

11th Annual Strategic Multi-Layer Assessment (SMA) Conference

Biographies of Panel Members, Moderators, and Speakers

KEYNOTE SPEAKER

General Joseph L. Votel

General Joseph L. Votel attended the United States Military Academy and was commissioned in 1980 as an Infantry Officer. His initial assignments were to the 3d Infantry Division in Germany where he served as a Rifle Platoon Leader, Executive Officer, Battalion Adjutant and Rifle Company Commander.

Following this he served as a Small Group Tactics Instructor at the Infantry School at Fort Benning, Georgia before being assigned to the 75th Ranger Regiment as a Plans / Liaison Officer where he participated in Operation JUST CAUSE.

He was next posted to the 1st Ranger Battalion where he served as the Battalion Liaison Officer, Operations Officer and Executive Officer.

Following this he was assigned to HQs, Allied Forces Southern



Europe, Naples, Italy and the NATO Peace Implementation Force (IFOR) in Sarajevo. He commanded the 2d Battalion, 22d Infantry (Light) at Fort Drum, New York and was subsequently selected to command the 1st Ranger Battalion at Hunter Army Airfield, Georgia.

Following attendance at the Army War College GEN Votel commanded the 75th Ranger Regiment and participated in Operation ENDURING FREEDOM, Afghanistan and Operation IRAQI FREEDOM, Iraq.

As a general officer, he served in the Pentagon as the Director of the Army and Joint IED Defeat Task Force and subsequently as the Deputy Director of the Joint IED Defeat Organization established under the Deputy Secretary of Defense. He served as the Deputy Commanding General (Operations), 82d Airborne Division / CJTF-82, Operation ENDURING FREEDOM, Afghanistan and was subsequently assigned as the Deputy Commanding General, then Commanding General of the Joint Special Operations Command, Fort Bragg, North Carolina.

He most recently served as the Commanding General of U.S. Special Operations Command, MacDill Air Force Base, Florida.

GEN Votel is a graduate of the Infantry Officer Basic and Advanced Courses, United States Army Command and General Staff College, and the United States Army War College.

Major General James E. Kraft, Jr.

Major General James E. Kraft, Jr., Deputy Commanding General, U.S. Army Special Operations Command, was born in Baltimore, Maryland. He graduated from Towson University in 1986 as a ROTC Distinguished Military Graduate and received his commission in the Infantry. While serving in 1st Battalion, 27th Infantry Regiment, Schofield Barracks, Hawaii, his assignments included duty as a rifle and scout platoon leader and company executive officer. He's had multiple deployments, including Australia, Japan, Korea, the Philippines, and Thailand.

In 1991, Kraft graduated from the Special Forces Qualification Course and was assigned to 7th Special Forces Group (Airborne), where he commanded at every level to include detachment commander, two Special Forces companies, Group Support company, 3rd Battalion, and Group command. During his 7th



Group tenure, Kraft deployed many times throughout Central and South America and twice in support of Operation Enduring Freedom-Afghanistan as both a Special Operations Task Force and Combined Joint Special Operations Task Force commander. He previously served as the Deputy Commanding General, Joint Special Operations Task Force-Afghanistan in support of Operation Enduring Freedom.

Kraft's staff assignments include Joint Staff Intern; Army Special Operations Forces Personnel Systems Staff Officer; Group Executive Officer; Speechwriter and later Aide-de-Camp, 29th Vice Chief of Staff of the Army; USASOC G3; Special Forces Command (Airborne) Chief of Staff; Executive Officer to the Commander, U.S. Special Operation Command; Assistant Commanding General, Joint Special Operations Command; and Commanding General, 1st Special Forces Command (Airborne) (Provisional).

Kraft's awards and decorations include the Defense Superior Service Medal with one oak leaf cluster (OLC), Legion of Merit (2 OLC), Bronze Star Medal, Defense Meritorious Service Medal, Meritorious Service Medal with silver OLC, Joint Service Commendation Medal, Army Commendation Medal (4 OLC), and the Army Achievement Medal (OLC). He has earned the Combat Infantryman's Badge, Expert Infantryman's Badge, Master Parachutist Badge, Pathfinder Badge, Air Assault Badge, Joint and Army Staff Identification Badges, and the Ranger and Special Forces Tabs.

He holds a Master of Arts degree in National Security and Strategic Studies from the Naval War College and a Master of Science degree in Joint Campaign Planning and Strategy from the Joint Advanced Warfighting School.

Brigadier General Alexus G. Grynkewich

Brigadier General Alexus G. Grynkewich is the Deputy Director, Global Operations (J39). He serves as the Joint Staff focal point for cyber and electronic warfare operations, information operations, special technical operations, and sensitive DOD support to government agencies.

Gen. Grynkewich received his commission in 1993 after graduating from the US Air Force Academy. He has served as an instructor pilot, weapons officer, and operational test pilot in the F-16 Fighting Falcon and F-22 Raptor. Gen. Grynkewich has commanded at the squadron and wing levels, and his staff assignments include duty at Air Combat Command, US European Command, and the Headquarters Air Force. Gen. Grynkewich is a command pilot with more than 2,300 hours in the F-16 and F-22.



Education

1993 Bachelor of Science in Military History, U.S. Air Force Academy, Colorado

1994 Master of Arts in History, University of Georgia

1997 Squadron Officer School, Maxwell AFB, Alabama

2003 Air Command and Staff College, by correspondence

2006 Master of Arts in Homeland Security, Naval Postgraduate School

2006 Air War College, by correspondence

2010 Master of Science in Joint Campaign Planning & Strategy, Joint Advanced Warfighting School

2012 Leadership Enhancement Program, Center for Creative Leadership, Greensboro, NC

2013 Executive Space Operations Course, Nellis AFB, Nevada

2014 Capitol Hill Workshop, Alan L. Freed Associates, Washington, D.C.

2014 Enterprise Leadership Program, Kenan-Flagler Business School, University of North Carolina

Assignments

1. June 1993 – August 1994, Student, Air Force Institute of Technology Civilian Institutions Program, University of Georgia, Athens, Ga.

2. September 1994 – September 1995, Student, Undergraduate Pilot Training, Vance AFB, Okla.

3. October 1995 – August 1996, Student, F-16C Replacement Training Unit, 63d Fighter Squadron, Luke AFB, Ariz.

4. September 1996 – July 1999, F-16 Pilot, Chief of Training, 18th Fighter Squadron, Eielson AFB, Alaska

5. August 1999 – December 2001, F-16 Instructor Pilot, Flight Examiner, and Flight Commander, 421st Fighter Squadron, Hill AFB, Utah

6. January 2002 – January 2003, F-16C Instructor Pilot and Chief of Weapons, 80th Fighter Squadron, Kunsan AB, Republic of Korea

7. February 2003 – August 2005, F-16C and F-22A Operation Test and Evaluation Instructor Pilot, 422d Test and Evaluation Squadron; Chief, F-22A Standardization and Evaluation, 53d Test and Evaluation Group; Director of Operations, 59th Test and Evaluation Squadron, Nellis AFB, Nev.

8. September 2005 – December 2006, Student, Naval Postgraduate School, Monterey, Calif.

9. January 2007 – December 2007, Chief, Interoperability Branch, 5th Generation Fighter Division; Executive Officer, Directorate of Requirements (A8), Headquarters Air Combat Command, Langley AFB, Va.

10. January 2008 – June 2009, Commander, 49th Operations Support Squadron, Holloman AFB, N.M.

11. July 2009 – June 2010, Student, Joint Advanced Warfighting School, Norfolk, Va.

12. July 2010 – May 2012, Joint Operational Planner, Chief, Crisis Response Branch, and Chief, Plans Division (J35), Headquarters US European Command, Stuttgart, Germany

13. June 2012 – May 2013, Vice Commander, 57th Wing, Nellis AFB, Nev.

14. May 2013 – June 2015, Commander, 53d Wing, Eglin AFB, Fla.

15. June 2015 – June 2016, Chief, Strategic Planning Integration Division, Deputy Chief of Staff for Plans and Requirements (A5/8), Headquarters Air Force, Pentagon, Washington, D.C.

16. June 2016 – June 2017, Deputy Director for Operations, Operations Team Three, J3, The Joint Staff, Pentagon, Washington, D.C.

17. June 2017 – present, Deputy Director, Global Operations (J39), J3, The Joint Staff, Pentagon, Washington, D.C.

Summary of Joint Assignments

1. July 2010 – May 2012, Joint Operational Planner, Chief, Crisis Response Branch, and Chief, Plans Division (J35), Headquarters US European Command, Stuttgart, Germany, as a lieutenant colonel and colonel.

2. June 2016 – June 2017, Deputy Director for Operations, Operations Team Three, J3, The Joint Staff, Pentagon, Washington, D.C., as a brigadier general.

3. June 2017 – present, Deputy Director, Global Operations (J39), J3, The Joint Staff, Pentagon, Washington, D.C., as a brigadier general.

Flight Information

Rating: Command Pilot Flight hours: More than 2,300 Primary aircraft flown: F-16C, F-22A Other aircraft flown: B-1B, B-2, B-52, C-17A, E-9A, F-15D, F-15E, HH-60G, MC-12, MQ-1, MQ-9, QF-4, T-38A, U-2

<i>Major Awards and Decorations</i> Defense Superior Service Medal	National Defense Service Medal with bronze star	
Legion of Merit with one oak leaf cluster	Armed Forces Expeditionary Service Medal	
Meritorious Service Medal with five oak leaf	Global War on Terrorism Service Medal	
clusters	Korean Defense Service Medal	
Air Medal	Nuclear Deterrence Operations Service Medal	
Aerial Achievement Medal with four oak leaf		
clusters	Effective Dates of Promotion	
Joint Service Commendation Medal with oak	Second Lieutenant	June 2, 1993
leaf cluster	First Lieutenant	June 2, 1995
Air Force Commendation Medal	Captain	June 2, 1997
Joint Service Achievement Medal	Major	August 1, 2003
Air Force Outstanding Unit Award with Valor	Lieutenant Colonel	September 1, 2007
device and oak leaf cluster	Colonel	September 1, 2011
Combat Readiness Medal with oak leaf cluster	Brigadier General	May 24, 2017

Dr. Charles W. Perkins

Dr. Perkins serves as the Principal Deputy, Emerging Capability & Prototyping in the office of the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)). In this position he is responsible for oversight and direction of EC&P programs and activities. In addition to these duties, Dr. Perkins chairs the Joint Special Operation Command Science and Technology Task Force (JSTTF). Dr. Perkins also serves on a number of DoD and Intelligence Community committees.

Prior to his current assignment, Dr. Perkins served as the Technical Advisor to the Director of Mission Integration Directorate of the National Reconnaissance Office. In that position, he provided advice pertaining to solving intelligence problems posed by the Combatant Commands, National Intelligence Managers and other members of the military, US Government agencies and other members of the Intelligence Community.



