



Lieutenant General James M. Richardson

Deputy Commanding General

Army Futures Command

Lieutenant General James M. Richardson assumed duties as the Deputy Commanding General, Army Futures Command on 5 September 2018.

Lieutenant General James Richardson is a native of Myrtle Beach, South Carolina and a 1982 graduate of the University of South Carolina and is a member of the Reserve Officers Training Corps Hall of Fame. His education includes a Bachelor of Science Degree, a Master's Degree in Advanced Military Studies from the Command and General Staff College, and a Master's Degree in National Security and Strategic Studies from the National Defense University. He is a graduate of the Armor Officer Basic and Aviation Officer Advanced Courses, the Army's Command and General Staff College, School of Advanced Military Studies, and the National War College.

Lieutenant General Richardson's most recent assignments include Director, Office of Process Innovation and Integration, Office of the Vice Chief of Staff, Commander, United States Army Aviation and Missile Command, Deputy Commanding General III Corps and Fort Hood and while deployed he was assigned as the Deputy Commanding General, United States Forces Afghanistan and Commander of the U.S. National Support Element. Throughout his career he has served in Army units in the United States, Republic of South Korea, Kuwait, Iraq and Afghanistan. Lieutenant General Richardson is a Master Army Aviator who has commanded Soldiers in combat on six different occasions both in Afghanistan and Iraq, and has commanded at every level.

Lieutenant General Richardson commanded an Attack Helicopter Battalion in the 101st Airborne Division (Air Assault) at Fort Campbell Kentucky where he deployed his battalion to both invasions of Afghanistan and Iraq; he commanded the 101st Combat Aviation Brigade in the 101st Airborne Division (Air Assault) at Fort Campbell Kentucky and deployed his Brigade to Afghanistan in 2009; Deputy Commanding General, 1st Cavalry Division from 2010 to 2011 at Fort Hood Texas; and Deputy Commanding General, Combined Joint Task Force 1 in Regional Command East, Afghanistan from 2011 to 2012.

His principal staff assignments include Executive Assistant to the Commander, International Security Force Afghanistan; Executive Officer to the Vice Chief of Staff of the United States Army; Executive Officer, Army G3/5/7; Chief of the Army Initiatives Group; 101st Airborne (Air Assault) Division Plans Officer, Fort Campbell, Kentucky; Brigade Operations Officer, 159th Aviation Brigade, 101st Airborne Division (Air Assault) Fort Campbell, Kentucky; Squadron Executive Officer, 4th Squadron, 6th US Cavalry, Fort Hood Texas; Squadron Operations Officer, 1st Squadron, 6th US Cavalry, Fort Hood Texas; Battalion Operations Officer, 4th Battalion, 501st Attack Helicopter Battalion, Republic of South Korea; and Brigade Adjutant (Personnel Officer), 1st Combat Aviation Brigade, Republic of South Korea.

Lieutenant General Richardson is married to Lieutenant General Laura Richardson and they have a daughter, Lauren.



Sharon L. Wood

Dean, Cockrell School of Engineering

University of Texas at Austin

Sharon L. Wood became the ninth dean of the Cockrell School of Engineering at The University of Texas at Austin in September 2014, after serving as interim dean for one year. She holds the Cockrell Family Chair in Engineering #14 and the Jack and Beverly Randall Dean's Chair for Excellence in Engineering.

Prior to her appointment as dean, Wood served as the chair of the school's Department of Civil, Architectural and Environmental Engineering for five years, and for one year, she was director of the Ferguson Structural Engineering Laboratory, one of the nation's leading research centers in the large-scale study of the behavior of bridges, buildings and structural components. She joined the Cockrell School faculty in 1996.

Wood is a member of the National Academy of Engineering and past president of the American Concrete Institute. She has been nationally recognized for her research on the earthquake response of reinforced concrete structures. Her research interests include improving the structural response of reinforced concrete buildings, design and evaluation of bridges, and development of passive sensors for infrastructure systems. She has served on federal advisory committees for the Department of Veteran Affairs, the National Earthquake Hazards Reduction Program and the U.S. Geological Survey.

Wood began her academic career at the University of Illinois at Urbana-Champaign, where she served on the faculty for 10 years. She received her bachelor's degree in civil engineering from the University of Virginia and her master's degree and doctorate in civil engineering from the University of Illinois at Urbana-Champaign.



Dr. James Canton

Futurist, Author and Visionary Business Advisor

Institute for Global Futures

Dr. James Canton is a renowned global futurist, social scientist, author, and visionary business advisor. As a former Apple Computer executive and high tech entrepreneur, he has been insightfully forecasting the key trends and technologies that have shaped our world. The Economist recognizes him as one of the leading global futurists. He has advised three White House Administrations and over 100 companies.

Dr. Canton is CEO and Chairman of the Institute for Global Futures, a leading think tank he founded in 1990 that advises business and government. A frequent guest of the media, he was named “the Digital Guru” by CNN and “Dr. Future” by Yahoo for his insights. Dr. Canton is the author of *The Extreme Future: The Top Trends That Will Reshape the World in the 21st Century*, Dutton 2006, and *Technofutures: How Leading-Edge Innovations Will Transform Business in the 21st Century*.

Dr. Canton advises the Global Fortune 1000 on trends in innovation, financial services, health care, population, life sciences, energy, security, workforce, climate change and globalization. From a broad range of industries, clients include: IBM, Tata, Intel, Philips, General Electric, Hewlett Packard, Boeing, FedEx, and Proctor & Gamble.

