acquisition; requirements analysis; cyber testing; cybersecurity practices; cyber operations planning.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Member, American Statistical Association. Board of Advisors, Harvard Data Science Review.

Dr. Gregory E. Shannon Carnegie Mellon University

EDUCATION

Harvard University

Certificate, National International Security Policy for Senior Executives 2012

Purdue University

Ph.D., Computer Sciences, Purdue University, 1988

Iowa State University

B.S, Computer Science, Iowa State University, 1982



WORK EXPERIENCE

Carnegie Mellon University

Chief Scientist, CERT Division, 2010-Present

Science Applications International Corp. (SAIC)

Chief Scientist, Cyber Security, Science Engineering and Technology Corporation, 2008-2010 CounterStorm, Inc.,

Chief Scientist, New York, NY, 2003-2008

Lucent Technologies, Inc.

Manager, Technology and Business Strategist, Columbus, OH, 1997-2003

Spanning Tree Technologies, Inc.

Founder and Chief Scientist, Ames, IA, 1994-1997

Indiana University

Assistant Professor, Bloomington, IN, 1988-1995

AREAS OF EXPERTISE

Cybersecurity, resilience, artificial intelligence, software, and science of security.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

IEEE, Senior Member; Association of Computing Machinery, Member; Women in Cyber Security (WiCyS) Conference, Steering Committee Member.

Mr. Gregory J. Simer **Northrop Grumman Mission Systems**

EDUCATION

Johns Hopkins University M.S., Electro-Optical Engineering, 2001 B.S., Electrical Engineering, 1999

WORK EXPERIENCE

Northrop Grumman

Director, Air Dominance, 2017-Present Director, Advanced EO/IR Systems, 2014-2017 Program Manager, EO/IR & Distributed Systems, 2007-2014 Senior Systems Engineer, 2003-2007 Independent Consultant 2002-2004 University of Maryland

Research Scientist, Army Research Lab, 2003

Yafo Networks

Systems Engineer, 2000-2002

Gould Fiber Optics

Engineer, 1995-2000

AREAS OF EXPERTISE

EO/IR Systems; Infrared Search and Track, Laser Radar; Fiber Optics; Lasers; Focal Plane Arrays, Optical Windows; Airborne System Integration; Flight Test; Low Observable Technologies; Radar, Optical Communication systems; ISR; Fire-control; Tracking and ID.



Dr. Katherine M. Simonson Sandia National Laboratories

EDUCATION

Princeton University
Ph.D., Statistics, 1989
Princeton University
M.A., Statistics, 1986
Middlebury College
B.A., Mathematics, 1984



WORK EXPERIENCE

Sandia National Laboratories

Senior Scientist, Systems Mission Engineering, 2015-present
Distinguished Member of Technical Staff, Data Analysis & Exploitation, 2002-2015
Principal Member of Technical Staff, Sensor Exploitation Applications, 1995-2002
Senior Member of Technical Staff, Statistics & Human Factors, 1989-1995

AREAS OF EXPERTISE

Statistics; Data Analytics; Automatic Target Recognition; Synthetic Aperture Radar; Image Processing; Intelligence, Surveillance and Reconnaissance.

PROFESSIONAL / SCIENTIFIC/HONORARY AFFILIATIONS

Association for Women in Mathematics; Automatic Target Recognizer Working Group; Phi Beta Kappa.

Dr. Annette L. Sobel Texas Tech University Health Sciences Center

EDUCATION

Wright State University

M.S., Aerospace Medicine/Human Factors Engineering, 1992

Duke University

Family Medicine Residency, 1986

Case Western Reserve School of Medicine

M.D., Medicine, 1983

Rutgers University

B.S., Biochemistry/Computer Science, 1979

WORK EXPERIENCE

Texas Tech University Health Sciences Center

Associate Professor, Medical Education, 2013-present

Adjunct Professor

Electrical and Computer Engineering, 2013-present

University of Missouri

Assistant to the Provost for Strategic Opportunities, 2008-2013

Sandia National Laboratories

Distinguished Member of the Technical Staff, 1992-2008

AREAS OF EXPERTISE

Aerospace Medicine; Human Factors Engineering; Virtual Reality/Augmented Reality; Simulation; Informatics; Disease Surveillance; Intelligence Fusion; CBRNE; Homeland Defense and Security; Humanitarian Assistance/Disaster Response; Automatic Target Recognition; One Health.

PROFESSIONAL/SCIENTIFIC/HONORARY AFFILIATIONS

Fellow, Aerospace Medical Association; Fellow, American Academy of Family Physicians; USGIF; IEEE; Association of Military Surgeons; Association of Old Crows; Human Factors and Ergonomics Society; AFCEA International.



Dr. Lindley T. Specht Raytheon

EDUCATION

University of Illinois at Urbana-Champaign Ph.D., Electrical Engineering, 1981 University of Illinois at Urbana-Champaign M.S., Electrical Engineering, 1978 University of Florida B.S., Chemistry, 1974



WORK EXPERIENCE

Raytheon

Subject Matter Expert, RayTech, 2015-Present
Retiree, Integrated Defense Systems, 2014-2015
Senior Principal Engineering Fellow, Integrated Defense Systems, 2009-2014
Principal Engineering Fellow, Integrated Defense Systems, 2006-2009
Senior Engineering Fellow, Integrated Defense Systems, 2003-2006
Engineering Fellow, Raytheon Electronic Systems, 1999-2003
Manager/Lead Scientist, Raytheon Systems Company, 1998-1999
Manager/Principal Engineer, Raytheon Electronic Systems, 1995-1998
Manager/Principal Scientist, Corporate Research Division, 1989-1995
Senior Scientist, Corporate Research Division, 1981-1989

AREAS OF EXPERTISE

Electro-Optics; Infrared Focal Plane Arrays; Lasers including HEL/DEW; Advanced Materials and Material/Chemical Science; MEMS, Nanotechnology; RF Devices, Semiconductor Materials and Device Fabrication; IC Design; Computer Systems; Signature Management; Sensor Systems; System Design and Analysis; Emerging Technology Development; Commercial Technology Applications.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS IEEE; ACS; ARRL.