Prior to Oct 2010, Dr. Perkins was the Director of Complex Systems (CS) in the Rapid Fielding Directorate (now EC&P). CS was responsible for speeding the introduction of new technology and concepts into the hands of warfighters and achieving this innovation in a sustainable manner so that these advanced capabilities could endure. Dr. Perkins was responsible for a number of programs to achieve these goals including the Joint Capabilities Technology Demonstration (JCTD) program, the Comparative Technology program, the Program Integration Office (PIO) and the Technology Integration Office (TIO). Dr. Perkins joined this organization in April 1994.

Prior to joining the Government, Dr. Perkins served various positions in industry including a Senior Technical Advisor at SRI International in Menlo Park, California, Vice President for Technology for SWL Inc., and Vice President and Director of the Special Projects Division of General Research Corporation.

From 1964 to 1966, he served as a First Lieutenant in the U.S. Army at the White Sands Missile Range in New Mexico. There he was a missile flight safety officer and chief of a section providing real- time computing support to the range.

Dr. Perkins holds Doctor of Science (1964) and Masters (1960) in Aeronautical and Astronautical Engineering from Massachusetts Institute of Technology. He also holds a Bachelor in Aeronautical and Astronautical Engineering from Rensselaer Polytechnic Institute (1959). He is a member of Tau Beta Pi, Sigma Gamma Tau, and Sigma Xi honorary societies and holds two U.S. Patents.

Dr. Joel Rynes

Dr. Joel C. Rynes is the Joint Program Activity Lead for the Research and Development Division of the Countering Weapons of Mass Destruction Office in the U.S. Department of Homeland Security. He received his Senior Executive Service career appointment on 5 June 2011. In this role, he leads an aggressive research and development program to fill technological gaps and protect the country from weapons of mass destruction. Prior to this assignment, Dr. Rynes the Assistant Director for Transformational and Applied Research and the Lead Technical Authority of the Domestic Nuclear Detection Office (DNDO). He was also a DNDO Program Manager responsible for developing the next generation radiography and active interrogation technology to detect special nuclear material.



From 1999 to 2006, Dr. Rynes was a Program Manager at General Dynamics

where he led several programs in support of nuclear treaty monitoring. These programs included the development, installation, and maintenance of particulate and gas nuclear sensors in the global International Monitoring System network and the data center analysis, visualization, and reporting software for the U.S. National Data Center and the International Data Centre in Austria. Prior to General Dynamics, Dr. Rynes was a scientist on the Pulsed Fast Neutron Analysis cargo inspection system program at SAIC. Here he developed a dual particle neutron and gamma-ray radiography system, developed automated decision algorithms to find contraband in cargo, and was the chief accelerator technician.

Dr. Rynes has a Ph.D. in Nuclear Engineering from the University of California at Berkeley. His dissertation was titled "Gamma-ray and Neutron Radiography for a Pulsed Fast Neutron Analysis Cargo Inspection System." Dr. Rynes is a Project Management Professional (PMP) as certified by the Project Management Institute.

Dr. Suzanne Fry

Suzanne Fry is Director of the Strategic Futures Group at the National Intelligence Council (NIC). The NIC supports the Director of National Intelligence in his role as head of the Intelligence Community (IC) and serves as a bridge between the intelligence and policy communities, a source of deep substantive expertise on all regions and functional intelligence issues, and a facilitator of Intelligence Community collaboration and outreach. At the NIC, Dr. Fry is responsible for global issues and long-range analysis as well as the *Global Trends* series, the NIC's flagship unclassified assessment of the future strategic landscape. The most recent report, *Global Trends: Paradox of Progress*, published in January, may be found at https://www.dni.gov/index.php/global-trends-



<u>home</u>. Prior to joining the NIC, Dr. Fry worked a range of governance, instability, and strategic warning issues worldwide and led the US Intelligence Community's Political Instability Task Force. Dr. Fry received her PhD in Politics from New York University and BA in Government and International Studies from the University of Notre Dame. She is originally from San Diego, CA.

CONFERENCE COORDINATOR

Colonel Senodja F. Sundiata-Walker

Colonel Senodja F. Sundiata-Walker is a 1995 graduate of Howard University where she received a commission as a Military Intelligence Officer through the Reserve Officers' Training Corps. Her first assignment was with the 2nd Brigade Combat Team (BCT), 2nd Infantry Division, in Camp Hovey, Republic of South Korea. While assigned to 2nd BCT, COL Sundiata-Walker served as the Assistant Brigade S-2 and the Brigade S1. She remained in Korea to serve as a Ground Surveillance Platoon Leader in Alpha Company, 102nd Military Intelligence Battalion. Following her assignments in Korea, she was assigned as the Assistant S-3, 111th Military Intelligence Battalion in Fort Huachuca, Arizona while awaiting attendance in the Military Intelligence Officer Advanced Course and Signals Intelligence and Electronic Warfare Officers Course. She was subsequently assigned to Fort Hood, TX where she served as the



Battalion S2 of the 588th Combat Engineer Battalion, 2nd BCT, 4th Infantry Division.

COL Sundiata-Walker went on to command 2nd BCT's Direct Support Military Intelligence Company and later deploy B. Co, 104th MI BN (Shadow 200 UAV) to Iraq in support of Operation Iraqi Freedom in 2003. After redeployment, she was assigned as the Assistant J-2, Joint Forces Headquarters-National Capital Region at Fort McNair, Washington, DC. While there, she transitioned to the Acquisition Corps and was assigned as a Counter-Remote Controlled Improvised Explosive Devices (RCIED) Electronic Warfare (CREW) Test and Evaluation Officer, Counter-IED Directorate, Army Evaluation Center, Army Test and Evaluation Command in Alexandria, VA. She was later assigned to Fort Meade, MD as the Assistant Product Manager, Product Manager Information Warfare, Program Executive Office-Intelligence, Electronic Warfare and Sensors. In 2011, she deployed to Camp As Saylivah in Doha, Oatar in support of Operation Enduring Freedom and served as the Chief of Operations and a Contract Specialist in Army Contracting Command-Qatar, 408th Contracting Support Brigade, Expeditionary Contracting Command. Upon redeployment, COL Sundiata-Walker was assigned at the Pentagon in the Deputy Assistant Secretary of the Army for Plans, Programs and Resources, Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology as the Deputy Director of Force Management and Human Capital. Prior to joining the Joint Staff. [39 Deputy Directorate for Global Operations, as the Division Chief for Program Support, she was the Program Manager Mobile Electric Power Systems, Project Manager Expeditionary Energy and Sustainment Systems, Program Executive Office Combat Support Combat Service Support at Fort Belvoir, VA.

COL Sundiata-Walker is a recent graduate of the Defense Acquisition University's School of Program Managers and the George Washington University School of Business Executive MBA Program. She is also DAWIA Level III certified in Program Management.

Senodja is married to COL James E. Walker, J-2 Deputy Director for Intelligence, National Military Command Center, Pentagon. They have two children-Kayla (12) and James, Jr. (9).

CONFERENCE COORDINATOR

Ms. Gia Harrigan

Gia Harrigan is currently employed by the Department of Homeland Security, Science and Technology Directorate and serves as the Program Manager for DHS Centers of Excellence. Ms. Harrigan is onsite at the Naval War College, War Gaming Department and supports Homeland Security/ Homeland Defense activities. Prior to joining DHS, Ms. Harrigan served as Science Advisor at the CNO Executive Panel in Washington, DC. She began government service at the Naval Undersea Warfare Center Division, Newport, Rhode Island and has led strategic initiatives for organizational transformation, in the areas of Technology Insertion Strategies, Business War Gaming, Balanced Scorecard, and Knowledge Management.

Ms. Harrigan has completed an Advanced Studies Program in System Dynamics at the Massachusetts Institute of Technology. She has a Master of Business Administration degree from the University of



Rhode Island and an undergraduate degree in Mathematics from Boston College.

CONFERENCE CREATOR

Dr. Hriar Cabayan

Dr. Hriar "Doc" Cabayan is currently in the Joint Staff/J-39, DDGO where he manages the Strategic Multilayer Assessment (SMA) Program. SMA provides planning support to Commands with complex operational imperatives requiring multi-agency, multi-disciplinary solutions. Solutions and participants are sought from across USG, academia, think tanks, and industry. SMA is accepted and synchronized by Joint Staff/J-39 and executed by ASD (R&E)/RFD. Prior to his current position he was with ASD (R&E)/RFD/RRTO (2007-2013). From 1997 to 2007, he was Special Technology and Science Advisor in the JS Directorate of Operations (J-3) where he provided technical and scientific assistance to the Combatant Commands in the areas of deliberate and crisis action planning. In 2007, Dr. Cabayan received a Joint Distinguished Civilian Service Award by the Chairman of the Joint Chiefs of Staff.



His current focus is on counter-terrorism, counter-WMD (State

and non-State), Global & regional socio-cultural assessments, and Individual, state and national-level deterrence studies.

Dr. Cabayan received his doctorate degree from the University of Illinois in Urbana, Illinois. After graduating, he taught mathematical physics for four years at New York University's Courant Institute of Mathematical Sciences and McGill University. In 1977, he joined the Department of Energy's LLNL where he worked on nuclear weapons effects, Strategic Defense Initiative related efforts, and directed energy programs.

Panelists and Moderators

Mr. Collin A. Agee

Collin Agee became the Senior Army Operations Advisor to the NGA in July 2017. Prior to his current assignment, he served as the Army Intelligence Senior Advisor for IC Engagement for six years, following two years as the Deputy for NGA's Future Warfare Systems Office. In 2008, he served as Deputy CJ2 Forward, the senior military intelligence officer in the US Embassy Baghdad and the Green Zone, where his duties included providing intelligence to the MNF-I staff and Strategic Intelligence Engagement with the Iraqi intelligence services and senior Iraqi officials. He was the Army's Director for ISR Integration for two years, highlighted by the Actionable Intelligence Initiative and numerous intelligence Quick Reaction Capabilities in support of OIF and OEF, most notably Constant Hawk, which redefined Wide Area Persistent Surveillance. This followed four years as a contractor for Booz Allen Hamilton in



support of the Army G-2 as a member of Task Force Actionable Intelligence, the US Army G2 ISR Integration Directorate and the Army Intelligence Master Plan (AIMP), where he was a co-author of the Army Intelligence Transformation Campaign Plan (AI-TCP). He served over 20 years as an Army Intelligence Officer, with assignments including J2 Operations for US forces in Haiti, XVIII Airborne Corps ACE Chief, and Senior Intelligence Officer (G2) of the 10th Mountain Division. He commanded Headquarters Company, 125th MI Battalion, Schofield Barracks, Hawaii and the Los Angeles Recruiting Battalion.

Mr. Agee has a Masters in Military Arts and Science from the School for Advance Military Studies (SAMS), a BS in National Security and Public Affairs from the US Military Academy at West Point and is a graduate of the Post Graduate Intelligence Program (PGIP). Mr. Agee created and chaired the Army Intelligence Senior Steering Group (SSG) for the Army G2 and the GEOCOM Relook Working Group and the Geospatial Training and Professional Development Subcommittee for the Geospatial Functional Manager. In his last assignment, he was a charter member of the Intelligence Community Senior Studies Group (ICSSG) and Intelligence Community Transparency Working Group (ICTWG); and is a member of the Special Multi-Layer Assessment (SMA) program, the Armed Forces Communications and Electronics Association's (AFCEA) Intelligence Committee; the Council for Emerging National Security Affairs (CENSA); and a high school and collegiate umpire as a member of the Northern Virginia Baseball Umpires Association (NVBUA) and is a Wounded Warrior Mentor.