Recognized as “one of the top presenters in the 21st century” by Successful Meetings Magazine, Dr. Canton is a highly sought-after keynote presenter. He has spoken to thousands of organizations on five continents. He is noted for his fascinating, informative, dynamic and entertaining keynotes.

A frequent guest of the media, Dr. Canton has been a commentator on CNN, CNBC, Fox, PBS, ABC. Media coverage has included CNBC, Fox, PBS, ABC, Fortune, The Wall Street Journal, The Economist, Bloomberg Report, The New York Times, US News and World Report, CEO, CIO and CFO Magazines. His FutureGuru blog and Twitter followers reach a worldwide audience.

Dr. Canton has held academic appointments at Singularity University at NASA, the Kellogg School of Management, MIT’s Media Lab, Europe, the Potomac Institute, and served on the International Advisory Council, Economic Development Board for the State Singapore, been an advisor to the National Science and Technology Council, US Departments of State, Defense and Health and Human Services.



Robert O. Work

Senior Counselor for Defense

Center for a New American Security (CNAS)

32nd Deputy Secretary of Defense

The Honorable Robert O. Work was the 32nd Deputy Secretary of Defense, serving for three Secretaries of Defense from May 2014 through July 2017. In this role he served as the Chief Operating and Chief Management Officer of the U.S. Department of Defense, overseeing the development of the \$600B defense program. He is widely credited for his work with leaders in the Department and the intelligence community in developing the “Third Offset Strategy,” which aimed to restore U.S. conventional overmatch over its strategic rivals and competitors.

Prior to serving as Deputy Secretary, Secretary Work spent one year as the Chief Executive Officer of the Center for a New American Security (CNAS), a bipartisan national security think tank. Before taking this role, he served as the Undersecretary of the Navy from 2009-2013 in the first Obama administration. As principal civilian deputy to the Secretary of the Navy, he was Chief Operating Officer of the U.S. naval global enterprise, with over 500,000 active duty personnel, 200,000 government civilians, and a budget of \$160B.

Retiring as a Colonel in 2001 after spending 27 years on active duty in the United States Marine Corps, Secretary Work spent seven years at the Center for Strategic and Budgetary Assessments (CSBA), first as a Senior Fellow and then as Vice President for Strategic Studies. While there, he wrote extensively about strategy, maritime affairs, revolutions in war, and global defense postures.

Secretary Work is now Senior Counselor for Defense CNAS; Senior Counselor at Telemus Group, LLC; Distinguished Visiting Fellow at the MITRE Corporation; Senior Fellow at the Johns Hopkins University Applied Physics Laboratory, and Principal at WestExec Advisors. He is on five boards of directors, including the Raytheon Corporation, and on the boards of advisors of several small technology firms. He holds a B.S. from the University of Illinois; an M.S. in Systems Management from the University of Southern California; an M.S. in Systems technology (Space Systems Operations) from the Naval Postgraduate School; and an M.I.P.P. from the Johns Hopkins University’s School of Advanced International Studies.



Dr. Paul Zablocky

Program Manager, Strategic Technology Office

Defense Advanced Research Projects Agency (DARPA)

Dr. Paul Zablocky joined DARPA as a program manager in the Strategic Technology Office in September 2018. Zablocky's previous positions include Navy, Marine, and Army R&D experience. His degrees include a Bachelor of Science in electrical engineering and physics from Fairleigh Dickinson University, a Master of Science in electrical engineering from the University of Central Florida, PMBA from the University of Massachusetts, and a doctorate in electrical engineering from the University of Pennsylvania.



Dr. Peter Stone

David Bruton, Jr. Centennial Professor, University Distinguished Teaching Professor

Department of Computer Science, University of Texas at Austin

Dr. Peter Stone is the David Bruton, Jr. Centennial Professor and Associate Chair of Computer Science, as well as Chair of the Robotics Portfolio Program, at the University of Texas at Austin. He received his Ph.D. in 1998 and his M.S. in 1995 from Carnegie Mellon University, both in Computer Science. He received his B.S. in Mathematics from the University of Chicago in 1993. From 1999 to 2002 he was a Senior Technical Staff Member in the Artificial Intelligence Principles Research Department at AT&T Labs - Research.

Prof. Stone's research interests in Artificial Intelligence include planning, machine learning, multiagent systems, robotics, and e-commerce. Application domains include robot soccer, autonomous bidding agents, and autonomous traffic management. His doctoral thesis research contributed a flexible multiagent team structure and multiagent machine learning techniques for teams operating in real-time noisy environments in the presence of both teammates and adversaries. He has developed teams of robot soccer agents that have won eleven robot soccer tournaments (RoboCup) in both simulation and with real robots. He has also developed agents that have won ten auction trading agent competitions (TAC). Prof. Stone is the author of "Layered Learning in Multiagent Systems: A Winning Approach to Robotic Soccer" (MIT Press, 2000) as well as a co-author of "Autonomous Bidding Agents: Strategies and Lessons from the Trading Agent Competition" (MIT Press, 2007).

Prof. Stone is an Alfred P. Sloan Research Fellow, Guggenheim Fellow, AAAI Fellow, IEEE Fellow, AAAS Fellow, Fulbright Scholar, and 2004 ONR Young Investigator. In 2013 he was awarded the University of Texas System Regents' Outstanding Teaching Award and in 2014 he was inducted into the UT Austin Academy of Distinguished Teachers, earning him the title of University Distinguished Teaching Professor. In 2003, he won an NSF CAREER award for his proposed long term research on learning agents in dynamic, collaborative, and adversarial multiagent environments, in 2007 he received the prestigious IJCAI Computers and Thought Award, given biannually to the top AI researcher under the age of 35, and in 2016 he was awarded the ACM/SIGAI Autonomous Agents Research Award.