Dr. Stefanie Tompkins Colorado School of Mines

EDUCATION

Brown University,

Ph.D, Geological Sciences, 1997

Brown University

M.Sc., Geological Sciences, 1993

Princeton University

B.A., Geological and Geophysical Sciences, 1987

WORK EXPERIENCE

Colorado School of Mines

Vice President for Research and Technology Transfer, 2018-Present

X (formerly Google X)

Advisor to X, 2018-present

Defense Advanced Research Projects Agency (DARPA)

Acting Deputy Director, 2017-2018

Director, Defense Sciences Office, 2014-2017

Chief of Staff, 2013-2014

Deputy Director, Strategic Technology Office, 2012-2013

Program Manager, 2007-2012

Science Applications International Corporation

Deputy Operations Manager, Reconnaissance and Surveillance Operation, 2006-2007

Division Manager, Advanced Technology Applications Division, 2003-2006

Senior Staff Scientist, 1996-2003

SETS Technology, Inc.

Associate Scientist, 1993-1996

U.S. Army (Military Intelligence)

Commissioned Officer, 1987-1991

AREAS OF EXPERTISE

Reflectance spectroscopy; imaging spectroscopy (hyperspectral imaging) and remote sensing; positioning, navigation, and timing; geology and detection of underground structures.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Member, Sigma Xi.



Dr. Vyshnavi Suntharalingam MIT Lincoln Laboratory

EDUCATION

Pennsylvania State University
Ph.D., Engineering Science and Mechanics, 1996
Yale University
B.S., Electrical Engineering, 1989

WORK EXPERIENCE

MIT Lincoln Laboratory

Senior Staff, Space Systems & Technology, 2014-Present Group Leader, Advanced Imaging and Silicon Technology, 2010-2014 Senior Staff, Advanced Imaging Technology, 2005-2010 Assistant Group Leader, Advanced Silicon Technology, 2000-2005 Technical Staff, Advanced Technology, 1996-2000



AREAS OF EXPERTISE

EO/IR components, sensors, systems; advanced materials and materials science; microelectronics; satellites and space system technologies; manufacturing technologies; RF components and sensors.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

IEEE Senior Member. DOE Basic Energy Sciences Accelerator and Detector Research Program Reviewer; DOE Basic Energy Sciences SLAC Linac Coherent Light Source Detector Advisory Committee. Manuscript reviewer: IEEE Electron Device Society, Journal of Astronomical Telescopes, Instruments, and Systems. Technical Program Committee member: IEEE International Electron Devices Meeting, Scientific Detectors for Astronomy Workshop (2012 to present), International Congress on High-Speed Imaging and Photonics, International Image Sensor Workshop (2012 to present), IEEE SOI-3D-Subthreshold Microelectronics Technology (2012-2016), IEEE SOI Conference Short Course Chair (2008). Lincoln Laboratory Technical Excellence Award 2014; MIT Excellence Award, Fostering Diversity and Inclusion 2010; Lincoln Laboratory Team awards: 2016-2017, 2015-2016, 2011-2012, 2004-2005.

Mr. Lee A. Venturino First Principles Inc.

EDUCATION

California State University, Fullerton
M.S., Communications, Electrical Engineering, 1991
Pennsylvania State University
B.S., Electrical Engineering, 1987

WORK EXPERIENCE

First Principles Incorporated
President and CEO, Founder, 2004-Present

Dynamic Analytics and Test
President and Co-Founder, 1999-2004

USAFR

Program Subject Matter Expert, SAF/AQL, 1999-2007

USAF

Branch Chief, Advanced Strike Technologies, SAF/AQLR 1996-1999 Test Program Manager, Det 3, 1992-1996 Advanced Technology Program Manager, Ballistic Missile Office, 1988-1992

AREAS OF EXPERTISE

Aircraft survivability, Aircraft Lethality, Electronic Warfare, Electronic Protection, Low Observables, Countermeasures, Towed Decoys, Ballistic Missiles, Satellite survivability.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Defense Science Board – "The Future of Military Technologies – 2019 Summer Study"; Task Force Member and Panel Co-Chair, "Long Range Effects Summer Study 2017"; Defense Science Board – "Maintaining Air Dominance in 2035"; Defense Science Board – "Electronic Warfare in a Complex Electromagnetic Environment"; IEEE; Tau Beta Pi.



Dr. Steve Warner Institute for Defense Analyses

EDUCATION

Massachusetts Institute of Technology
Ph.D., Inorganic Chemistry, 1986
State University of New York, Stony Brook
B.S., Chemistry/Minor Mathematics, 1982

WORK EXPERIENCE

Institute for Defense Analyses

Director, System Evaluation Division, 2008-Present
Assistant Director, System Evaluation Division, 2005-2008
Research Staff Member, Operational Evaluation Division, 1986-2005
Massachusetts Institute of Technology

Research and Teaching Assistant, Chemistry Department, 1982-1986



AREAS OF EXPERTISE

Assessments of Weapon System Performance (missiles, sensors, torpedoes, countermeasures); Missionand Force-Level Modeling and Simulation; Test and Evaluation of Military Systems; Evaluation of Tools for Predicting Atmospheric Transport and Dispersion (chemical-biological agent defense, nuclear effects, hazardous materials), Electronic Warfare (counter-improved explosive device and air warfare); Evaluation of Undersea and Antisubmarine Systems; Operational Assessment of Counterdrug Operations and Coast Guard Law Enforcement Activities.

Dr. Peter M. Wegner Spaceflight Industries

EDUCATION

University of Wyoming

Ph.D., Composite Materials/Mechanical Engineering, 1999

Stanford University

M.S., Aerospace Engineering, 1993

University of Arizona

B.S., Aerospace Engineering, 1992



Spaceflight Industries

Chief Technology Officer, 2014-Present

USU/Space Dynamics Laboratory

Director of Advanced Concepts, 2012-2014

USAF

 $Director\ of\ Operationally\ Responsive\ Space\ Office,\ 2008-2012$

Air Force Research Laboratory, 1993-2007

AREAS OF EXPERTISE

Satellites; Rockets; Remote Sensing; Ground Systems; Data Analytics; Cloud Processing.

PROFESSIONAL / SCIENTIFIC / HONORARY AFFILIATIONS

Associate Fellow AIAA; USAF Harold Brown Award; Rotary NASA Award.



Mr. Alan R. Wiechman Eagle Aerie Inc.

EDUCATION

California Polytechnic State University B.S., Electrical Engineering, 1972

WORK EXPERIENCE

Eagle Aerie Inc.