Dr. Allison Astorino-Courtois

Dr. Allison Astorino-Courtois is Executive Vice President at NSI, Inc. She has also served as co-chair of a National Academy of Sciences study on Strategic Deterrence Military Capabilities in the 21st Century, and as a primary author on a study of the Defense and Protection of US Space Assets. Dr. Astorino-Courtois has served as technical lead on a variety of rapid turn-around, Joint Staff-directed Strategic Multi-layer Assessment (SMA) projects in support of US forces and Combatant Commands. These include assessments of key drivers of political, economic and social instability and areas of resilience in South Asia; development of an analytic approach used to identify PACOM requirements for humanitarian support in a Megacity (case study: Dhaka, Bangladesh); development of a methodology for conducting provincial assessments for the ISAF Joint Command; production of a "rich contextual understanding" (RCU) to supplement intelligence reporting for the ISAF J2 and Commander; projects for USSTRATCOM on deterrence assessment methods; and, work for USSOCOM on operationalizing its "gray zone" concept.



Previously, Dr. Astorino-Courtois was a Senior Analyst at SAIC (2004-2007) where she served as a STRATCOM liaison to U.S. and international academic and business communities. Prior to that Dr. Astorino-Courtois was a tenured Associate Professor of International Relations at Texas A&M University in College Station, TX (1994-2003) where her research focused on the cognitive aspects of political decision making and how to "market" peaceful conflict resolution to adversarial actors. She has received a number of academic grants and awards and has published articles in multiple peer-reviewed journals. She has also taught at Creighton University and as a visiting instructor at the U.S. Military Academy at West Point. Dr. Astorino-Courtois earned her Ph.D. in International Relations and MA in and Research Methods from New York University. Her BA is in political science from Boston College. Finally, Dr. Astorino-Courtois also has the distinction of having been awarded both a US Navy Meritorious Service Award and a US Army Commander's Award.

Mr. Weston Aviles

Weston Aviles is an analyst at NSI, Inc. He studied criminology and political science at Arizona State University (BS) with minors in Middle Eastern history and economics, and certificates in political thought and leadership, international studies and religion and conflict. Weston then studied Government at the InterDiscplinary Center (IDC) Herzliya, Israel graduate school with a focus in counter-terrorism and security studies (MA). His graduate studies focused on Arab Spring dynamics, international security in the MENA region and radical Islam. Weston is an alumnus of the University of Virginia's Semester at Sea program and has participated in several academic programs in Israel to study terrorism and counter-terrorism. Weston continues a research focus on Middle Eastern politics and conflict studies.



Dr. Elizabeth Bowman

Dr. Elizabeth Bowman is a Senior Operations Research Analyst with the Army Research Laboratory, Computational & Information Sciences Directorate. She has a PhD from the University of Maryland School of Social Work and guides ARL research in Social Science. She specializes in leading interdisciplinary research projects across ARL and has experience in human dimensions of networks, agent-based decision making, and social network analysis.

Her current projects involve text and imagery data analytics for non-kinetic action selection and impacts to social influence arising from social computing technologies. Her research is internationally recognized through her membership in NATO and TTCP where she leads groups focused on extracting information from multiple sources to identify emerging threats and



environmental knowledge to support the formation of effective course of action selection.

Lieutenant Colonel (Promotable) Brad Burris

Lieutenant Colonel (Promotable) Burris entered active duty on 10 May 1996 after earning a BA degree in American History from Carson-Newman College in Tennessee. His first assignment was to 3rd Battalion, 321st Field Artillery Regiment at Fort Bragg, North Carolina where he served in all the typical junior officer positions.

As a Captain at Fort Sill, Oklahoma, he graduated from the Field Artillery Officers' Advanced Course and Combined Arms Staff Services School before commanding Bravo Battery, 2nd Battalion, 80th Field Artillery Regiment and Headquarters Battery, 2nd Battalion, 5th Field Artillery Regiment. As a battery commander, he deployed in support of Operation Iraqi Freedom from April 2003 until March 2004.

After becoming a Major and a Psychological Operations Officer in 2006, he deployed in support of Operations Iraqi Freedom and Enduring Freedom as the commander of Alpha Company, 8th



Psychological Operations Battalion (Airborne). After his command tour, he earned a Master of Science Degree in Defense Analysis from the Naval Postgraduate School and graduated with distinction from the Naval War College Command and Staff Program.

After returning to Fort Bragg in 2010, LTC(P) Burris served as Operations Officer for 6th Military Information Support Battalion (Airborne) and then as Operations Officer for 8th Military Information Support Group (Airborne). From July 2012 to December 2013, LTC(P) Burris served as an analyst in the Department of the Army Quadrennial Defense Review Office at the Pentagon.

LTC(P) Burris next returned to Fort Bragg as Deputy Commander of the 4th Military Information Support Group (Airborne) from December 2013 until June 2014. In June 2014, LTC(P) Burris assumed command of the 8th Military Information Support Battalion (Airborne) which he commanded until June 2016. During this period, he deployed numerous times throughout the U.S. Central Command Area of Responsibility.

From August 2016 to June 2017, LTC(P) Burris earned a Master of Science Degree in National Security Strategy from the National War College at Fort McNair, Washington, D.C. He is currently stationed at the Pentagon serving on the Joint Staff as the Strategic Effects Division Chief in the Operations Directorate.

LTC Burris' awards and decorations include the Bronze Star Medal with one oak leaf cluster, Meritorious Service Medal with three oak leaf clusters, the Global War on Terrorism Expeditionary and Service Medals, and the Parachutist and Air Assault Badges. He and his family reside in Arlington, Virginia and Whispering Pines, North Carolina.

Ms. Sarah A. Canna

Ms. Sarah A. Canna is a Principal Analyst at NSI. In this capacity, Ms. Canna applies her open source analysis skills to regions of vital concern to US Combatant Commands, particularly the Middle East and South Asia. To help military planners understand the complex socio-cultural dynamics at play in evolving conflict situations, Ms. Canna developed a Virtual Think Tank (ViTTa) tool, which is designed to rapidly respond to emergent crises by pulsing NSI's extensive subject matter expert (SME) network to provide deep, customized, multidisciplinary analysis for defense and industry clients. This tool has been used to study the so-called Islamic State as well as Eurasian cooperation and conflict. Ms. Canna is also a lead editor and integrator of white papers, reports, and proceedings focused on violent extremism, influence and deterrence. and adversarial intent. Ms. Canna also supported durability analyses using the NSI State Stability (StaM) model for Afghanistan, Pakistan, Nigeria, and (at the megacity level) Dhaka, Bangladesh.



Prior to joining NSI, she was an associate within the Social Science Program at Strategic Analysis, Inc. (SA), where she supported multidisciplinary projects ranging from developing and assessing computational social science models, evaluating state instability forecast models, and developing cultural aptitude taxonomies. Additionally, Ms. Canna provided analytic support to the Defense Science Board (DSB) 2008 task force on Understanding Adversaries, the 2007 DSB summer study on Challenges to Military Operations in Support of US Interests, and the 2006 DSB summer study on 21st Century Strategic Technology Vectors. Prior to joining SA, she was a research associate at Intellibridge Corporation in Washington, D.C. where she provided daily open source analysis to the Commander, US Southern Command and the Commandant, US Coast Guard. She also managed a network of 200-plus subject matter experts, upon whose knowledge Intellibridge analysts relied. Ms. Canna has a MA degree from Georgetown University in Technology and Security Studies. Ms. Canna holds a translation certificate in Spanish from American University and is learning Dari.

Dr. Kathleen M. Carley

Experience Dr. Carley is a Professor of Computer Science in the Institute for Software Research, IEEE Fellow, and Director of the Center for Computational Analysis of Social and Organizational Systems at Carnegie Mellon University. She joined Carnegie Mellon in 1984 as Assistant Professor Sociology and Information Systems. In 1990 she became Associate Professor of Sociology and Organizations, in 1998 Professor of Sociology, Organizations, and Information Technology, and in 2002, attained her current role as Professor of Computation, Organization, and Society. She is also the CEO of Carley Technologies Inc. aka Netanomics.

Dr. Carley's research combines cognitive science, sociology, and computer science to address complex social and organizational issues. Her most notable research contribution was the



establishment of Dynamic Network Analysis (DNA) – and the associated theory and methodology for examining large high-dimensional time variant networks. Her research on DNA has resulted in tools for analyzing large-scale dynamic networks and various multi-agent simulation systems. Her group has developed tools for extracting sentiment, social and semantic networks from social media and other textual data (AutoMap), simulating epidemiological models (BioWar), simulating covert networks (DyNet), and simulating changes in beliefs and practice given information campaigns (Construct). Her ORA system is one of the premier network analysis and visualization engines supporting geo-temporal analysis of social network and meta-network data. It is used worldwide and at several of the combatant commands. Illustrative projects include assessment of IRS outreach activities, assessment of impact of NextGen on airline re-rerouting, counter-terrorism modeling, counter-narcotics modeling, assessment of design of public-health departments, mapping the global cyber-attack network, and social media based assessment of crises such as Benghazi, Darfur, and the Arab Spring.

Education Dr. Carley received SB degrees in Economics and in Political Science from M.I.T., and a PhD degree in Sociology from Harvard University.

Publications Among Dr. Carley's many scientific publications, she co-authored papers "Exploring Characteristics of Suspended Users and Network Stability on Twitter" (2016), "Transition Networks in a Cohort of Patients with Congestive Heart Failure" (2015), "Remote assessment of countries' nuclear, biological, and cyber capabilities: joint motivation and latent capability approach" (2015), "Destabilizing Terrorist Networks" (2003), "The Impact of US Cyber Policies on Cyber-Attacks Trend" (2016), "Rapid Modeling and Analyzing Networks Extracted from Pre-Structured News Articles" (2012), "An Incremental Algorithm for Updating Betweenness Centrality and k-Betweenness Centrality and Its Performance on Realistic Dynamic Social Network Data" (2015).

Honors Dr. Carley is an IEEE Fellow. She is the recipient of the Allen Newell award for research excellence. She has served as President of the North American Association for Computational and Organizational Simulation (2003-2004) and of the Mathematical Sociology Section of the American Sociological Association (1999-2000). She received the Lifetime Achievement Award from the Sociology and Computers Section of the ASA (2001). In 2011 she received the Simmel Award for advances in the area of social networks from INSNA and became a senior member of the IEEE. She has served as a Task Force Member of the Defense Science Board and of Geographic Information Science Panel of the Strategic Command. She has served on a committee and several panels of the National Research Council including ones on the military, big data, and geo-spatial analytics and was a member of the DHS-HSSTAC.