Professor Stone co-founded Cogitai, Inc., a startup company focused on continual learning, in 2015, and currently serves as President and COO.



Dr. Garrett Warnell

**Research Scientist, Computational and Information Sciences
Directorate**

Army Research Lab South

Garrett Warnell is a research scientist with Army Research Laboratory's Computational and Information Sciences Directorate. He received BS degrees in mathematics and computer engineering from Michigan State University in 2009, and MS and PhD degrees in electrical engineering from The University of Maryland in 2013 and 2014, respectively. He joined Army Research Laboratory in 2014. In 2016, he became part of the ARL South extended campus community, and joined The University of Texas at Austin Department of Computer Science as a visiting researcher. His research interests are broadly in the areas of robotics, machine learning, and artificial intelligence, with current focuses on online and human-in-the-loop machine learning.



Dr. Mitchell Pryor

Research Scientist

University of Texas at Austin

Dr. Pryor earned his BSME at Southern Methodist University in 1993. After graduating, he taught math and science courses at St. James School in St. James Maryland before returning to Texas. He completed his Masters (1999) and PhD (2002) at UT Austin with an emphasis on the modeling, simulation, and operation of redundant manipulators. Since earning his PhD, Dr. Pryor has taught graduate and undergraduate courses in the mechanical and electrical engineering departments as well as led and conducted research in the area of robotics and automation in Mechanical Engineering, Petroleum Engineering and the Nuclear Engineering Teaching Laboratory. He has worked for numerous research sponsors including, NASA, DARPA, DOE, INL, LANL, ORNL, Y-12, and many industrial partners. He is a co-founder of the Nuclear Robotics Group and the Drilling & Rig Automation Group. Both are interdisciplinary research efforts to deploy robotics in hazardous, uncertain environments to perform manufacturing, material handling and other tasks. He is a member of ROS-Industrial, IEEE, ASME, PGE, and ANS. He is an officer on the executive committee of the ANS Robotics and Remotes Systems Division.



Dr. Brian O'Neil

**Research and Development Engineer,
Los Alamos National Laboratory**

As a research and development engineer at Los Alamos National Laboratory, Brian develops advanced technical solutions to plutonium manufacturing problems to meet the nation's defense, energy, and environmental needs. He works works to bring modern manufacturing technology to decades-old nuclear production processes. Brian holds undergraduate degrees in mechanical engineering and political science from Arizona State University, and Master's and Ph.D. degrees in mechanical and nuclear engineering from the University of Texas at Austin. He serves as a liaison between UT and LANL to transfer young engineers and technology out of academia to the laboratory to directly impact on LANL's national security missions.



Dr. Maruthi R. Akella

Professor, Aerospace Engineering and Engineering Mechanics

University of Texas at Austin

Maruthi R. Akella is a tenured full professor with the Department of Aerospace Engineering and Engineering Mechanics at The University of Texas at Austin (UT Austin) where he holds the E.P. Schoch Endowed Professorship in Engineering. He is the founding director for the Center for Autonomous Air Mobility (CAAM) and the faculty lead for the Control, Autonomy, and Robotics area at UT Austin. Dr. Akella's research program encompasses control theoretic investigations of nonlinear and coordinated systems, vision-based sensing for state estimation, and development of integrated human and autonomous multivehicle systems. He published more than 150 research papers in peer-reviewed archival journals and professional conferences. His research contributions have found several highly successful applications in astrodynamics, in the control of space systems, and vision-guided robotics. For his far-reaching contributions to the field of attitude estimation and control, Dr. Akella received several prestigious awards including the Mechanics and Control of Flight Award from the AIAA and the Judith A. Resnik Space Award by the IEEE Aerospace and Electronic Systems Society. He currently serves as Technical Editor for IEEE Transactions on Aerospace and Electronic Systems, and as Associate Editor for the Journal of Guidance, Control, and Dynamics, and the Journal of the Astronautical Sciences. He is the Chair for the Space Flight Mechanics Technical Committee and serves on the Board of Directors for the American Astronautical Society (AAS). Dr. Akella is a Fellow of the AAS, an Associate Fellow of the AIAA, and holds the title of IEEE Distinguished Lecturer.



Dr. Todd Humphreys

Associate Professor, Aerospace Engineering and Engineering Mechanics

University of Texas at Austin

Dr. Humphreys specializes in the application of optimal detection and estimation techniques to problems in satellite navigation, autonomous systems, and signal processing. He directs the Radionavigation Laboratory at UT Austin. His recent focus has been on secure perception for autonomous systems, including navigation, timing, and collision avoidance, and on centimeter-accurate location for the mass market.

Dr. Humphreys is also on the graduate study committee of the UT Department of Electrical and Computer Engineering. He received the UT Regeants' Outstanding Teaching Award in 2012, the NSF CAREER Award in 2015, and the Institute of Navigation Thurlow Award in 2015. Dr. Humphreys joined the faculty of the Cockrell School of Engineering in Fall 2009.



Coit Kessler

Firefighter

Austin Fire Department

Firefighter Coitt Kessler is an 18 year veteran of the Austin Fire Department (AFD) and is the Program Manager for AFD's Robotic Emergency Deployment (RED) Team. He is currently assigned to the AFD Wildfire Division after having spent several years within the AFD Special Operation's Division. His accomplishments include being a founding member and Master Instructor for the International Association of Firefighters (IAFF) FF's Fire Ground Survival Program, Chairperson for Local 975's IAFF Wellness Fitness Initiative Committee, and proudly served for eight years in the US Military. Firefighter Kessler is a contributing member for both FEMA's Response Robotics USAR work group and the National Institute of Standards and Technologies (NIST) on Standard Test Methods for Response Robots, a work group member for both the National Council on Public Safety UAS and the Public Safety Aviation Accreditation Commission for training and accreditation (PSAAC), a contributor to the 2017 Congressional roadmap for unmanned systems, and represents AFD and the IAFF on NFPA's 2400 Standard for Small Unmanned Aircraft Systems (sUAS) used for Public Safety Operations. Notably Firefighter Kessler coordinated all unmanned operations for the State of Texas during Hurricane Harvey and is currently assisting in the development of Statewide Public Safety Unmanned Response Teams (PSURT).