Chief Technology Officer, 2014-Present Contractor for MTSI, 2015-Present Contractor for MIT/LL, 2015-Present

Boeing

Vice President Special Technology Integration, 2009-2014
Vice President Advance Combat Systems, 2004-2006
Division Director, Special Assignment, 2000-2004
Director Proprietary Professional Grounds Managements, 1985-2000
Deposition Technology, Brunswick, 1985-1985
LO Section Chief, McDonnell Douglas 1981-1985
LO Engineer, Lockheed Skunks Works 1977-1981
Electronic Engineer, Vitro Labs, Naval Upgrades 1971-1977



AREAS OF EXPERTISE

Low Observables, Radar Cross Section/Radiant Intensity/Acoustics/Visual/Electromagnetic Emissions, Prop, Aero, Materials, Mission Systems, Structures, Codes.

PROFESSIONAL/ SCIENTIFIC/ HONORARY AFFILIATIONS

AIAA, Aerospace Design Award; National Defense Industrial Association Combat Survivability Award, Tech Achievement; Pioneer of Stealth Award; Tulare Western High School (First Ever Wall of Fame); College of Sequoias (Hall of Fame).

Dr. Yadunath B. Zambre Lockheed Martin

EDUCATION

Stanford University

Ph.D., Applied Physics, 1987

Yale University

M.S., Engineering and Applied Science, 1979

Yale University

B.S., Engineering and Applied Science, 1979



Lockheed Martin

Director & Chief Technologist, New Ventures, 2018- Present

Chief Scientist, Advanced Technology Center, Space Systems, 2012-2017

Chief Scientist, Information Systems and Global Services, Defense Engineering, 2009-2012

Senior Fellow, 2011-Present

Fellow, Information Systems and Global Services, 2008-2011

Principal Engineer, Information Systems and Global Services, 2005-2008

UTrue, Inc.

Chief Technology Officer, 2003-2005

R.B. Webber & Company

Principal, 2002-2003

Atomic Tangerine

Chief Technology Officer, 2000-2002

Stanford Research Institute

Principal Consultant, SRI Consulting, 1997-2000

Research Physicist, Geoscience and Engineering Center, 1989-1997

AREAS OF EXPERTISE

Cyber security; communications; networking; systems architecture; space systems; business models; technology incubation; technology commercialization.

PROFESSIONAL/SCIENTIFIC/HONORARY AFFILIATIONS

Member, IEEE.



United States Air Force - Scientific Advisory Board 2019-2020				
Section 3	: Air Staff an	d Secretaria	t Biographie	es

Lt Gen Duke Z. Richardson SAB Military Director

Lt. Gen. Duke Z. Richardson is the Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, Technology, and Logistics, the Pentagon, Arlington, Virginia. He is responsible for research and development, test, production, product support, and modernization of Air Force programs worth more than \$60 billion annually.

* * *

Gen. Richardson enlisted in the Air Force in 1983 as an avionics technician, and later received his commission via Officer Training School. In addition to four Program Executive Officer leadership tours, Gen. Richardson has held a

breadth of materiel-related assignments within Program Offices, the Air Force Research Laboratory, Headquarters Air Force Life Cycle Management Center, Headquarters Air Force Materiel Command, Headquarters Air Force, U.S. Special Operations Command and the Office of the Secretary of Defense.

In his previous assignment, he was the Air Force Program Executive Officer for Presidential & Executive Airlift, where he oversaw the planning and execution of all life cycle activities for programs including the Air Force One recapitalization, current Air Force One, C-12, C-21, C-32, C-37, C-40 and E-4B.

EDUCATION

- 1989 Bachelor of Science, Electrical Engineering, Arizona State University, Tempe
- 1993 Master of Science, Electrical Engineering, University of New Mexico, Albuquerque
- 1997 Master of Arts, Organizational Management, The George Washington University, Washington, D.C.
- 1997 Squadron Officer School, Maxwell Air Force Base, Ala.
- 2001 Air Command and Staff College, Maxwell AFB, Ala.
- 2002 Advanced Program Management Course, Fort Belvoir, Va.
- 2006 Industrial College of the Armed Forces, Fort Lesley J. McNair, Washington, D.C.
- 2006 Senior Acquisition Course, Fort Lesley J. McNair, Washington, D.C.
- 2009 U.S. Air Force Enterprise Leadership Seminar, Darden School, University of Virginia, Charlottesville, Va.
- 2012 Executive Program Manager's Course, Fort Belvoir, Va.
- 2016 Advanced Senior Leader Development Program, Warrenton, Va.

ASSIGNMENTS

- 1. March 1983 September 1989, avionics technician, and later, Airmen's Education and Commissioning Program student, Williams Air Force Base, Ariz.
- 2. October 1989 May 1993, Space Electronics Engineer, Air Force Research Laboratory (formerly Phillips Laboratory and Weapons Laboratory), Kirtland AFB, N.M.
- 3. May 1993 July 1995, Course Director and Instructor, Department of Mathematical Sciences, U.S. Air Force Academy, Colo.
- 4. August 1995 July 1997, Air Force Intern, Office of the Under Secretary of Defense for Acquisition and Technology, Arlington, Va.
- 5. July 1997 June 1999, F-15 Suite 4 Program Manager, F-15 System Program Office, Wright-Patterson AFB. Ohio
- 6. July 1999 July 2000, Designated Acquisition Commander Staff Officer, Aeronautical Systems Center, Wright-Patterson AFB, Ohio
- 7. August 2000 June 2001, student, Air Command and Staff College, Maxwell AFB, Ala.
- 8. June 2001 June 2002, Life Support Systems Program Element Monitor, Directorate of Global Power Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Headquarters U.S. Air Force, Arlington, Va.