Dr. William D. Casebeer

William D. Casebeer, PhD (USAF LTCOL, RET.) is the Senior Research Area Manager in Human Systems and Autonomy for Lockheed Martin Advanced Technology Laboratories. He has a decade of experience in program management and leading teams of scientists and engineers in multiple settings.

Before ATL, Bill was a DARPA PM in the Defense Sciences Office and the Biological Technologies Office, where he started the Narrative Networks and Low-Cost EEG programs, and led the Accelerated Learning, Education Dominance, Strategic Social Interaction Modules, Young Faculty Award and other programs. His last command position was as Deputy Director of the Technology Advancement and Warfighter Training Department for the 500-person Joint Warfare Analysis Center (a DoD modeling and simulation unit), and he has multiple tours with deployed time as an intelligence officer. He has a joint PhD in



Cognitive Science and Philosophy from UC-San Diego, MA in National Security Affairs from the Naval Postgraduate School, MA in Philosophy from the University of Arizona and a BS in Political Science from the USAF Academy. <u>Publications</u> include an *MIT Press* neural network and ethics book (<u>here</u>), a neuroethics article in *Nature Reviews Neuroscience* (<u>here</u>), and a book on violent non-state actors (<u>here</u>).

Dr. James Caverlee

James Caverlee is an Associate Professor in the Department of Computer Science and Engineering at Texas A&M University. His research targets topics from social media, information retrieval, recommender systems, data mining, and emerging networked information systems. For many years, he has studied threats to these systems, including spam/bots, crowd-powered strategic manipulation, collective attention threats, attacks on search engines, and other emerging threats.

Caverlee is a recipient of the 2010 Defense Advanced Research Projects Agency (DARPA) Young Faculty Award, the 2012 Air Force Office of Scientific Research (AFOSR) Young Investigator Award, and a 2012 NSF CAREER Award. He spent his sabbatical in 2015 at Google as a Visiting Scientist. Caverlee received his Ph.D. from Georgia Tech in 2007, M.S. degrees in Computer Science (2001) and in Engineering-Economic Systems & Operations Research (2000) from Stanford University, and a B.A. in Economics from Duke University (1996, magna cum laude).

Mr. Matt Chessen

Matt Chessen is a career U.S. diplomat, technologist and author who is currently serving as the Senior Technology Policy Adviser in the Office of the Science and Technology Adviser to the Secretary of State. From 2016-2017, Matt was the State Department Science and Technology Policy Fellow at the George Washington University, where he researched the international implications of artificial intelligence, computational propaganda, and cognitive security. From 2014-2016, Matt was the Coordinator for International Cyber Policy for the Bureau of East Asian and Pacific Affairs



where he led the regional implementation of the US International Strategy for Cyberspace.

Before joining the Foreign Service in 2004, Matt founded an ecommerce company, and worked at Razorfish, managing the strategy development, design and implementation of large corporate websites. Matt served overseas as an Economic officer in Liberia, a Consular and Pol-Mil officer in Iraq, and as a POLAD to ISAF-HQ in Afghanistan. He also worked in Washington D.C. at the Bureau of Political-Military Affairs and at the Office of eDiplomacy, where he led the implementation of an open-source, crowd-working platform for the US government called Open Opportunities.

Matt holds a J.D. from Georgetown University, and an M.B.A. and B.A. from the University of Arizona. He has earned eight honor awards for his service at the Department of State, including Superior Honor Awards for his work on the Afghan Peace Process and his efforts advancing the US International Strategy for Cyberspace. Matt has written two novels, as well as numerous nonfiction articles and fictional short stories.

See more at http://mattchessen.com/ and https://www.linkedin.com/in/mattchessen/

Dr. Richard Cincotta

Richard Cincotta is a Wilson Center Global Fellow with the Center's Environmental Change and Security Program, and Non-resident Fellow at the Stimson Center in Washington, DC. His current research focuses primarily on the political effects of the agestructural transition and the consequences of sub-national demographic dynamics.

Dr. Cincotta served as the Director of Demographic and Social Science Programs in the (U.S.) National Intelligence Council's (NIC's) Long Range Analysis Unit (2006-09), and has contributed to three of the NIC's quadrennial Global Trends (GT) reports (2008, 2012, 2017). Previously, he worked in the Policy and Evaluation Division of the US Agency for International Development (USAID), in the Office of Population and Reproductive Health (1992-96), and as a senior demographer at PAI, a non-governmental reproductive health organization (1996-2006). His analyses of the impacts of



demographic change appear in Foreign Policy, Current History, Nature and Science. His recent review of "the age-structural theory of state behavior" appears as a chapter in the Oxford Reference Encyclopedia of Politics (2017), and in an article in the Journal of Intelligence Analysis, entitled "Demography and Early Warning" (2015).

Colonel Brandt Deck

Colonel Brandt Deck graduated with a Bachelor of Science degree from Arizona State University in 1988 and was subsequently commissioned as an Infantry Officer. He later earned a Masters of Business Administration degree from Touro University International in 2002 and a Masters in National Security Studies from the National War College in 2011. COL Deck's professional education includes the Infantry Officer Basic and Advanced Courses, Combined Arms Service and Staff School, the Special Forces Qualification Course, the Command and General Staff College, and the National War College.

COL Deck's first assignment was with the 10th Mountain Division, FT Drum, NY, where he served as a Rifle Platoon Leader, Mortar Platoon Leader, Support Platoon Leader, and Battalion S4. After completion of Special Forces training he was assigned to the 1st



Special Forces Group in FT Lewis, WA where he served as a Special Forces Detachment Commander. He then served as an Assistant Operations Officer and Chief, Special Activities Branch at the U.S. Army Special Operations Command at FT Bragg, NC. Later he served as a Company Commander, Operations Officer, and Executive Officer with 1st Battalion, 1st Special Forces Group in Okinawa, Japan including duty in Operation Enduring Freedom - Philippines, Republic of the Philippines. His next assignment was as the Chief of Current Operations, later Chief of Future Operations, SOJ3X Special Programs, Special Operations Command Pacific, at Camp Smith, HI. Colonel Deck then commanded Detachment 3, Joint POW/MIA Accounting Command, Vientiane, Laos. He then served with Joint Forces Special Operations Component Command-Iraq as Deputy MiTT Chief, later MiTT Chief for the Iraqi Counter Terrorist Command, Baghdad, Iraq. Colonel Deck's next assignment was as Director, Army Special Operations Capabilities Integration Center, U.S. Army John F. Kennedy Special Warfare Center and School, FT Bragg, NC. He then commanded the 157th Infantry Brigade, Camp Atterbury, IN before serving as Director, Special Operations Planning and Liaison Element, Special Operations Joint Task Force – Afghanistan/NATO Special Operations Component Command – Afghanistan, Kabul, Afghanistan. Colonel Deck is currently serving as the Division Chief Concept Development and Integration, J7 Joint Special Operations Forces Development, US Special Operations Command, MacDill Air Force Base, FL.

His military awards include the Master Parachutist Badge, Expert Infantryman's Badge, Ranger Tab, and Special Forces Tab. His decorations include the Legion of Merit, Bronze Star Medal, Defense Meritorious Service Medal, Meritorious Service Medal, Joint Service Commendation Medal, Army Commendation Medal, Army Achievement Medal, and the GWOT Service and Expeditionary Medals.

Ms. Patricia DeGennaro

Patricia (Tricia) DeGennaro is a senior geopolitical risk and intelligence analyst for Threat Tec., LLC. She currently supports the US Army's Training and Doctrine Command Operational Environment Center's Network Engagement Team. She is also an adjunct professor at New York University's Department of International Affairs where she teaches courses on international security policy and civilian and military affairs and a Visiting Scholar at George Mason University's Center on Narrative and Conflict Resolution.

DeGennaro capitalizes on her experience as an academic, author and consultant in international security policy. Much of her work focuses



on stabilization in the Middle East and surrounding region, countering violent extremism, and transitioning nations from war. She has spent considerable time in Iraq and Afghanistan on security, provincial governance, capacity building, public policy and joint interagency, intergovernmental and multinational coordination.

During her tenure, she has consulted with the Asia Foundation, Director of National Intelligence Office, Department of Homeland Security, The Conference Board, World Bank, Senate Labor and Human Resources Committee chaired by Senator Edward M. Kennedy, and several organizations that support the Middle East Peace Process. She also spent four years in Albania as a Small and Medium Enterprise volunteer with the Peace Corps and, later, as a contractor with US Agency for International Development. Regionally, DeGennaro continues to focus on the Balkans, the Middle East and South Asia where she travels often.

DeGennaro has published several articles on US foreign policy and national security topics. Her focus is to encourage an integrated international policy that looks beyond war and the use of force. She is often an expert commentator for CNN, MSNBC, Al Jazeera, Fox News, BBC and various nationally and internationally syndicated radio programs.

DeGennaro holds an MBA in International Trade and Finance from George Washington University and an MPA in International Security and Conflict Resolution from Harvard University. She speaks fluent Albanian and has a basic knowledge of Italian, Arabic and Dari.

Dr. Diane DiEuliis

Dr. Diane DiEuliis is a Senior Research fellow at National Defense University. Her research areas focus on emerging biological technologies, biodefense, and preparedness for biothreats. Dr. DiEuliis also studies issues related to dual use research, disaster recovery research, and behavioral, cognitive, and social science as it relates to important aspects of deterrence and preparedness.

Prior to joining NDU, Dr. DiEuliis was the Deputy Director for Policy, (and served as Acting Deputy Assistant Secretary for Policy and Planning) in the Office of the Assistant Secretary for Preparedness and Response (ASPR), U.S. Department of Health and Human Services. While there, she coordinated policy in support of domestic and international health emergency preparedness and response activities, including implementation of the Pandemic All-Hazards Preparedness Act, the National Health Security Strategy,



and the Public Health Emergency Medical Countermeasures Enterprise (PHEMCE).

From to 2007 to 2011, Dr. DiEuliis was the Assistant Director for Life Sciences and Behavioral and Social Sciences in the Office of Science and Technology Policy (OSTP) in the Executive Office of the President. During her tenure at the White House, she was responsible for developing policy in areas such as biosecurity, synthetic biology, social and behavioral science, scientific collections, ethics, STEM education, and biotechnology. Dr. DiEuliis also worked to help coordinate agency response to public health issues such as the H1N1 flu.

Prior to working at OSTP, Dr. DiEuliis was a program director at the National Institutes of Health (NIH), where she managed a diverse portfolio of neuroscience research in neurodegenerative diseases. She completed a fellowship at the University of Pennsylvania in the Center for Neurodegenerative Disease Research, and completed her postdoctoral research in the NIH Intramural research program, where she focused on caellular and molecular neuroscience. Dr. DiEuliis has a Ph.D. in biology from the University of Delaware, in Newark, Delaware.

Areas of Expertise: Biodefense; Biosecurity; Deterrence (Neuroscience & Neurobiology); Emergency Management; Ethics & Leadership (Life Sciences/Human Subjects); WMD Preparedness/Response

Rear Admiral Select Joseph A. DiGuardo Jr.