Dr. Julie A. Adams

**Associate Director of Research, Collaborative Robotics and
Intelligent Systems Institute**

Oregon State University

Dr. Adams is the Associate Director of Research for the Oregon State University Collaborative Robotics and Intelligent Systems Institute and was the founder of the Human Machine Teaming Laboratory at Vanderbilt University, prior to moving it to Oregon State University. Adams has worked in the area of human machine teaming for almost thirty years. Throughout her career, she has focused on human interaction with unmanned systems, but also focused on manned civilian and military aircraft at Honeywell, Inc. and commercial, consumer and industrial systems at the Eastman Kodak Company. Her research, which is grounded in robotics applications for domains such as first response, archaeology, oceanography, the national airspace and the U.S. military, focuses on distributed artificial intelligence, swarms, robotics and human-machine teaming. Adams received her M.S. and Ph.D. in Computer and Information Sciences from the University of Pennsylvania and her B.S. in Computer Science and B.B.E. in Accounting from Siena College.



LTG Theodore D. Martin

Deputy Commanding General

U.S. Army Training and Doctrine Command

Lieutenant General Theodore D. Martin assumed duties as Deputy Commanding General/Chief of Staff, United States Army Training and Doctrine Command, March 5, 2018.

The Martin family's military heritage harkens back more than ten generations to 1776 when Private Daniel Martin enlisted in the 1st New Jersey Infantry Regiment and fought the British during the American Revolution, including service at Valley Forge. Lieutenant General Martin graduated from the United States Military Academy in 1983 and was commissioned a second lieutenant of Armor. His military education includes the Armor Officer Basic Course (Cavalry Track), the Infantry Officer Advanced Course, the Naval College of Command and Staff, and the Army War College. He holds a Master's Degree in National Security & Strategic Studies from the Naval War College, a Master's Degree in Strategic Studies from the Army War College, and a Master's Degree in Business from Webster University.

His command experience includes Commander, C Company, 2d Battalion, 64th Armor Regiment, 3d Infantry Division, Federal Republic of Germany; Commander, 1st Squadron, 10th U.S. Cavalry Regiment (Buffalo Soldiers), 4th Infantry Division, Fort Hood, Texas and Operation Iraqi Freedom in Iraq; Commander, 1st Heavy Brigade Combat Team, 4th Infantry Division, Fort Hood, Texas and Operation Iraqi Freedom in Iraq; Commander, Operations Group (COG), National Training Center, Fort Irwin, California; Commandant & 45th Chief of Armor, U.S. Army Armor School, Fort Benning, Georgia; the 73rd Commandant of Cadets at the United States Military Academy, West Point, New York; the Commanding General National Training Center & Fort Irwin, California; and the Commanding General 2d Infantry Division (Combined), Republic of Korea.

Beyond command, Lieutenant General Martin has served in a wide variety of staff and leadership assignments including duty in the 1st Armor Training Brigade, Fort Knox, Kentucky; the Combined Arms Command-Training, Fort Leavenworth, Kansas; Advisor to the Imam Mohammed bin Saud Brigade and later the Prince Sa'ad bin Abdul Rahman Brigade, Kingdom of Saudi Arabia; Deputy Chief of Staff, G3, 4th Infantry Division, Fort Hood, Texas and Operation Iraqi Freedom in Iraq; Joint Improvised Explosive Device-Defeat Task Force as the Iraq Field Team Leader, Baghdad, Iraq; and Human Resources Command, Alexandria, Virginia, as Armor Branch Chief and Chief of Combat Arms Division.



BG James P. Bienlien

Director, G-3/5/7, Futures and Concepts Center

Army Futures Command

BG Bienlien is a 1990 graduate of Radford University. During his 28 years of service, BG Bienlien has held command and staff assignments in the 5th Infantry Division, Fort Polk; 2nd Armored Division, Fort Hood; 25th Infantry Division, Schofield Barracks; 18th Airborne Corps, Fort Bragg; Human Resources Command; NATO Supreme Allied Command Transformation; United States Army Pacific; Operation Iraqi Freedom; and Headquarters Department of the Army, The Pentagon. BG Bienlien completed a tour with industry as a research fellow at the Logistics Management Institute, Washington D.C.

BG Bienlien assumed the duties of the Director, G-3/5/7, FCC, on February 2019. Prior to his assignment to FCC, he served as the Director, Joint and Integration, HQDA G-8.

BG Bienlien is a graduate of the Ordnance Officer Basic and Advanced Courses; Marine Corps Staff College; Force Management Course; and the National War College. BG Bienlien holds a Master of Science in Public Policy from Troy State University and a Master of Science in National Security Strategy from the National War College, Washington, DC.

His awards and decorations include the Legion of Merit, Bronze Star Medal, Defense Meritorious Service Medal, Meritorious Service Medal (with 5 Oak Leaf Clusters), the Parachutist Badge, Air Assault Badge, and the Army Staff Identification Badge.