- 9. June 2002 June 2004, F-22 Branch Chief and Lead Program Element Monitor, Directorate of Global Power Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Headquarters U.S. Air Force, Arlington, Va.
- 10. July 2004 July 2005, Executive Officer to the Military Deputy, Assistant Secretary of the Air Force for Acquisition, Headquarters U.S. Air Force, Arlington, Va.
- 11. August 2005 June 2006, student, Industrial College of the Armed Forces, Fort Lesley J. McNair, Washington, D.C.
- 12. June 2006 July 2007, Deputy Director of Global Power Programs, Office of the Assistant Secretary of the Air Force for Acquisition, Headquarters U.S. Air Force, Arlington, Va.
- 13. July 2007 April 2009, Commander, 823rd Aeronautical Systems Group, 303rd Aeronautical Systems Wing, Aeronautical Systems Center, Wright-Patterson AFB, Ohio
- 14. May 2009 May 2011, Program Executive Officer for Fixed Wing, Headquarters U.S. Special Operations Command, MacDill AFB, Fla.
- 15. May 2011 August 2012, Air Force Program Executive Officer for Fighters and Bombers, Aeronautical Systems Center (later, Air Force Life Cycle Management Center), Wright-Patterson AFB, Ohio.
- 16. August 2012 September 2013, Vice Commander, Air Force Life Cycle Management Center, Wright-Patterson AFB, Ohio
- 17. September 2013 September 2014, Director, Logistics and Sustainment, Headquarters Air Force Materiel Command, Wright-Patterson AFB, Ohio
- 18. September 2014 June 2017, Air Force Program Executive Officer for Tankers, Tanker Directorate, Air Force Life Cycle Management Center, Wright-Patterson AFB, Ohio
- 19. March 2017 August 2018, Air Force Program Executive Officer for Presidential Airlift Recapitalization, PAR Directorate, Air Force Life Cycle Management Center, Wright-Patterson AFB, Ohio 20. September 2018 June 2019, Air Force Program Executive Officer for Presidential & Executive Airlift, PE Directorate, Air Force Life Cycle Management Center, Wright-Patterson AFB, Ohio
- 21. June 2019 present, Military Deputy, Office of the Assistant Secretary of the Air Force for Acquisition, Technology and Logistics, the Pentagon, Arlington, Va.

MAJOR AWARDS AND DECORATIONS

Defense Superior Service Medal Legion of Merit with oak leaf cluster Meritorious Service Medal with five oak leaf clusters Air Force Commendation Medal Air Force Achievement Medal

OTHER ACHIEVEMENTS

1991 Weapons Laboratory Young Scientist/Engineer of the Year 1995 Outstanding Academy Educator, Department of Mathematical Sciences 1997 Distinguished Graduate, Squadron Officer School 2001 Distinguished Graduate, Air Command and Staff College 2006 Distinguished Graduate, Industrial College of the Armed Forces

EFFECTIVE DATES OF PROMOTION Second Lieutenant Sept. 28, 1989 First Lieutenant Sept. 28, 1991 Captain Sept. 28, 1993 Major July 1, 1999 Lieutenant Colonel March 1, 2003 Colonel Jan. 1, 2007

Brigadier General Aug. 2, 2013 Major General July 3, 2017 Lieutenant General June 20, 2019

(Current as of June 2019)

Dr. Richard J. Joseph Air Force Chief Scientist Ex-Officio Member

Dr. Richard J. Joseph is the Chief Scientist of the United States Air Force, Washington, D.C. He serves as the chief scientific adviser to the Chief of Staff and Secretary of the Air Force, and provides assessments on a wide range of scientific and technical issues affecting the Air Force mission. In this role, he identifies and analyzes technical issues and brings them to the attention of Air Force leaders, and interacts with other Air Staff principals, operational commanders, combatant commands, acquisition and science and technology



communities to address cross-organizational technical issues and solutions. He also interacts with other services and the Office of the Secretary of Defense on issues affecting the Air Force technical enterprise. He serves on the Executive Committee of the Air Force Scientific Advisory Board. He is the principal science and technology representative of the Air Force to the civilian scientific and engineering community and to the public at large.

Dr. Joseph has more than 40 years of experience as a physicist, directed energy researcher, senior program manager, national security advisor and executive. Prior to assuming his current position, Dr. Joseph was the Chief Executive Officer for Earthstar LLC, a small consulting firm he founded in 1998. In this position, he has served government agencies, national laboratories and public companies on the development and management of programs in a broad range of technical areas.

Dr. Joseph commissioned into the United States Air Force in 1973. While on active duty, he performed nuclear physics research at the Defense Nuclear Agency, taught basic and upper level physics courses at the United States Air Force Academy, and in 1983 served on the Directed Energy Panel of the Defensive Technologies Study Team. The resulting DTST Presidential study report became the blueprint for the Strategic Defense Initiative.

Upon leaving active duty, Dr. Joseph joined Los Alamos National Laboratory in the Accelerator Technology group. In 1985 he was chosen as the Neutral Particle Beam program manager in the Strategic Defense Initiative Office's Directed Energy Office. While in this role he instituted and directed three major spacecraft-based programs.

In 1987 he divided his time between serving as a senior advisor to the Defense and Space Delegation in the Nuclear and Space Talks with the Soviet Union in Geneva, acting as a senior policy analyst for national security at the White House Office of Science and Technology Policy, and directing a large study on deployment of an initial missile defense capability for the Secretary of Defense.

Between 1988 and 1990 Dr. Joseph led multiple research programs in laser remote sensing to include an airborne laser system capable of detecting biological warfare agents at LANL. This system, designed to support Operation Desert Storm, was built and successfully tested in 28 days.

In 1992 Dr. Joseph took a leave of absence to join the National Aeronautics and Space Administration where he was part of a small group of senior managers directing the restructuring of the agency. While at NASA he also led an interagency task force on remote sensing that moved the agency from using very large satellites for the Earth Observing System to constellations of smaller platforms.

Upon returning to Los Alamos in 1993, he directed the Laboratory's missile defense programs and in 1995 he joined the Accelerator Production of Tritium program which intended to use a new approach in a new production plant to produce material for the nuclear weapons program.

EDUCATION

1970 Bachelor of Science Physics, Georgetown University, Washington D.C. 1979 Ph.D. Physics, University of Texas, Austin

CAREER CHRONOLOGY

1973 – 1979, Nuclear researcher, Defense Nuclear Agency, Armed Forces Radiobiology Research Laboratory

1979 – 1981, Physics instructor, United States Air Force Academy, Colorado Springs, Colo.

1981 – 1983, Field Command Defense Nuclear Agency nuclear weapons development liaison officer, Los Alamos National Laboratory, N.M.

1983 - 1985, Program manager, Neutral Particle Beam program, SDIO Directed Energy Office

1986 – 1987, Director, Missile Defense Study, Office of the Secretary of Defense, the Pentagon, Washington, D.C.

1988 – 1992, Laser Remote Sensing program manager, LANL, N.M.

1992 – 1993, Integration Team Lead, National Aeronautics and Space Administration, Washington D.C.

1993 – 1995, Missile Defense Program Director, LANL, N.M.

1995 – 1998, Accelerator Production of Tritium program, Department of Energy, LANL, N.M.

1998 - 2017, Owner, Earthstar LLC, LANL, N.M.

2018 – present, Chief Scientist of the U.S. Air Force, Washington, D.C.