Rear Admiral Select Joseph A. DiGuardo Jr, USN, was born in Fallston, Maryland. He graduated from the United States Naval Academy with a Bachelor of Science Degree in History.

He received his commission in 1991, and reported to Naval Special Boat Unit 12 (SBU 12) for duty as Assistant Officer in Charge (AOIC) and Combat Craft Patrol Officer. During this tour, he deployed to the Philippines. Subsequently he was assigned to the USS Frederick (LST-1184), and served as Gunnery Officer, Auxiliary and Electrical Officer and Navigator. This tour included deployments to Somalia and the Persian Gulf. He commenced Explosive Ordnance Disposal (EOD) training in February 1995. From September 1996 through November 1998, he served as Officer in Charge, EOD Mobile Unit EIGHT DET EIGHT and led a EUCOM Special Operations detachment on two deployments in Bosnia-Herzegovina and Africa. From November 1998 to October 2000 he served as OIC, EOD Mobile Unit



EIGHT DET Bahrain supporting COMFIFTHFLT where he led Humanitarian Demining Operations in Yemen and supported contingency operations to include the USS COLE bombing.

In October 2000, he was selected for Joint Special Operations Command and served as Special Projects Officer. During this tour, he completed 5 combat deployments in Operations ENDURING and IRAQI FREEDOM. From February 2004 to April 2005, he served as XO of EOD Mobile Unit TWO in Little Creek VA. In April 2005 RDML(sel) DiGuardo was assigned to USCENTCOM as the Deputy Chief of the Counter IED Task Force and completed a 6th combat deployment to Iraq. From July 2007 until July 2009 RDML(sel) DiGuardo was the Commanding Officer of EODMU 11 where he led 300 warriors in the execution of over 2000 Counter IED Missions in IZ and AFG. He graduated from the National War College in June 2010 earning a Master's degree in National Security Strategy. Following his degree, he was assigned as the OIC of the Navy Counter IED COE in Indianhead MD from 2010 to 2012. At the completion of that assignment he was selected to be the Director of the Navy Warfare Group, under the office of Navy Strategy and Policy within the Staff of the CNO. RDML(sel) DiGuardo took Major Command in June 2013 as Commander Task Force Five Six/Navy Expeditionary Forces Central where he led over 1800 Navy Expeditionary Warriors in support of Commander Fifth Fleet. At this tour, he was made an honorary Chief Petty Officer by the Fifth Fleet Chiefs Mess. RDML(sel) DiGuardo was the Branch Head for Navy Expeditionary Combat under the Director of Expeditionary Warfare on the OPNAV Staff from 2014-2016. He reported as the Vice Deputy Director for Global Operations on the Joint Staff in Sep 2016. He has earned designations as an EOD Officer, Special Operations Officer, Master EOD Technician, Surface Warfare Officer, Naval Parachutist, Basic Diving Officer and Combat Craft Patrol Officer.

RDML(sel) DiGuardo proudly wears the Legion of Merit (3 awards), the Bronze Star, the Defense Meritorious Service Medal, the Meritorious Service Medal, the Joint Commendation Medal (2 awards) NM Commendation Medal (4 stars), the Army Commendation Medal, the Navy Achievement Medal, the Army Achievement Medal, the Combat Action Ribbon, the Joint Meritorious Unit Commendation the Navy Unit Commendation and various campaign medals.

Dr. Cathryn Downes

Dr. Downes joined the National Defense University's College of Information and Cyberspace in 2003. She leads the College's National Security Strategy and Cyber Power, and the Multi-Agency Collaboration Courses. She is also a team member of the Defense Security Assistance Agency adviser training program for senior DoD civilian advisers to Afghanistan and other countries. Her Network Centric Warfare and Operations course was recognized in 2010 by the Institute for Government and Defense Advancemen t, and in 2013, she was selected as a Top 40 Educational Innovator by the U.S. Center for Digital Education.

Her research interests are focused on national security futures and cyber power strategies, strategic thinking and strategy formulation, the Russian Influence and Disinformation Campaign, developing an inter-agency collaborative maturity framework, unintentional



militarism and e-learning edge practices. Her latest publication is: "Strategic Blind-Spots on Cyber Threats, Vectors and Campaigns" in the Winter 2017-18 edition of the Cyber Defense Review.

Dr. Downes served 13 years with the New Zealand Defence Force holding SES leadership positions in focused on enterprise transformation for strategic management systems and processes. She also served as a national security policy writer and adviser to the NZ Secretary of Defense and as the Senior Defense Adviser to the NZ Government's 2003 Review of Defence Accountabilities and Structural Arrangements.

Dr. Downes earned her Doctorate (International Relations) and Master of Strategic Studies and International Relations (with distinction) from the University of Lancaster, UK. She also holds a U.S. Department of Defense Chief Information Officer Certificate, and is a graduate of the Australian Department of Defence Industrial Mobilization Course.

Her academic appointments include a John M. Olin Postdoctoral Research Fellowship, Harvard University's Center for International Affairs, a University Research Fellowship, University of Melbourne and an Australian Department of Defense Research Fellowship, Australian National University's Strategic and Defence Studies Centre.

Dr. Downes is a Fellow, and has served three terms as a Council member of the Inter-University Seminar on Armed Forces and Society. She is also a Fellow of the 21st Century Trust (UK).

In 1995, she represented New Zealand on the Canadian Government's International Consultative group on reforming the UN's rapid reaction capability. In 1997, she presented her research on military ethos to U.S. Army Chief of Staff General Reimer, his senior staff and other US Army and US Marine Corps audiences. In recent years, Dr Downes has contributed to US Naval Postgraduate School, Center for Civil Military Relations teaching teams to Croatia, Estonia and Hungary and to NDU CIC teaching teams to Romania, Bulgaria, and Singapore.

Ms. Rebecca Earnhardt

Rebecca Earnhardt is a Researcher and Project Manager for the Unconventional Weapons and Technology Division at the National Consortium for the Study of Terrorism and Responses to Terrorism (START). She focuses on emerging technologies of national security concern, biological threats and biotechnology, and adversary decision making. With experience in designing and implementing red team exercises, Rebecca takes a creative and innovative approach to addressing key areas of security concern including aviation security and radiological material control. Rebecca received her M.S. in Biodefense from George Mason University, and completed a B.A. in Political Science and a B.A. in Homeland Security / Emergency Preparedness at Virginia Commonwealth University.

Lt General (Ret) Robert Elder, D.Engr

Lt General Robert Elder (USAF, retired) joined the George Mason University faculty as a research professor with the Volgenau School of Engineering following his retirement from military service as the Commander of 8th Air Force and U.S. Strategic Command's Global Strike Component.

He currently conducts research in the areas of command and control, deterrence, escalation control, competition short of armed conflict, crisis management, and international actor decisionmaking. General Elder served as the Central Command Air Forces Deputy Commander for Operation Enduring Freedom, Air Operations Center Commander and Deputy Air Component Commander for Operation Iraqi Freedom, and Commandant of the Air War College. He was the first commander of Air Force Network Operations and led the development of the cyberspace mission for



the Air Force. He received his Doctorate in Engineering from the University of Detroit.

Mr. James P. Farwell

James P. Farwell is an author and defense consultant who has advised the U.S. Department of Defense and the U.S. Special Operations Command on global initiatives and actions, communication strategy, cyber policy development and authorities, and cyber security. Mr. Farwell is a recognized expert with an international reputation in the legal and policy issues for cyber war and cyber security, and strategic communication – especially as affecting political issues in North Africa, the Middle East and Pakistan.



He has served as a consultant to the U.S. Department of Defense, including Office of the Under Secretary of Defense (Policy), Office of the Under Secretary of Defense (Intelligence), Special Operations - Low Intensity Conflict, U.S. Special Operations Command, and U.S. Strategic Command.

As an attorney, he is currently Of Counsel to Elkins PLC in New Orleans, where he leads a team specializing in cybersecurity. He holds the advanced CIPP/US certification in that field. Formerly he was a partner at Chaffe McCall law firm in New Orleans specializing in business law and litigation for major national and international clients. He has served as Arbitrator for NYSE and American Arbitration Association, and as a Mediator for American Arbitration Association. He holds a B.A. from Tulane University, a J.D. in Law from Tulane University, and a D.C.L.S. in Comparative Law from the University of Cambridge (Trinity College).

He has international experience in handling political campaigns at the presidential level in handling campaigns for strategy and media. He has advised legislative candidates abroad, including United Bermuda Party; New Democracy Party (Greece); Lee Hoi Chang (Presidential, Korea); Antiqua; and British MPs. In the United States, he has handled or advised as to strategy and media in campaigns for the U.S. Presidency – including Senator John McCain in 2008, and Newt Gingrich in 2012 -- Senate, Governor, Congress and statewide offices. Non-partisan on national security, in 2016 he advised four Presidential campaigns or candidates on national security issues.

Mr. Farwell has worked with major multi-nationals including R.J.R. Nabisco, Caesar's Palace, HRI Properties, Philip Morris, Freeport-McMoran (now Freeport-McMoran Copper & Gold Inc.), Monsanto, Entergy Corporation, Microsoft, Boeing, and Monsanto. He has also worked for advocacy groups and business associations such as the Coalition for Affordable Power, Louisiana Lottery, Louisiana Council for Fiscal Reform, North Carolina Citizens for Business & Industry, and the American Insurance Association.

ACADEMIC: Associate Fellow, King's Centre for Strategic Communications, Department of War Studies, Kings College, London and a non-resident Senior Fellow at the Middle East Institute in Washington, D.C.

PUBLICATIONS: <u>The Pakistan Cauldron</u> (Washington: Potomac Books, 2011); <u>Persuasion &</u> <u>Power</u> (Washington: U. of Georgetown Press, 2012); <u>The Architecture of Cyber Security</u> (Lafayette: Sans Souci/U. of Louisiana Lafayette, 2017).

Dr. Aaron Frank

Dr. Aaron Frank is an Information Scientist at the RAND Corporation. His research focuses on designing, developing, and employing computational social science models in the support of intelligence analysis and policy. Since joining RAND in 2014, Aaron's research has spanned a variety of topics and government organizations, including the use of denial and deception to enhance the resilience of US military bases, the integration of data science capabilities into the Defense Intelligence Agency, developing concepts and models of will to fight for the US Army, support for DARPA in social science advanced modeling and research, and internally sponsored research on measuring the complexity of cities and applications of Virtual, Augmented and Mixed Reality technologies in policy research.

Prior to joining to RAND, Aaron supported the Central Intelligence Agency, National Geospatial Intelligence Agency, National Defense University, Office of Net Assessment, Joint Warfare Analysis Center, and other organizations. He holds a BA in Political Science from Boston University, an MA in National Security Studies from



Georgetown University, and a PhD in Computational Social Science from George Mason University. Aaron is also an alumnus of the Complex Systems Summer School at the Santa Fe Institute.

Dr. Frank can be reached at <u>afrank@rand.org</u>.