Dr. Troy Alexander

Chief, Future Cell

Combat Capabilities Development Command, Army Research Lab

Dr. Troy Alexander is Chief of the U. S. Army Combat Capability Development Command Army Research Laboratory (CCDC ARL) Futures Cell and leads Technology Forecasting to support the Army's Future Force Modernization Enterprise (FFME). He joined the technical staff at CCDC ARL – the Army's Corporate Laboratory, in 2000 and has held numerous posts across the laboratory – including serving as the corporation's first Associate for Strategic Planning; in this role, Troy led development and authorship of CCDC ARL's initial complement of technical strategic documents in 2014. Additionally, Dr. Alexander has worked diligently to foster cross-organizational collaboration, with a goal of improving technical cohesion across the DoD and Army Science and Technology (S&T) Enterprise. Since 2013, he has served as the Senior S&T Advisor to the Army Capability Integration Center (ARCIC), now an element of Army Futures Command (AFC) Futures and Concepts Center (FCC); Director of Strategy and Acting Basic Research Portfolio Director within the Office of the Deputy Assistant Secretary of the Army for Research and Technology (ODASA(R&T)); and was a substantial contributor to the DoD Long Range Research and Development Program Plan (LRRDPP)-Technology Enabled Capabilities Working Group.

Dr. Alexander earned a Bachelor of Science degree from Louisiana State University and Agricultural & Mechanical College in Chemistry (1995) and a Doctorate in Analytical Chemistry from Marquette University (2000).

Troy is the proud father of three wonderful sons.



Dr. Julia Badger

Project Manager, Robotics and Intelligence for Human Spacecraft Team

The National Aeronautics and Space Administration (NASA)

Dr. Julia Badger is the Project Manager for the Robonaut and Autonomous Spacecraft Management Projects at NASA-Johnson Space Center in Houston, TX. She is responsible for the research and development of humanoid robotic and autonomous system capabilities, both on the Earth and on the International Space Station, that include dexterous manipulation, autonomous spacecraft control and caretaking, and human-robot interfaces. Badger has a BS from Purdue University, and an MS and PhD from the California Institute of Technology, all in Mechanical Engineering.



Dr. Ken Fleischmann

**Associate Professor, School of Information
University of Texas at Austin**

Kenneth R. Fleischmann is an Associate Professor in the School of Information at The University of Texas at Austin. His research focuses on understanding the role of human values in the design and use of information technologies, developing new technologies for ethics education and evaluating the effectiveness of ethics education for preparing information professionals for the ethical challenges that they will face in the workforce, and developing new approaches for computational social science through collaboration with computational linguists. His research has been funded by nine grants and fellowships from the National Science Foundation (NSF) as well as funding from the Intelligence Advanced Research Projects Activity (IARPA), and has been published in journals such as Journal of the American Society for Information Science and Technology (JASIST), Communications of the ACM, Computer, and The Information Society. He serves as an Associate Editor of The Information Society.



Dr. Jakki Bailey

**Assistant Professor, School of Information
University of Texas at Austin**

Dr. Jakki Bailey specializes in immersive media, and its influence on cognition, behavior, and learning. She is the current Scott C. and Vickie S. Reeve Endowed Faculty Fellow at the University of Texas at Austin. Bailey examines the psychological implications of immersive virtual reality (VR) on child development, and is currently studying VR's influence on children's cognitive skills and social responses. Her past research has included studying how technology affects behavior change such as through Internet-based programs to reduce the risk of mental disorders and leveraging VR to promote pro-environmental behaviors among adult populations. In addition, she has used VR to test some of the mechanisms behind embodiment's influence on perception.

Dr. Bailey completed her Ph.D. in Communication at Stanford University, and was the recipient of the 2016-2017 Sesame Workshop Dissertation Award, and the Stanford University 2018 Nathan Maccoby Dissertation Award. In addition to her academic research and service, Bailey has advised children's media company executives on the psychological, social, and ethical implications of VR in youth's lives.



Danna Gurari

**Assistant Professor, School of Information
University of Texas at Austin**

Danna Gurari is an assistant professor in the School of Information at The University of Texas at Austin (UT-Austin). Her research interests span computer vision, human computation, crowdsourcing, machine learning, accessibility, and (bio)medical image analysis, with a focus on designing visual analysis systems that improve people's quality of life. She completed a postdoctoral fellowship in Computer Science at UT-Austin in 2017, PhD in CS at Boston University in 2015, and MS in CS and BS in Biomedical Engineering at Washington University in St. Louis in 2005. She held industry positions at two leading technology companies from 2005-2010: Boulder Imaging and Raytheon. Dr. Gurari was recognized with the Researcher Excellence Award from the Boston University CS department in 2015 as well as awards in leading computing venues including CHI, MICCAI, and WACV.



Dr. Matthew Lease

**Associate Professor, School of Information
University of Texas at Austin**

Matthew Lease is an Associate Professor in the School of Information, with additional appointments in Computer Science (CS) and Statistics & Data Science departments. He holds a Ph.D. in CS from Brown University, and a BSc. in CS from the University of Washington. Lease's research spans several areas: 1) information retrieval (IR) - the science of building search engines such as Google; 2) natural language processing (NLP) of text and speech; 3) crowdsourced data annotation and human computation to train and supplement AI capabilities; and 4) human-computer interaction (HCI) design. In IR, Lease seeks: i) to improve core search algorithms; and ii) enable new forms of search. With crowdsourcing, Lease seeks: i) to optimize data collection (e.g., quality, cost, and speed); ii) to expand the reach of crowdsourcing to tackle new problems; and iii) to investigate broader socio-technical questions of how crowdsourcing is transforming digital work and the lives of workers. Lease's research has been recognized by three Early Career awards (<http://www.utexas.edu/news/2013/05/22/national-science-foundation-awards-550000-for-creation-of-state-of-the-art-crowdsourcing-techniques>) from: the Defense Advanced Research Projects Agency (DARPA), the National Science Foundation (NSF), and the Institute for Museum and Library Sciences (IMLS). His DARPA research was featured in WIRED's Danger Room (<http://www.wired.com/dangerroom/2013/03/darpa-speech>). Lease received Best Paper Award at the 2016 Association for the Advancement of Artificial Intelligence (AAAI) Human Computation and Crowdsourcing conference, and the Modeling Challenge Award at the 2012 International Conference on Social Computing, Behavioral-Cultural Modeling & Prediction. His industry experience includes positions at Intel Research, a wavelet image compression spinout from Los Alamos, and a Silicon Valley crowdsourcing startup.