BOARDS AND ADVISORY GROUPS (Recent)

Oak Ridge National Laboratory, Global Security Advisory Group Oak Ridge National Laboratory, Nuclear Science and Engineering Advisory Board Argonne National Laboratory, Global Security Advisory Group Nevada Test Site, Senior Advisory Group

(Current as of February 2018)

Lt Col Elizabeth D. Sorrells Executive Director

Lt Col Elizabeth Sorrells is the Executive Director, Air Force Scientific Advisory Board, Office of the Assistant Secretary of the Air Force for Acquisition, the Pentagon, Washington, D.C. She is responsible for the 20-person Secretariat at Headquarters Air Force, which supports over 50 leading scientists and engineers from industry, FFRDCs, national labs, and academia who perform in-depth reviews of Air Force science and technology programs and conduct major studies on topics deemed critical by the Air Force. Prior to her current assignment,



Lieutenant Colonel Sorrells was assigned to Headquarters Defense Threat Reduction Agency where she finished up her tour there as the Deputy Chief, Chemical Biological Radiological Nuclear (CBRN) Preparedness and Response Division.

Lt Col Sorrells graduated from Arizona State University in 2002 with a Bachelor of Science Degree in Chemical Engineering and commissioned as a second lieutenant through the Reserve Officer Training Corps. Her first assignment was at the Air Force Research Laboratory at Edwards AFB CA, where she worked on research identifying and testing new liquid hydrocarbon rocket fuels. At the Air Force Technical Applications Center she supported the nuclear surveillance mission through chemical research and development. While assigned to AFTAC, Lt Col Sorrells deployed with the Defense Intelligence Agency (DIA) to Baghdad, Iraq, leading their analysis laboratory and participating in CBRNE technical collection missions supporting the intelligence mission.

Lt Col Sorrells was then assigned to DIA as the deputy chief for Irregular Warfare and Weapons of Mass Destruction requirements branch, assessing cutting edge technology to support technical collection teams. She then took over as the DIA Program Manager for agency R&D efforts leveraging laboratory and industry partner R&D funding. She also worked closely with CIA and InQTel, accessing and influencing cutting edge technologies of small business startups. At the Space and Missile Systems Center, she supported the Military Satellite Communications (MILSATCOM) Directorate, looking at future MILSATCOM technologies and satellite architectures. After ACSC, Lt Col Sorrells was assigned to the Defense Threat Reduction Agency, where her initial position was as the NORTHCOM Country Lead for the Chemical Biological Radiological Nuclear (CBRN) Preparedness Program, assisting Partner Nations build the capability to respond to CBRN incidents.

EDUCATION

2002 Bachelor of Science in Engineering, Chemical Engineering, Arizona State University, Tempe, Ariz.

2002 Air and Space Basic Course, Maxwell Air Force Base, Ala.

2006 Squadron Officer School, Maxwell AFB, Ala., by correspondence

2007 Squadron Officer School, Maxwell AFB, Ala.,

2010 Master of Arts in Procurement and Acquisition Management, Webster University

2013 Air Command and Staff College, Maxwell AFB, Ala., by correspondence

2016 Master of Military Operational Art and Science, Air Command and Staff College, Maxwell AFB, Ala.

ASSIGNMENTS

- 1. June 2002–June 2005, Propellant Combustion Engineer, Propulsion Directorate, Air Force Research Laboratory, Edwards Air Force Base, Calif.
- 2. June 2005–July 2006, Chemical Technology Evaluator, Materials Technology Directorate, Air Force Technical Applications Center, Patrick AFB, FL.
- 3. July 2006–January 2008, Chief, Chemical Engineering Evaluation Section, Materials Technology Directorate, Air Force Technical Applications Center, Patrick AFB, FL.

- 4. January 2008–June 2008, DTK Lab Manager and CBRNE Technical Collection Team Member, Camp Slayer, Victory Base Compound, Baghdad, Iraq.
- 5. June 2008–May 2009, Deputy Chief, Environmental Sciences Branch, Materials Technology Directorate, Air Force Technical Applications Center, Patrick AFB, FL.
- 6. May 2009–July 2010, Deputy Branch Chief, Irregular Warfare and WMD, MASINT and Technical Collection Directorate, Defense Intelligence Agency, Washington, D.C.
- 7. July 2010–October 2011, Deputy Branch Chief, Irregular Warfare and Test, MASINT and Technical Collection Directorate, Defense Intelligence Agency, Charlottesville, VA.
- 8. October 2011–January 2014, Program Manager, Innovation and R&D Outreach, Science and Technology Directorate, Defense Intelligence Agency, Charlottesville, VA.
- 9. Jan 2014–June 2015, Program Integrator, Special Concepts Branch, MILSATCOM Directorate, Space and Mission Systems Center, Los Angeles AFB, Calif.
- 10. June 2015-June 2016, Student, Air Command and Staff College, Maxwell AFB, AL.
- 11. July 2016–March 2018, NORTHCOM Lead and Division PM, CBRN Preparedness and Response Division, HQ Defense Threat Reduction Agency, Ft Belvoir, VA.
- 12. March 2018–July 2019, Deputy Division Chief, CBRN Preparedness and Response, HQ Defense Threat Reduction Agency, Ft Belvoir, VA.
- 13. July 2019–present, Executive Director, Air Force Scientific Advisory Board, Pentagon, Washington, D.C.

MAJOR AWARDS AND DECORATIONS

Defense Meritorious Service Medal Meritorious Service Medal Joint Service Commendation Medal with oak leaf cluster Air Force Commendation Medal National Defense Service Medal Iraq Campaign Medal

EFFECTIVE DATES OF PROMOTION

Second Lieutenant May 29, 2002 First Lieutenant May 29, 2004 Captain May 29, 2006 Major June 1, 2012 Lieutenant Colonel April 1, 2017

(Current as of July 2019)

Mr. Evan G. Buschmann Deputy Executive Director

EDUCATION

University Illinois Champaign-Urbana B.S., General Engineering, 2005

AREA OF EXPERTISE

Acquisition Program Management; Systems Engineering; Continuous Process Improvement; Aircraft Survivability and Mission Effectiveness Engineering and Test.