Dr. James Giordano

James Giordano PhD is Professor in the Departments of Neurology and Biochemistry, and Chief of the Neuroethics Studies Program of the Pellegrino Center for Clinical Bioethics at Georgetown University Medical Center, Washington, DC, USA; and is Executive Director of the Center for Policy for Emerging Technologies (C-PET), a Washington DC-based international think tank. Dr. Giordano is also Distinguished Visiting Professor of Brain Science, Health Promotions and Ethics at the Coburg University of Applied Sciences, Coburg, Germany.

Dr. Giordano has served as an appointed member of United States Department of Health and Human Services Secretary's Advisory Council on Human Research Protections (SACHRP); appointed member of the Neuroethics, Legal and Social Issues (NELSI) Advisory Panel of the Defense Advanced Research Projects' Agency (DARPA); as Senior Science Advisory Fellow of the Strategic Multilayer Assessment Branch of the Joint Staff of the Pentagon; and as Research Fellow and Task Leader for the Sub-Program on Dual Use Brain Science of the European Union Human Brain Project.



The author of over 275 publications in neuroscience and neuroethics, 7 books, and 15 international governmental whitepapers on neurotechnology, ethics and biosecurity, he is Editor-in-Chief of the international journal *Philosophy, Ethics and Humanities in Medicine*; and Associate Editor of the *Cambridge Quarterly of Health Care Ethics*.

His ongoing research addresses the neurobiological bases of moral cognition and decision-making; and neuroethical issues arising in and from the development, use and misuse of neuroscientific techniques and technologies in medicine, public life, and military applications. In recognition of his work, he was elected to membership in the European Academy of Science and Arts, the Dana Alliance for Brain Initiatives, and the Royal Society of Medicine (UK).

Dr. Rebecca Goolsby

Dr. Goolsby currently serves as a program officer for the Office of Naval Research in Arlington, Virginia. For the past eighteen years, she has developed research in social network analysis and computational social science, the first to hold the position of computational social scientist in the U.S. government. She taught at the University of Washington and Evergreen State College in Washington State before joining ONR in 2000, where she collaborated with ONR-funded scientists to address the problem of understanding big data of terror networks. Her early program involved the development of computational social science models, algorithms, and visualizations for understanding unique and novel threats. She has published many articles in peer-reviewed journals on a variety of topics including understanding terrorist networks, ethics in military research, humanitarian disaster communications



concerns, and diffusion of propaganda via social media. Well known internationally for her research and program development in strategic communication, her 2013 publication for the Woodrow Wilson Center for International Scholarship was the first to identify the potential of Internet and mobile phone communications as a vector for rumor, crowd manipulation and social hysteria propagation.¹ Among her honors, she was awarded a Fulbright Award and a Special Commendation from the Navy. She is the lead on NATO Research Technology Group, HFM-293 "Digital and Social Media Assessment For Effective Communication And Cyber Diplomacy." She is a technical advisor for the NATO Digital Working Group, and a member of the NATO Digital Working Group's Core "Tiger" Team for Information Environment Assessment project.

¹Goolsby, Rebecca (2013). "On Cybersecurity, Crowdsourcing and Social-Cyber Attack," Woodrow Wilson Science and Technology Innovation Program, Commons Lab Memo. Number 1. <u>https://www.wilsoncenter.org/publication/cybersecurity-crowdsourcing-and-social-cyber-attack</u>

Mr. David Horwitz

David A. Horwitz is a retired U.S. Air Force Special Tactics Lieutenant Colonel. He currently is serving as a senior analyst in the U.S. Special Operations Command J-7 Concepts Development and Integration Division's Lessons Learned Strategic and Operational Studies Branch. Mr. Horwitz brings 28-years of wide-ranging military and civilian Special Operation experience. He has firsthand knowledge and understanding of contingency operations from his direct involvement in the Somalian Humanitarian Relief Operations and multiple operational tours in Afghanistan. Mr. Horwitz developed his interest in water scarcity as a contributing source to local and regional conflict during his military and civilian deployments to Afghanistan. He holds a Master's Degree in Public Administration



from Troy University. Mr. Horwitz is currently a graduate student in water resource management at the Patel College of Global Sustainability, University of South Florida.

Mr. Steve Jameson

Mr. Steve Jameson is a program manager in DARPA's Information Innovation Office (I2O), having joined DARPA in August 2014. His current research focuses on technologies to enable situation understanding, improve effectiveness and timeliness of decisionmaking, and build trust between humans and autonomous reasoning systems. Specific interests include knowledge representation, techniques for causal modeling, reasoning, and inference, as well as technologies to support mixed initiative reasoning, with a focus on enabling non-expert users to effectively interact with automated reasoning systems.

Mr. Jameson manages three programs at DARPA. Causal Exploration seeks to develop a modeling platform to aid military planners in understanding and addressing underlying causal factors that drive complex conflict situations. The technologies



embodied in the Causal Exploration platform will enable users to rapidly create, maintain, and interact with a causal model that has been tailored for the operational environment they are facing.

Big Mechanism aims to develop technologies for a new kind of science in which research is integrated more or less immediately—automatically or semi-automatically—into causal, explanatory models of unprecedented completeness and consistency. The domain of the program is cancer biology with an emphasis on signaling pathways. Big Mechanism technologies read research abstracts and papers to extract pieces of causal mechanisms, assemble these pieces into more complete causal models, and reason over these models to produce explanations.

Insight addresses the need for new tools and automation to enhance intelligence analyst capabilities and performance, developing an adaptable, integrated system for intelligence, surveillance and reconnaissance (ISR) information to augment intelligence analysts' support of time-sensitive operations on the battlefield. The Insight system receives, indexes and stores incoming data from multiple sources; analyzes and correlates that information; and requests and shares other relevant information with analysts and data providers. Insight's analysis capabilities include pattern analysis and course of action assessment algorithms to help analysts discover and identify potential threats and explore hypotheses about those threats' potential activities.

Mr. Jameson joined DARPA following a 27-year career in advanced technology development at Lockheed Martin Corporation where his research focused on artificial intelligence, sensor and data fusion, and unmanned autonomous systems. He holds a Bachelor of Science degree in electrical engineering from Johns Hopkins University and a Master of Science degree in computer science from the University of Pennsylvania.
Mr. Robert C. Jones

Bobby Jones is a retired U.S. Army Special Forces Colonel; a former Deputy District Attorney; and the senior strategist at U.S. Special Operations Command. Currently serving as a member of the SOCOM J5 Donovan Group, Mr. Jones is responsible for leading innovative thinking on the strategic environment and how it impacts factors critical to national security, such as the character of conflict, deterrence and societal stability. He also serves as the strategic Advisor to the Director of Plans, Policy and Strategy.

Mr. Jones's principle focus is on all aspects of political conflict, and how such conflicts are affected by our rapidly evolving strategic environment. He enjoys his role as a featured lecturer in the Joint



Special Operations University's Enlisted Academy, focusing on the strategic environment, the nature of insurgency and terrorism, and the evolving character of conflicts currently challenging the force.

He has been a featured speaker at an Oxford University Changing Character of Warfare conference on Fragile States; a Harvard extension course on Irregular warfare; and also co-created and taught a pop-up course at the Stanford Design School in partnership with the Stanford Peace Innovation Lab on the role of trust in stable societies. Mr. Jones is a Fellow with the Center for Advanced Defense Studies; and a strategic analysis consultant with DS-48.

"If war is the final argument of Kings, then revolution is the final vote of the people." RCJ

Ms. Regina Joseph

Regina Joseph is the founder of Sibylink, an international consultancy based in The Hague, and co-founder of pytho, a US-based decision-science consultancy. Both organizations provide strategic foresight through quantitative forecasting, training programs and digital solutions development. Joseph is an IARPA ACE program Superforecaster and was a Senior Consultant on the IARPA-funded Good Judgment Project research team. She also serves as a member of the faculty at New York University.

An analyst, futurist, information systems designer and technical creative director with a record of award-winning product development over 25 years, Joseph is also a political scientist whose work and research assists public and private sector



organizations. Her corporate work spans the world, from Sony to Hearst to Liberty Global. Her public sector work has aided such clients as the OSCE, NATO and the UN, among others. Her most recent endeavors include launching the world's first cross-agency forecasting tournament for the government of The Netherlands as part of Sibylink's proprietary strategic foresight training program; the invention of digital tools like **neuer**tm, a quantified structural analytic technique (patent pending) and InfoRank, an information reliability index; the development of a cyber-threat forecasting platform; and further IARPA-funded research into the development of hybrid human-machine forecasting systems.

In her career, Joseph has been recognized as a pioneer and thought leader in both the analog and digital worlds: she was the founder and editor-in-chief of Blender, the world's first digital magazine and she has been responsible for several technical firsts in the fields of media technologies and telecommunications. Her writing has appeared in a variety of outlets including Reuters, the Washington Post, the New York Times, Forbes, AdWeek, the International Relations & Security Network at ETH-Zurich, Foreign Policy and many others. Joseph is a Thomas J. Watson Fellow and holds a B.A. from Hamilton College (magna cum laude and Phi Beta Kappa) and an M. Sci from New York University.

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Colonel Eero Keravuori

COL Eero Keravuori started his military service in 1991 as a combat medic in the 2ND/325 Airborne Infantry Regiment of the 82ND Airborne Division. In May 1997, he was commissioned as an officer in the US Army Adjutant General Corps. COL Keravuori spent six years on active duty based in Germany with deployments to Bosnia, Kosovo, Poland and Kuwait in roles including Platoon Leader, TF Commander and Corps Battlestaff planner.

After Release from Active Duty, COL Keravuori spent two years working with the Department of Justice on International Law Enforcement before mobilizing as a Civil Affairs officer in Iraq as the PRT Rule of Law Team Leader for Baghdad Provence. He then served as a Counterterrorism Operations Officer with Dep of State Counterterrorism Bureau, the G-3 Ops/Intel Integration Branch



Chief with the Military Intelligence Readiness Command (MIRC), and as the MIRC Deputy Chief of Staff, G-1. In 2016, he joined the CENTCOM J-3 Joint Operations Center (JOC) as the JOC Team Chief. COL Keravuori is currently the Division Chief of the CENTCOM Combined Strategic Analysis Group.

COL Keravuori earned a Bachelor's of Science Degree from the United States Military Academy, a Master's Degree in International Relations from the University of Oklahoma and an MBA from Cameron University. He is a graduate of the Adjutant General, Military Intelligence, and Civil Affairs schoolhouses, the Army Command and General Staff College, the Defense Strategy Course, and is currently attending the Army War College Distance Education Program.

COL Keravuori's awards and decorations include the Bronze Star Medal, Joint Meritorious Unit Commendation, and the US and Finnish Airborne Badges among others.