Ms. Evanna Hu

Fellow, International Security Program

New America / CEO and Partner of Omelas

Hu is the CEO and Partner of Omelas, a cutting edge technology company that provides the real-time, online information environment pertaining to security and influence threats. By utilizing machine learning/ artificial intelligence and data analytics, it is also one of the first to offer an organic monitoring and evaluating tool to measure the effectiveness of non-lethal warfare, including countermessaging campaigns and information operations. With offices in New York City, Washington, DC, Chicago, and Dubai, UAE, Omelas is operational in Europe, the Middle East, and Africa. Evanna is also a subject matter expert in CVE/CT in both Salafi-jihadism and neo-Nazism and has worked at the intersection of governance, security, and technology in 25+ countries in Africa and the Middle East, including Kenya, Iraq, Gaza Strip, Syria, Tunisia, and Afghanistan. Prior to Omelas, she successfully founded two technology ventures, one based in Nairobi, Kenya and another in Amman, Jordan. To date, she has briefed 4 national heads of intelligence and has advised 8 Cabinet/Ministerial members on tech and security and spent 6+ years living in Africa and the Middle East.

A graduate of the University of Chicago, Hu sits on the following Boards of nonprofits: Re:Coded, an Erbil-based nonprofit that gives livelihoods to refugees by teaching them how to code through a comprehensive training program in Iraq and Turkey; Promote Leadership, which is founded by active officers and veterans to foster inclusive leadership within the U.S. Special Operations Forces community; and Project Ninevah Plains, which does reconstruction work in post-IS environments in the Ninevah Plains, Iraq. She has won numerous high-level accolades and recognition for her work.



Dr. Alex Roesler

**Deputy Director, Integrated Military Systems,
Sandia National Laboratories**

Alex Roesler, Ph.D. is a Deputy Director for the Integrated Military Systems Center at Sandia National Laboratories. He leads the Autonomy for Hypersonics Mission Campaign (A4H). A4H is a large IRAD program that seeks to significantly enhance the warfighting utility of hypersonic flight systems through research and development in autonomous systems technologies.

Additionally, Alex is responsible for Sandia's Pathfinder Technologies program, which creates, develops and delivers next-generation warfighter technologies. Focus areas for program include directed energy and autonomy.

Alex has been a manager at Sandia for 12 years. During that time, he has overseen numerous activities in support of DHS, DoD and the NNSA. His management experience spans from Research (fundamental studies) to Development (weapon component design/development) to Application (Mark Quality nuclear weapons production operations). Alex also completed an eleven-month postgraduate national security research fellowship at the Harvard Kennedy School of Government, and subsequently spent 2 years as a manager at the Sandia/California site. His research activities at Sandia have included work on autonomous systems, neutron generators, fuzing and firing systems, microelectromechanical systems (MEMS) and cybersecurity. He has authored numerous peer-reviewed journal articles and he holds several U.S. Patents.

Alex received a B.S. degree in electrical and computer engineering from the University of Texas at Austin, and M.S. and Ph.D. degrees in electrical and computer engineering from Carnegie Mellon University, Pittsburgh, PA.



Dr. Gary F. Polansky

Senior Scientist, Integrated Military Systems

Sandia National Laboratories

Gary F. Polansky has a Ph.D. from The University of Texas at Austin and has worked for 35 years at Sandia National Laboratories in national security, nuclear energy, and environmental programs. His broad-based technical capabilities have made key contributions to many of program areas, including aerospace systems, space nuclear power and propulsion, nuclear energy, and nuclear materials management.

Currently, Dr. Polansky holds the position of Senior Scientist in the Integrated Military Systems Development Center and has technical responsibilities across a wide range of programs. He was the Program Manager for the highly successful Advanced Hypersonic Weapon Flight Test 1A. This test demonstrated a first-of-its-kind vehicle that was designed to fly through the atmosphere at hypersonic speed and long range. Gary was the 2013 recipient of the Richard H. Johnson Technical Achievement Award presented by the Precision Strike Association.

Gary has authored or co-authored more than 50 technical publications in computational physics, nuclear technology, and hypersonic systems. He has served as session chair and conference organizer for national and international technical conferences. He is a Fellow of both the American Society of Mechanical Engineers (ASME) and the American Institute of Aeronautics and Astronautics (AIAA). He has served on national technical committees and was active in local professional society activities for many years.



Dr. Moriba K Jah

Associate Professor, Aerospace Engineering and Engineering Mechanics

University of Texas, Austin

Dr. Moriba Jah joined the Department of Aerospace Engineering and Engineering Mechanics in 2017. His research interests are in non-gravitational astrodynamics and advanced/non-linear multi-sensor/object tracking, prediction, and information fusion. His expertise is in space object detection, tracking, identification, and characterization, as well as spacecraft navigation.