ASSIGNMENTS

USAF Life Cycle Management Center (ASC/WWJP), F-35 Joint Program Office (Arlington, VA)

F-35 Strategic Initiatives Lead, 2016-2017

F-35 Block 3i Deputy Capability Manager, 2014-2016

F-35 Deputy Program Manager for Production Planning, 2012-2014

NAVAIR/NAWCAD AIR-4.1.8 (Patuxent River Naval Air Station, MD) F-35 Survivability and Mission Effectiveness Verification Lead, 2010-2012 F-35 RF/IR Signature Engineer, 2010 VH-71 Presidential Helicopter Survivability Engineer, 2008-2010 HX-21 Rotary Wing Flight Test Engineer, 2007-2008

AH-1W/Z and UH-1N/Y Aircraft Survivability Engineer, 2005-2007

Lt Col Melissa M. Tallent Chief of SAB Studies

EDUCATION

Old Dominion University
M.P.A., Public Administration, 2000
James Madison University
B.S., Political Science, 1996

AREA OF EXPERTISE

Program Management, Acquisitions, Certified Information Systems Security
Professional, Information Technology Management, Information Assurance, Configuration Management.

ASSIGNMENTS

(Pentagon, VA, 2018-Present) Office of the Assistant Secretary of the Air Force (Acquisition); (Pentagon, VA) Chief Air& Space Branch, Joint Staff J-8, Joint Requirements and Assessments Division; (PACOM, Camp Smith, HI) Deputy Chief Headquarters Command, Control, Communications and Cyber Services Division; (Langley AFB, VA) Flight Commander, C4 Systems; (FLARNG) Battalion Signal Officer; (USAREUR) Operations Officer; (MDARNG) Signal Platoon Leader.



Maj Jed E. Sherman Chief of S&T Reviews

EDUCATION

Georgetown University
M.S., Infectious Diseases
American Military University
M.A., National Security Studies
West Liberty University
B.S., Biology



AREAS OF EXPERTISE

Program Management; Special Military Operations; Air Mobility.

ASSIGNMENTS

(Pentagon, VA 2016-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Hurlburt Field) Formal Training Unit Instructor/Evaluator & Flight Commander U-28A; (Dyess AFB) Instructor Navigator C-130 E/H.

MSgt Aileen L. Griffith Superintendent

EDUCATION

Ashford University

Bachelors of Administration, Organizational Management

Community College of the Air Force

Associates, Information Resource Management

Community College of the Air Force

Associates, Aerospace Ground Equipment (AGE) - Maintenance

Master Resiliency Trainer

Professional Manager Certification

USAF Senior Non-Commissioned Officer Academy (Distant Learning)

Non-Commissioned Officer Academy (In-residence, Germany)

Joint Senior Non-Commissioned Officer Academy (Distant Learning)

Airman Leadership School (In-residence, LA)



AREAS OF EXPERTISE

Office management; Human Resource Actions; Defense Travel System; Resource Management; Project Management; Event Planning; Development & Mentoring Airmen; Resiliency Training; Military Professional Development Classes; Process improvement; Protocol.

ASSSIGNMENTS

(Pentagon, DC, 2019-Present) Office of the Assistant Secretary of the Air Force (Acquisition); (Travis AFB, CA 2016-2019) 60th Air Mobility Wing,; (RAF Mildenhall, UK, 2013-2016) 95th Reconnaissance Squadron; (USAG-Yongsan, Seoul, S. Korea, 2009-2013) Office of the Commanding General, UNC/CFC/USFK; (Goodfellow AFB, TX, 2006-2009) 17th Training Wing; (CENTCOM, MacDill AFB, FL, 2008) J3/Detainee Operations; (Camp Victory, Baghdad, Iraq, 2006-2007) Task Force 134/Detainee Operations, Multi-National Forces-Iraq; (Keesler AFB, MS, 2006) Info Management Technical School; (Barksdale AFB, LA, 2003-2006) 2nd Maintenance Squadron (AGE); (Aviano AB, Italy, 2000-2003) 31st Maintenance Squadron (AGE).

SrA Jaedon A. Clarke Exec Admin & Security Manager

EDUCATION

University of Maryland University College Currently pursuing - B.S, Social Science/Art Minor,

AREAS OF EXPERTISE

Security Manager; Command Support Section; decorations; evaluations; promotions and ceremonies; administrative-related duties; skilled painter.

ASSSIGNMENTS

(Pentagon, DC, 2019-Present), Office of the Assistant Secretary of the Air Force (Acquisition), Security Manager/Administrator; (Joint Base San Antonio (JBSA) Kelly AFB, Texas, 2018) Air Force Information Mission Support Center HQ, Command Support Staff; (JBSA Lackland AFB, Texas, 2016-2018) 68th Network Warfare Squadron, Command Support Staff.

Mr. Raymond H. McJonathan Budget Officer

EDUCATION

Airman Leadership School Non Commissioned Officer Academy Senior Non Commissioned Officer Academy

AREAS OF EXPERTISE

Military finance, personnel, and travel; SAF/AQB budget and fiscal integrity.

ASSIGNMENTS

(Pentagon, VA, 2002-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Robins AFB) 78th Comptroller Squadron – AF Reserve; (Wright Patterson AFB) HQ AFMC Logistics Support Office; (Bolling AFB) 11th Wing Financial Management; (Robins AFB) Warner Robins Air Logistics Center; (Kelly AFB) San Antonio Air Logistics Center; (Dover AFB) 436th Comptroller Squadron; (Offutt AFB) 55th Comptroller Squadron.

Mr. Nicholas A. Stern Senior Program Analyst

EDUCATION

Virginia Commonwealth University B.A., History / Anthropology

AREAS OF EXPERTISE

Strategic Planning; Force Management; Program Management; Supply Chain Logistics; Budget Analysis; Database Management; Mortuary Affairs; Historical Archaeology.



ASSIGNMENTS

(Fort Bragg, NC, 2016 – 2017) Strategic Planner, 1st Sustainment Command (Theater); (Fort Lee, VA, 2014 – 2016) Battalion S-3 (FWD), 82nd Special Troops Battalion.

Mr. Steven B. Chambers Senior Program Analyst

EDUCATION

Joint Forces Staff College Norfolk Virginia
International Relations (Graduate)
Command and General Staff College
PRINCE II Practitioner
Practitioner Certified
Army Systems Automation Management School, 2006
CISCO Academy Cert
University of Texas at San Antonio
B.S., Geopolitics, 1986



AREAS OF EXPERTISE

IT Systems Automation Management, Project Management, Command Leadership.