Dr. Barnett S. Koven

Barnett S. Koven is a Senior Researcher/Assistant Research Scientist at the University of Maryland's National Consortium for the Study of Terrorism and Responses to Terrorism (START), a U.S. Department of Homeland Security (DHS) Center of Excellence. He is also an Affiliated Scholar at the Jack D. Gordon Institute for Public Policy at Florida International University, an Adjunct Professor at the George Washington University (GWU), an Adjunct Presenter at the U.S. Air Force Special Operations School and a part-time Quantitative Social Scientist at Performance Systems, LLC. Koven received his Ph.D., M.Phil. and M.A. in Political Science, as well as a B.A. in International Affairs and Latin American and Hemispheric Studies from GWU. He also holds a Certificate in Conflict Analysis from the United States Institute of Peace and a Certificate in Advanced Security in the Field from the United Nations System Staff College.

Koven has conducted extensive overseas research in conflict and post-conflict zones. His work employs cutting-edge quantitative and



qualitative methods to answer pressing defense and homeland security questions. Specifically, he focuses on issues pertaining to counterinsurgency, counterterrorism, countering violent extremism, counter-narcotics, gray zone conflict, security cooperation, organized criminal violence, weapons availability and conflict onset, post-conflict reconstruction, and the material and non-material sources of military power. Koven has received research funding from the U.S. Department of Defense (DoD), the DHS and the National Nuclear Security Administration, as well as from the Horowitz Foundation for Social Policy and GWU. A complete list of journal articles, book chapters and policy publications can be found on his personal website: barnettkoven.weebly.com.

In addition to his aforementioned academic affiliations, Koven regularly instructs Combating Terrorism Seminars at the Federal Law Enforcement Training Center in Charleston, SC. He is also a frequent presenter during the various lecture series curated by the Strategic Multi-layer Assessment Branch of the DoD, as well as to myriad other U.S. government and university audiences. Moreover, Koven routinely offers his analysis of terrorism to the international media.

Beyond academia, Koven is the Vice President and Director of Events at the Godparents of the Children of Instituto Mundo Libre, a non-profit organization providing safe housing, rehabilitation and vocational training to homeless children in Peru. In addition, Koven is a Board Member at Mindot, a non-profit educational platform for developing the next generation of local leaders and agents of social change. Finally, he is an Advisor at Concordia, a non-profit organization dedicated to expanding public-private partnerships.

Dr. Gina Ligon

Dr. Gina Ligon is an Associate Professor of Management and Collaboration Science at the University of Nebraska at Omaha. She received her PhD in Industrial and Organizational Psychology with a Minor in Measurement and Statistics from the University of Oklahoma. Since arriving at UNO, she has been awarded over \$3,000,000 in National Security-related grants and contracts. She is a member of the National Academy of Sciences, Engineering, and Medicine, and serves on the panel for behavioral sciences for the Office of the Director of National Intelligence. Ligon is the Principal Investigator on a grant from Department of Homeland Security (DHS) examining the leadership and performance of transnational Violent Extremist Organizations (VEOs), and she is the originator



of the Leadership of the Extreme and Dangerous for Innovative Results (LEADIR) database.

Her research interests include profiling leaders from afar, violent ideological groups, expertise and leadership development, and collaboration management. Prior to joining UNO, she was a faculty member at Villanova University in the Department of Psychology. She also worked in St. Louis as a management consultant with the firm Psychological Associates. She has published over 50 peer-reviewed publications in the areas of leadership, innovation, and violent groups, and she is the editor to the academic journal *Dynamics of Asymmetric Conflict*.

Dr. Diane L. Maye

Dr. Diane Maye is an Assistant Professor of Security Studies and International Affairs at Embry- Riddle Aeronautical University in Daytona Beach, Florida, and an affiliated faculty member at George Mason University's Center for Narrative and Conflict Analysis. She also served as a Visiting Professor of International Affairs at John Cabot University in Rome, Italy. Diane teaches undergraduate level courses in International Relations, Homeland Security, American Foreign Policy, Counterterrorism Analysis, Arabic, and Middle Eastern Affairs.

Prior to her work in academia, Diane served as an officer in the United States Air Force and worked in the defense industry. Upon



leaving the Air Force, Diane managed projects in foreign military sales, proposal development, and the execution of large international communications and physical security projects for military customers. During the Iraq war, she worked for Multi-National Force-Iraq in Baghdad, managing over 400 bi-lingual, bicultural advisors to the U.S. State Department and the U.S. Department of Defense. She is a graduate of the U.S. Air Force Academy and the Naval Postgraduate School and earned her Ph.D. in Political Science at George Mason University.

Dr. Ian McCulloh

Ian McCulloh holds joint appointments as a Parson's Fellow in the Bloomberg School of Public health, a Senior Lecturer in the Whiting School of Engineering and a senior scientist at the Applied Physics Lab, at Johns Hopkins University. His current research is focused on strategic influence in online networks. His most recent papers have been focused on the neuroscience of persuasion and measuring influence in online social media firestorms. He is the author of "Social Network Analysis with Applications" (Wiley: 2013), "Networks Over Time" (Oxford: forthcoming) and has published 48 peer-reviewed papers, primarily in the area of social network analysis. His current applied work is focused on educating soldiers and marines in advanced methods for open source research and data science leadership. He also works with various medical practitioners in the Baltimore area to improve the effectiveness of public health campaigns.



He retired as a Lieutenant Colonel from the US Army after 20 years of service in special operations and improvised explosive device forensics. He founded the West Point Network Science Center and created the Army's Advanced Network Analysis and Targeting (ANAT) program. In his most recent military assignments as a strategist, he led interdisciplinary teams of Ph.D. scientists at Special Operations Command Central (SOCCENT) and Central Command (CENTCOM) to conduct social science research in 15 countries across the Middle East and Central Asia to included denied areas, which he used to inform data-driven strategy for countering extremism and irregular warfare, as well as empirically assess the effectiveness of military operations. He holds a Ph.D. and M.S from Carnegie Mellon University's School of Computer Science, an M.S. in Industrial Engineering, and M.S. in Applied Statistics from the Florida State University, and a B.S. in Industrial Engineering from the University of Washington. He is married with four children and a granddaughter.

Dr. Robert McCreight

After serving the United States government at the State Department and other federal agencies over a 35 year career, Dr. McCreight retired from civil service in 2004 and served as a consultant for major homeland security and national defense contractors. His professional career includes work as an intelligence analyst. treaty negotiator, arms control delegate to the UN, counter-terrorism advisor, political-military affairs analyst and Deputy Director of Global Scientific Exchanges at State Department. During his service at State Department he was a senior Soviet military analyst with INR specializing in the assessment of Soviet, chemical and biological weapons programs. He participated in the design of remote collection, satellite surveillance and verification systems. He also performed assignments involving the management or



coordination international post-disaster relief and humanitarian operations, developed and coordinated peacekeeping policy, and promoted global science and technology cooperation projects

He was involved in the design and coordination of White House nuclear readiness command crisis exercises during the Reagan administration possessing extensive experience in geopolitical wargame design and strategic simulations as well for the Defense Department. During his federal career, he contributed to and coordinated well over 22 cabinet level strategic nuclear preparedness exercises, worked on Presidential Protection and Survivability Programs and directed the operation of several dozen senior-level military exercises involving theoretical force-on-force scenarios between the United States and the Soviet Union.

He spent 27 years of combined active and reserve military service concurrently with his civilian work in U.S. Army Special Operations and has devoted 12 years to teaching graduate school as an adjunct at Georgetown, Virginia Tech, Penn State, George Mason and George Washington Universities in subjects as diverse as disaster and emergency management, strategic intelligence, nonproliferation policy, homeland security policies, terrorism analysis, intelligence analysis and assessing WMD threats. Following completion of his doctoral studies in 1989 he remains active in graduate education programs in emergency and crisis management writing and publishing three books on emergency exercise design, homeland defense and neuroscience issues in national security. He has also written over 39 articles on chemical weapons use, disaster management, disaster recovery, post-strike attribution, biological weapons threats to homeland security, WMD scenario development technology assessment and collegiate educational strategies for developing future crisis managers for government service. He has published two books on designing emergency exercises and homeland defense and written 11 chapters in a variety of other homeland security textbooks. He is currently an Infrastructure Fellow at George Mason University and lectures periodically at National Defense University.

Dr. Spencer B. Meredith III

Dr. Spencer B. Meredith III serves as an Associate Professor of National Security Strategy at the National Defense University (NDU), College of International Security Affairs (CISA). With two decades of research and support to governance and conflict resolution, his principle areas of expertise are Russian, Eastern European, and Middle Eastern politics. Focused on the Gray Zone and countering peer-adversary influence, he is a Subject Matter Expert for multiple Geographic Combatant Command, Intelligence Community, and Joint Special Operations efforts. He has briefed at the National Security Council, and his current work focuses



on democratization and the human domain in Ukraine and the Baltics.

With a doctorate from the University of Virginia in Government and Foreign Affairs, as well as a Fulbright Scholarship to the Republic of Georgia, he has a broad record of scholarship. His first book, *Nuclear Energy Safety and International Cooperation: Closing the World's Most Dangerous Reactors*(2014) resulted from work with key US Interagency and partner nation elites in Eastern Europe. His articles have appeared in peer-reviewed journals ranging from *Communist Studies and Transition Politics, Peace and Conflict Studies, Central European Political Science Review*, to *Special Operations Journal*; as well as in professional publications including *Strategy Bridge, Small Wars Journal, Inter-Agency Journal, Special Warfare*, and *Foreign Policy Journal*. He is a regular contributor to Joint Staff White Papers on cognitive factors in the contemporary and future operating environments.

Dr. Kay Mereish

Dr. Mereish is a Senior Level Intelligence Officer at the office of the Deputy Undersecretary for Intelligence Operations, Office of Intelligence and Analysis (I&A) of Department of Homeland Security (DHS). She served as Deputy Director for DHS at the National Center for Medical Intelligence in Fort Detrick, Maryland.

Dr. Mereish was acting Director, WMD and Health Assessment Division, I&A, DHS after joining DHS in Feb 2009 as Senior Level Medical Intelligence Officer.

She represents DHS at several national intelligence boards; NIAB, CPIB, NIC/NIEs and WHH NIM board. She is the Chair of the Analysis and Production Board of DHS Intelligence Enterprise, and Deputy Key Intelligence Officer for I&A. Working on technologies solutions,



she is the Chair of the Federal Coordination Board and Board member to several; Center of Excellence funded by the DHS/S&T Office of the University Programs.

As an army officer, COL (Ret.) Mereish served as Senior Manager at the DIA-National Media Exploitation Center. She also deployed on several overseas tours in CENTCOM and PACOM AOR as an Army Attaché. Dr. Mereish is DoD Certified Acquisition Professional –Highest level–Level III; Defense Attaché, North Africa/Middle East and Defense Linguist DPLTIV.

In her civil career, she held the position of Chief Biologist of the United Nations Monitoring and Verification Commission (UNMOVIC)-and Deputy Director for Planning and Operation in New York from 2000-2008. She organized and led UNMOVIC weapons inspection teams in Iraq and served as chief weapon inspector. She also served as a weapon inspector for several years with United Nations Special Commission. At the UN assignments, Dr. Mereish contributed to the quarterly reports on arms control for the UN Security Council, and lead author of the compendium on Iraq's WMD.