He received his B.S. in Aerospace Engineering from Embry-Riddle Aeronautical University, Prescott, Arizona, and his M.S. and Ph.D. in Aerospace Engineering Sciences from the University of Colorado at Boulder specializing in astrodynamics and statistical orbit determination.

Prior to being at UT Austin, Dr. Jah was the Director of the University of Arizona's Space Object Behavioral Sciences with applications to Space Domain Awareness, Space Protection, Space Traffic Monitoring, and Space Debris research to name a few. Preceding that, Dr. Jah was the lead for the Air Force Research Laboratory's (AFRL) Advanced Sciences and Technology Research Institute for Astronautics (ASTRIA) and a Principal Investigator for Detect/Track/Id/Characterize Program at AFRL's Space Vehicles Directorate.

Before joining AFRL in 2007, he was a spacecraft navigator for NASA's Jet Propulsion Laboratory (JPL) in Pasadena, CA, serving on Mars Global Surveyor, Mars Odyssey, Mars Express (joint mission with ESA), Mars Exploration Rovers, Hayabusa (joint mission with JAXA), and the Mars Reconnaissance Orbiter.

Dr. Jah is a member of the Astrodynamics Technical Committee of the International Astronautical Federation (IAF) and a permanent member of the Space Debris Technical Committee of the International Academy of Astronautics (IAA). He is a Fellow of the International Association for the Advancement of Space Safety (IAASS), the AFRL, the AAS and the Royal Astronomical Society (RAS), as well as an AIAA Associate Fellow, IEEE Senior Member, Associate Editor of the IEEE Transactions on Aerospace and Electronics Systems, IEEE Aerospace and Electronic Systems Magazine, and Elsevier Information Fusion Journal.

Dr. Jah is a world-recognized subject matter expert in astrodynamics-based Space Domain Awareness sciences and technologies with 75+ publications in peer-reviewed journals, conferences, and symposia. He's been an invited lecturer and keynote speaker at 20+ national and international space events, workshops and fora.



Matthew Bold

Principal Researcher, Advanced Technology Center

Lockheed Martin Corporation

Matthew Bold is a Principal Researcher at Lockheed Martin's Advanced Technology Center in Palo Alto, California. He is the architect for Space Domain Awareness (SDA) and one of the principal architects for Lockheed Martin's Space Security portfolio. In this role he is responsible for overseeing the development and operation of multiple SDA capabilities globally, the global knowledge infrastructure that networks these capabilities and is deeply involved in the evolution of global space policy chairing various conferences, workshops and working groups. Matthew has over 20 years of experience managing programs and portfolios in a number of strategic areas including missile defense and space security. He has a background in physics and experimental particle physics from the University of Dayton and Arizona State University.



Dr. Andrew Ellington

Professor, Molecular Biosciences

University of Texas at Austin

Dr. Andrew Ellington received his B.S. in Biochemistry from Michigan State University in 1981, and his Ph.D. in Biochemistry and Molecular Biology from Harvard in 1988. As a graduate student he worked with Dr. Steve Benner on the evolutionary optimization of dehydrogenase isozymes. His post-doctoral work was with Dr. Jack Szostak at Massachusetts General Hospital, where he developed methods for the in vitro selection of functional nucleic acids and coined the term 'aptamer.' Dr. Ellington began his academic career as an Assistant Professor of Chemistry at Indiana University in 1992, and continued to develop selection methods. He has previously received the Office of Naval Research Young Investigator, Cottrell, and Pew Scholar awards. In 1998 he moved to the University of Texas at Austin and is now the Fraser Professor of Biochemistry in the Department of Molecular Biosciences. Dr. Ellington was a member of the Defense Science Studies Group of the Institute for Defense Analysis, and has actively advised on biodefense and biotechnology issues, including serving on the Biochem2020 panel of the DIA and the Security Working Group of the EBRC. He has been named a National Security Science and Engineering Faculty Fellow, and American Academy of Microbiology Fellow, and an AAAS Fellow, has helped found the companies Archemix, b3 Biosciences, and GRO Biosciences.

Dr. Ellington's lab works centers on the development of nucleic acid circuitry for point-of-care diagnostics, on accelerating the evolution of proteins and cells through the introduction of novel chemistries, and using orthogonal control systems to engineer complex organisms. DNA circuits based on strand exchange reactions and capable of executing embedded algorithms have proven to be useful tools for creating diagnostic assays for a variety of purposes. Translation engineering centers on the introduction of novel amino acids into proteins that have the capability to base-pair, and is being pursued using a variety of techniques, including directed evolution, computational design, and high-throughput synthesis. Finally, we have developed operating systems that can work between and across bacterial and eukaryotic domains, including tools to directly synthesize operons, enable facile horizontal transfer, and edit genomes, and are interested in how such tools can be used to engineer cellular consortiums, including biofilms and plants.



Dr. Krista Soderlund

Research Associate, Institute of Geophysics

University of Texas at Austin

Krista Soderlund is a planetary geophysicist broadly interested in fluid dynamic processes. She is a Research Associate at the University of Texas Institute for Geophysics (UTIG), previously earning dual B.S. degrees in Physics and Space Sciences from the Florida Institute of Technology in 2005 and a Ph.D. in Geophysics and Space Physics from the University of California, Los Angeles in 2011. She uses numerical models, in combination with spacecraft mission data, to understand icy satellites and investigate planetary magnetic fields. Soderlund is a science team member of the ice-penetrating radar instrument (REASON) selected for NASA's Europa Clipper mission to assess the Jovian satellite's habitability and served recently on NASA's Ice Giant Mission Study Science Definition Team to consider science priorities and potential mission concepts for the Uranus and Neptune systems.