ASSIGNMENTS

Retired US Military Officer (Army 15 years/ USMC Officer 10 years), US Army Cyber Command Capabilities and Integrations/ D-CTO - Industry Engagement Manager 2014-2016; NATO Joint Warfare Center, Stavanger Norway - Capabilities and Integration Section Chief 2011-2014; 1 Armored Division, Bagdad Iraq Assistant G-3 Current Operations, 2009-2011; NATO Joint Warfare, Stavanger Norway - Plans and Policies Section Leader 2006-2009; Army Testing and Evaluation Command, Alexandria VA - Testing and Evaluations Officer 2004-2006; 25th Infantry Division, 3rd Bde. 2-27 Infantry BN - Company Commander 2002-2004; 25th Infantry Division, 3rd Bde. 2-27 Infantry BN - Assistant G-3 1999-2002; Sterling International Group, Sterling VA - Logistics Accounts Manager 1994-1999; 11th Marine Corps Recruit District, San Francisco, CA - Operations Officer 1991-94; 1st Mar Div., 3rd Mar, Kaneohe MCAS, HI - Executive Officer/ Platoon Commander 1988-1991.

Ms. Kimia L. Blackwell Analyst

EDUCATION

Annandale High School General Studies Woodson Technical Program Cosmotology Program

AREAS OF EXPERTISE

Providing exceptional commitment to administrative support and customer service to the DoD and their families.

ASSIGNMENTS

(Joint Base Andrews, 2018-Present) Travel Administrative Assistant - SAFTAS Programs; (Joint Base Anacostia Bolling, 2016-2017) Human Resources Specialist-Transient Department; (Washington Navy Yard/NAS Patuxent River, 2010-2016) Site Security Manager-Lead Site Rep/CAC Operator.

Ms. Erika Castedo Event Planner

EDUCATION

George Mason University

B.A. Global Affairs; Concentration in International Development, 2011 Minor Public Health

AREAS OF EXPERTISE

Event/Conference Planning & Managing at the IC level; Client & Vendor Relations; Client Database Administration; Project Management.

ASSIGNMENTS

(USAF Scientific Advisory Board, 2019-Present) Event Planner – (Capelli, 2008-2018) Client Services/ Events/Social Media Manager – (Defense Intelligence Agency- IRT, 2015-2016) Event Manager Lead – (Sierra Nevada Corporation, 2014) Executive Assistant/Event Manager – (International Volunteer HQ Ghanaian Orphanage, 2012) Teacher – (Marcus & Millichap, 2011-2012) Client Services Coordinator/ Event Planner.





Ms. Sanaa A. Lasher Information Manager

EDUCATION

University of Maryland Global Campus
M.S., Data Analytics (Graduate)
Saint Leo University
B.S., Computer Information Systems, 2014

AREAS OF EXPERTISE

Data Science and Big Data Analytics, Office 365: SharePoint Online Administrator, Mining Massive DataBase, Oracle, Python, SAS, Java, HTML, CSS, JavaScript, SQL, R Language, Statistics, IBM Congo, Adobe Creative Suite InDesign, Photoshop, Photoshop Light room, Illustrator, and Dreamweaver.

ASSIGNMENTS

(USAF Scientific Advisory Board, 2019-Present) Information Manager – (UMC-Naval Health Clinic Quantico, 2019-2020) DBC Administrative Assistant for OCS, TBS, WNY – (Chemonics International USAID, 2018-2019) Freight Invoice Auditer – (4th Judicial District Attorney's Office, 2015-2017) El Paso County Legal Assistant – (USAF Eaglewood Gulf Course, 2011-2014) Administrative Assistant – (Middle East Broadcasting Center-MBC, 2005-2010) Television Post Production Coordinator.

Mr. Phillip W. Burnham ISSM

EDUCATION

CCAF, Jun 2012
AA Information Technology
Stephen F. Austin State University, May 1999
BS Interdisciplinary Studies



AREAS OF EXPERTISE

Info Assurance, COMSEC, Certified Information Security Manager (ISACA), Security Plus CE (COMPTIA)

ASSIGNMENTS

(Herndon, VA, 2019-Present), US Air Force 1999-2019); ISSM, Air Force Special Security Office, Pentagon, VA (2018-2019); COMSEC Responsible Officer, 644 Combat Communication Squadron, Andersen AFB, Guam (2011-2018); ISSM/CRO, 707 Communications Squadron, Ft Meade, MD (2008-2011); CRO, NATO IT Wing, Geilenkirchen NATO Air Base, Germany (2004-I 2008); COMSEC accountant/ADPE Specialist, 355 Communications Squadron, D-M AFB, AZ (2000-2004); Student, 336 Training Squadron, Keesler AFB, MS (2000-2000); Trainee, 320 Training Squadron, Lackland, AFB, TX (1999-2000).

Col Brian K. Beachkofski Senior Executive Staff Officer

EDUCATION

Massachusetts Institute of Technology
M.B.A., Data & Entrepreneurship, 2012
Wright State University
Ph.D., Engineering, 2004
Georgia Institute of Technology
M.S., Aerospace Engineering, 1999
United States Air Force Academy
B.S., Engineering Mechanics, 1998



AREAS OF EXPERTISE

Fracture mechanics; Probabilistic analysis; Quantitative financial analysis; Operations research; Risk assessment; Data analysis; Optimization; Stratified sampling techniques.

MILITARY ASSIGNMENTS

Hypersonics Lead, SAF/AQR, 2014-2015; Director, Office of Tech Intel (ASDR&E), 2012-2014; Panel Chair, Space and Cyber (AF/A8P), 2008-2012; Turbo Propulsion Researcher, AFRL/PRT, 2003-2008; Points of Partnership Lead, USCYBERCOM, 2016-2018; Tech Manager, ASDR&E, 2014-2016 ISR Division Chief, USSTRATCOM, 2013-2014; Special Projects Officer, OSD Policy, 2009-2013 Network Integration Engineer, GCIC (SAF/XC), 2004-2009; Propulsion Engineer, J-UCAS SPO, 2003-2004; Turbo Propulsion Researcher, AFRL/PRT, 1999-2003; Student, Georgia Tech, 1998-1999.

Lt Col Jennifer L. Dahms Executive Staff Officer

EDUCATION

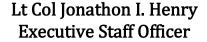
Harvard University
M.A., Extension Studies/Government
United States Air Force Academy
B.S., Legal Studies

AREAS OF EXPERTISE

Program Management, Intelligence Policy & Strategy, Data Exploitation & Dissemination Systems.