Martha Wells

Science Fiction Author

Murderbot Diaries

Martha Wells has written many fantasy novels, including The Books of the Raksura series (beginning with *The Cloud Roads*), the Ile-Rien series (including *The Death of the Necromancer*) as well as YA fantasy novels, short stories, media tie-ins (for *Star Wars* and *Stargate: Atlantis*), and non-fiction. Her most recent fantasy novel is *The Harbors of the Sun* in 2017, the final novel in The Books of the Raksura series. She has a new series of SF novellas, *The Murderbot Diaries*, published by Tor.com in 2017 and 2018. She was also the lead writer for the story team of *Magic: the Gathering's Dominaria* expansion in 2018. She has won a Nebula Award, a Hugo Award, an ALA/YALSA Alex Award, a Locus Award, and her work has appeared on the Philip K. Dick Award ballot, the USA Today Bestseller List, and the New York Times Bestseller List. Her books have been published in eleven languages.

Her first novel, *The Element of Fire*, was published by Tor in hardcover in July 1993 and was a finalist for the 1993 Compton Crook/Stephen Tall Award and a runner-up for the 1994 Crawford Award. The French edition, *Le feu primordial*, was a 2003 Imaginales Award nominee.

Her third novel *The Death of the Necromancer* (Avon Eos) was a 1998 Nebula Award Finalist and the French edition was a 2002 Imaginales Award nominee.

Her novella *All Systems Red: The Murderbot Diaries* (Tor.com) was a 2017 Philip K. Dick Award nominee, and won an ALA/YALSA Alex Award, a Hugo Award for Best Novella, a Nebula Award for Best Novella, and a Locus Award. *The Books of the Raksura* was a Hugo Finalist for Best Series.

She has also published three media tie-in novels: *Stargate Atlantis: Reliquary*, released in March 2006, and *Stargate Atlantis: Entanglement* in March 2007, and a *Star Wars: Razor's Edge* in September 2013. Her first young adult fantasy, *Emilie and the Hollow World*, was published in April 2013 by Strange Chemistry Books, and the sequel, *Emilie and the Sky World* in March 2014.

She has had short stories published in *Realms of Fantasy*, *Black Gate*, *Lone Star Stories*, *Stargate Magazine*, *Lightspeed Magazine*, *Wired Magazine*, and in the anthologies *Elemental*, *Tales of the Emerald Serpent*, *The Other Half of the Sky*, *Tales of the Emerald Serpent II: A Knight in the Silk Purse*, *Mech: Age of Steel*, and *The Gods of Lovecraft*. She has essays in the non-fiction anthologies *Farscape Forever*, *Mapping the World of Harry Potter*, *Chicks Unravel Time*, and *The Kobold Guide to Magic*.



Thomas F. Greco

Director of Intelligence, Deputy Chief of Staff, G-2

U.S. Army Training and Doctrine Command

Mr. Thomas F. Greco serves as the Director of Intelligence, Deputy Chief of Staff, G-2 for the U.S. Army Training and Doctrine Command (TRADOC G-2). This is a Tier Two Defense Intelligence Senior Executive Service (DISES) position. He is the Army's lead for developing, defining, and applying current and future threats and environments in support of Army leader development, concept development, capability design, training readiness, and experimentation. He also leads the Army's enterprises for Critical Thinking, Mad Scientist Initiative, University of Foreign Military & Cultural Studies, Foreign Military Studies Office, Global Cultural Knowledge Network, and the Operational Environment Center. TRADOC G-2 supports the Army's Combat Training Centers, deployed forces, all of the Army's educational institutions and capability development activities. Prior to his assignment as TRADOC's G-2, Mr. Greco served as the Special Assistant for Intelligence to the Commanding General and G-2 of U.S. Army Europe from 2004 to 2011 where he spearheaded the intelligence efforts of a forward deployed theater Army headquarters. Notably, from 2007 to 2008, Mr. Greco deployed to Iraq where he served as the Assistant CJ2 in Iraq, ensuring intelligence support to the entire Combined Joint Task Force during the highly successful Sunni Awakening that changed the course of the war there.

Before entering Civil Service, Mr. Greco served 22 years on active duty as an Army intelligence officer in a variety of important command and staff positions. Highlights include one year as the G-2 of Task Force Eagle in Bosnia where he provided multi-disciplined intelligence support to high visibility peace enforcement operations in the Balkans and as the G-2 of Task Force Falcon in Kosovo. He also spent time as the Military Advisor to the START and Defense and Space negotiations in Geneva, Switzerland. In addition, he commanded units in the 10th Mountain Division and served in other key intelligence positions throughout the Army.

Mr. Greco holds a Bachelor of Arts degree (with honors) from Hunter College, City University of New York, a Master of Military Arts and Sciences from the U.S. Army Command and Staff College, and a Master of Military Arts and Sciences from the School of Advanced Military Studies (SAMS). He attended the Intelligence Senior Fellows Program and is a graduate of the Executive Leadership Excellence Program run by the Kellogg School of Management, Northwestern University.

Mr. Greco has received numerous awards and honors throughout his career. In 2016, Mr. Greco was awarded the Presidential Rank Award, Meritorious Rank, Defense Intelligence Senior Executive Services. As a civil servant Mr. Greco received the Civilian Meritorious Service Medal, the Superior Service Medal and the Commander's Award for Civilian Service. As a military officer, he was awarded the Legion of Merit and multiple awards of the Defense and Army Meritorious Service Medals. He also received the George C. Marshall Award ("The White Briefcase") as the Distinguished Honor Graduate from the U.S. Army Command and General Staff College.