MILITARY ASSIGNMENTS

(Pentagon, VA, Mar 14-present) Office of the Assistant Secretary of the Air Force (Acquisition); (National Air and Space Intelligence Center) Program Manager for Business Analytics; (166 Network Warfare Squadron, Delaware Air National Guard) National Security Agency Threat Operations Center Analyst; (102 Network Warfare Squadron, Rhode Island Air National Guard) Flight Commander, Intelligence Support to Air Force Network Operation Center; (Hanscom Air Force Base) Program Manager, Distributed Common Ground System Block 10.2 and Air Operations Center Integration; (Hanscom AFB) Project Manager, Joint Mission Planning System.



EDUCATION

University of Dayton
M.S., Aerospace Engineering
West Virginia University
B.S., Aerospace Engineering

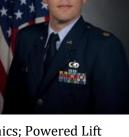
AREAS OF EXPERTISE

Aerodynamics; Aircraft Configuration; Flight Test; Wind Tunnel Testing; Hypersonics; Powered Lift Systems; Missile Testing; Education and Training.

MILITARY ASSIGNMENTS

(Pentagon, VA, May 15-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Maxwell AFB) Chief, Commanders Action Group, HQ Air University; Dir of Ops, 23d Training Sq, OTS; Student Sq CC, 23d Training Sq, OTS; (Kirtland AFB) Chief, Airborne Sensors Branch, Airborne Laser Program Office; Deputy Chief, Airborne Sensors Branch, Airborne Laser; (Camp Victory, Iraq) Ops Officer, DCMA Central Iraq; (Edwards AFB) Lead B-2 Ops Engineer, 419th Flt Test Sq, 412th Test Wing; Flight Test Engr, Hypersonic Flight Test Team, 412th Test Wing; (Wright Patt AFB) Deputy Chief, Advanced Mobility Office, Air Vehicles Dir, AFRL; Developmental Engr, Air Vehicles Dir, AFR.





Maj Lloyd "Tom" Hunsaker Executive Staff Officer

EDUCATION

Georgetown University

CMAP., Change Management Advanced Practitioner, 2011

University of Colorado - Colorado Springs

MBA., Organizational Development and New Venture Management, 2008

Utah State University

B.S., Business Administration, 2002



AREAS OF EXPERTISE

Management and Business Consulting, Change Management, Acquisitions, Program Management, Project and Process Improvement, Technology Transfer and Commercialization, International, DoD and Commercial Space, Small Satellites and Launch Vehicles, Satellite Operations, Higher Education and Training

MILITARY ASSSIGNMENTS

(Pentagon, VA, Oct 19-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Peterson AFB) Dean's Office and Instructor, National Security Space Institute, (Schriever AFB) Satellite Operations, DMSP; (Vandenberg AFB) Assistant Director, Missile Defense Office; (Vandenberg AFB) Program Manager, Evolved Expendable Launch Vehicle (EELV).

Capt Matthew C. Renner Executive Staff Officer

EDUCATION

Harvard Business School
M.B.A., Business Administration, 2016
John Hopkins University
M.S., Systems Engineering, 2013
University of Michigan
B.S., Mechanical Engineering, 2010



AREAS OF EXPERTISE

Strategy consulting; general management; due diligence; financial analysis; engineering management; program management; mechanical engineering; systems engineering; design.

MILITARY ASSIGNMENTS

United States Air Force Reserve Staff Officer, Air Force Science Advisory Board, 2016-Present G-51 Capital Management Venture Capital Scholar, Division, 2014. United States Air Force Executive Officer, Aerospace Management Systems Division, 2013-2014. United States Air Force Lead Engineer, Air Force Weather Weapon System, 2012-2013.

Capt Young-Jun (Y.J.) Yoon Executive Staff Officer

EDUCATION

Johns Hopkins University
M.B.A., Financial Engineering, 2017
Rensselaer Polytechnic Institute
M.Eng., Computer & Systems Engineering, 2002
University of Delaware
B.S., Computer Science, 1997



AREAS OF EXPERTISE

Big Data Analytics; Server Platform Infrastructure & Engineering; Artificial Intelligence; Machine Learning; SIGINT; Cyber Security; Data Collection & Analysis; Software Engineering.

MILITARY ASSSIGNMENTS

(Pentagon, VA, Apr 19-present) Office of the Assistant Secretary of the Air Force (Acquisition); (Fort Meade, MD) Computer & Systems Engineer, DISA; (Fort Meade, MD) Deputy Branch Chief, 29th Intelligence Squadron, NSA; (Fort Meade, MD) Technical Director, 34th Intelligence Squadron, NSA; (Shaw AFB) Crew Commander, AFCENT; (Fort Meade, MD) Flight Commander, 707th Comm Squadron.

Section 4: Membership Departure List

FY2020

Dr. Andrew Alleyne

Dr. Melissa Choi

Dr. Mark Campbell

Dr. James Chow

Lt Gen Terry Gabreski, USAF (Ret)

Dr. Samuel Graham Jr.

Dr. Tadayoshi Kohno

Gen Lester Lyles, USAF (Ret)

Dr. Kenneth Olson

Dr. Alan Pue

Dr. Nils Sandell Ir.

Dr. Lara Schmidt

Dr. Yadunath Zambre

FY2021

Mr. Aaron Blow

Dr. Robert Bontz

Dr. Eric Hall

Gen Donald Hoffman, USAF (Ret)

Dr. Juliana Hsu

Dr. Ann Karagozian

Dr. Leo Kempel

Dr. Patric Patterson

Dr. Kevin Saeger

Dr. Gregory Shannon

Mr. Gregory Simer

Dr. Lindley Specht

Dr. Vyshnavi Suntharalingam

Dr. Steven Warner

Mr. Alan Wiechman

FY2022

Dr. Suzanne Beers

Dr. Rodney Bowersox

Dr. David Coombs

Dr. Natalie Crawford

Dr. Doc Dougherty

Dr. Robert Duncan

Dr. Philip Fawcett

Dr. Peter Hancock

Dr. Ryan Hersey

Dr. Eric Jones

Mr. Glenn Kuller

Dr. Todd Murphey

Dr. David Robbins

Dr. Katherine Simonson

FY2023

Dr. Michael Bear

Dr. Steven Cummings

Mr. Dennis Gilbert

Dr. Ionathan Green

Dr. Brian Kent

Dr. Kevin Massey

Mr. Thomas McNeil

Dr. Tony Pandiscio

Dr. Helen Reed

Dr. William Regli

Dr. Annette Sobel

Dr. Stefanie Tompkins

Mr. Lee Venturino

Dr. Peter Wegner