Dr. Mereish served as a senior technical advisor to the US Chief negotiator/Department of State, and a delegate to the Ad Hoc Group, the BWC expert meetings in Geneva, representing different government agencies, including Defense, State, Commerce, and the National Security Council. She continued her BW non-proliferation efforts as UNMOVIC delegate to the BWC technical meetings, States Parties meetings and the Review Conferences in Geneva.

Dr. Mereish led the development of RNA and DNA-based assay for biological agents; received a patent award in October 2001 for inventing an autonomous sampling device designed to investigate the presence of CB threat agents. She represented CB Defense of DTRA at several MASINT meetings and reviews; and supported the establishment of CBIST.

As a scientist at the biodefence facility at Fort Detrick, Maryland (1986-1997) she published in peer reviewed journals many scientific articles on biodefense, nonproliferation, verification technologies and presented papers at national and international forums on arms control, disarmament, verification and nonproliferation of WMD.

Dr. Mereish is a doctoral degree graduate from the University of Nebraska Medical Center, in Omaha, Nebraska. Received ODNI Senior Intelligence pin, completed Leading the Intelligence Community courses and seminars.

Dr. Mereish received from the Secretary of Homeland Security the Outstanding Public Service Medal in 2009; the Defense Meritorious Service Medal 2008 and the U.S. Army Meritorious Service Medal.

Dr. Vera Mironova

Dr. Vera Mironova is an International Security Fellow at the Belfer Center (Harvard Kennedy School) and received her PhD in Political Science from the University of Maryland.

Her research explores individual level behavior in conflict environments.

Dr. Mironova conducted fieldwork in active conflict zones (Yemen, Iraq, Ukraine, and Palestinian territories) and post-conflict regions: Balkans (Bosnia, Kosovo, and Croatia), Africa (DR Congo, Rwanda, and Burundi), Central Asia (Tajikistan, Kyrgyzstan, and Uzbekistan), and Caucasus (Georgia, Armenia, and Azerbaijan).

In 2016-2017, she was embedded with Iraqi Special Operations Forces during Mosul Operation.

Dr. Mironova's papers have been published in American Economics

Journal: Applied Economics, British Journal of Political Science, Journal of Conflict Resolution, Journal of Peace Research and Journal of Experimental Political Science

Her scholarship has been featured in *The New York Times, Foreign Policy, BBC* and *Boston Globe.* Dr. Mironova has served as a commentator for a number of major media outlets, including *The New York Times, Associated Press, Washington Post,* and *Vice News.* She was featured in *The New Scientist* for her fieldwork. Dr. Mironova's public press articles appeared in *Foreign Policy, Washington Post,* and *The New Republic* among others. Dr. Mironova is a regular contributor to *Foreign Affairs.*



Mr. Randall Munch

Randall (Randy) Munch supports the TRADOC G-2 as an independent contractor, assisting the Network Engagement Team in developing training courses that operationalize recent doctrine and joint concepts related to network engagement, such as the Joint Concept (JC) for Human Aspects of Military Operations and the JC for Operating in the Information Environment. During 29 years of service in the Army as an Infantry officer and a Foreign Area Officer, he deployed with the 10th Mountain Division to Somalia and Haiti and with the Defense Threat Reduction Agency to Iraq. Following his military retirement in 2005, he worked with the Joint IED Defeat Organization and with TRADOC organizations to help operationalize and institutionalize the concepts of attack the



network and network engagement, and he is now using that experience to help advance the concept of cognitive maneuver.

Mr. Vinh X. Nguyen

Mr. Nguyen leads the Intelligence Community mid- and long-term strategic analysis to support and advance the cyber mission. He serves as the subject matter expert and advises the Director of National Intelligence (DNI) on cyber issues in support of the DNI's role as the principal intelligence adviser to the President.

Recruited by NSA through the Stokes Program, Mr. Nguyen received the dual degrees in psychology and computer science from the University of Pennsylvania. He earned his MA in International Science and Technology Policy at the George Washington University's Elliott School of International Affairs, where he focused his work on defense innovation policies and processes. He was trained on positive executive leadership at the University of Michigan's Ross School of Business.



Mr. Nguyen was responsible for leading and integrating the enterprise-wide cryptologic mission to detect and assess the cybersecurity threats from the Asia-Pacific areas at NSA. He has served in many key analytic and technical positions in the network security, information operations, and counterterrorism areas at NSA. He was instrumental in developing and prototyping cyber attribution methods, leading joint operations against key adversaries, and analyzing terrorist use of the Internet.

Mr. Nguyen was a recipient of the DNI's Exceptional Accomplishment Award (2017), NSA's Senior Special Achievement Award (2015), the DNI's Presidential Daily Briefing Pin (2013), the Meritorious Civilian Service Award (2010), the Sparky Baird Award for the best contributed article published in the SIGNAL magazine (2007), and the Distinguished Young AFCEAN of the Year Award (2006-07). He joined the Defense Intelligence Senior Level ranks in 2014.

Dr. Amy Pate

Amy Pate is the Research Director at START. She earned a Ph.D. in Government and Politics (Comparative Politics and International Relations) from the University of Maryland in 2007. Prior to joining START as a researcher in 2011, Pate was research director (2007-2011) and project coordinator (2003-2005, 2006-2007) of the Minorities at Risk Project, based in the Center for International Development and Conflict Management at the University of Maryland. Pate is a specialist in international relations and comparative politics, with particular foci on ethnic politics, democratization, political instability, terrorism, transnational organized crime, and counterinsurgency/ counterterrorism.

Pate earned an M.A. in Government and Politics from the University of Maryland in 2005 and her B.A. in Political Science, History, and Russian from Miami University (Ohio) in 1998.



Ms. Nicole Peterson

Nicole Peterson is an analyst who assists in qualitative research and strategic analysis in support of Strategic Multi-Layer Assessment (SMA) efforts primarily focused on national security issues and Department of Defense (DoD) concerns. She has contributed to NSI's Virtual Think Tank (ViTTa®) and discourse analyses during her time at NSI.

Nicole coordinates SMA's speaker series, which encompasses a broad range of topics from radicalization of populations and violent extremist organizations to artificial intelligence. She is also the publisher of SMA's weekly newsletter, which summarizes SMA speaker sessions, outlines upcoming events, and disseminates relevant publications.

Nicole began her career at NSI as an undergraduate intern for its commercial sector. In June 2016, she transitioned to an Associate



Analyst position and has since been promoted to Analyst. She graduated with honors from the University of San Diego where she received a BA in applied mathematics and a minor in accountancy.

Dr. Jonathan Pfautz

Dr. Jonathan Pfautz joined DARPA as a program manager in June 2015. His principal research interests lie at the intersection of the computational and behavioral/social sciences. Prior to joining DARPA, Dr. Pfautz led cross-disciplinary research and guided system development and deployment at Charles River Analytics. His efforts spanned research in social science, neuroscience, cognitive science, human factors engineering, and applied artificial intelligence.

Dr. Pfautz holds a doctor of philosophy degree in computer science from the University of Cambridge. He also holds degrees from the Massachusetts Institute of Technology: a master of engineering degree in computer science and electrical engineering, a bachelor of science degree in brain and cognitive sciences and a bachelor of science degree in computer science and engineering. Dr. Pfautz has published more than sixty peer-reviewed conference and journal publications and five book chapters. He holds five patents.



Lieutenant Colonel Thomas Pike

LTC Thomas (Tom) Pike is researching how the military can more effectively integrate computational models into analysis and decision making from the tactical to the strategic level.

He currently assesses the military should integrate programming into all entry level training for intelligence professionals. He contends this will dramatically enhance our ability to leverage data analysis tools across all facets of intelligence, as well as position itself to help catalyze and integrate emerging computational tools, specifically Agent Based Models.

Tom is currently a PhD student in George Mason's Computational Social Science Department. He is attending through the National Intelligence University's Professor of Strategic Intelligence program.

Tom commissioned in the Infantry in 2000, and served as an Air Assault Platoon Leader and Company Executive Officer with 1^{st} Battalion, 503^{rd} Infantry in the 2^{nd} Infantry Division. He then served



in the 1st Battalion, 16th Infantry in the 1st Infantry Division as a Bradley Platoon Leader and Scout Platoon Leader. He deployed as the Scout Platoon leader in support of Operation Iraqi Freedom. He then transitioned to Military Intelligence and served as an Advanced Individual Training Company Commander, and instructor and course manager at the Military Intelligence Basic Officer Leader's Course.

Tom then transitioned to Strategic Intelligence, where he was assigned to U.S. Transportation Command (USTRANSCOM). At USTRANSCOM, Tom served as a Senior Watch Officer, Branch Chief, Executive Assistant to the Commander and Executive Officer to the Director of Intelligence. During, this time he helped conduct a reorganization of the Transportation Intelligence Enterprise, working with the National Geospatial-Intelligence Agency and Defense Intelligence Agency. He also initiated and coordinated an interagency Agent Based Model of a Global Strategic Area of Interest. He then transitioned to Ft Knox, Kentucky to serve as the assignment officer for the Strategic Intelligence Functional Area. While there, he coordinated for the reconstitution for the Strategic Intelligence Council of Colonels and served as an instructor for the new Non-Commissioned Officer Evaluation Report.

He is married to Dr. Amy Pike, a former U.S. Army veterinarian, who is a Diplomate of the American College of Veterinary Behaviorists. They have two children.

Dr. Benjamin L. Ruddell

Dr. Benjamin L. Ruddell (Ben), Ph.D., P.E., is an Associate Professor in the School of Informatics, Computing, and Cyber Systems at Northern Arizona University, the President of Ruddell Environmental consulting, and the Director of the FEWSION project.

His PhD is in Civil and Environmental Engineering from the University of Illinois at Urbana-Champaign. His professional experiences are in the fields of civil engineering, water resources, systems analysis, ecology/ecohydrology, and engineering research and education in an interdisciplinary university setting.



Mr. Paul Scharre

Paul Scharre is a Senior Fellow and Director of the Technology and National Security Program at the Center for a New American Security. He is author of the forthcoming book, *Army of None: Autonomous Weapons and the Future of War*, to be published in April 2018.

From 2008-2013, Mr. Scharre worked in the Office of the Secretary of Defense (OSD) where he played a leading role in establishing policies on unmanned and autonomous systems and emerging weapons technologies. Mr. Scharre led the DoD working group that drafted DoD Directive 3000.09, establishing the Department's policies on autonomy in weapon systems. Mr. Scharre also led DoD efforts to establish policies on intelligence, surveillance, and reconnaissance (ISR) programs and directed energy technologies. Mr. Scharre was involved in the drafting of policy guidance in the *2012 Defense Strategic Guidance, 2010 Quadrennial Defense Review*, and Secretary-level planning guidance. His most recent position was Special Assistant to the Under Secretary of Defense for Policy.



Prior to joining OSD, Mr. Scharre served as a special operations reconnaissance team leader in the Army's 3rd Ranger Battalion and completed multiple tours to Iraq and Afghanistan. He is a graduate of the Army's Airborne, Ranger, and Sniper Schools and Honor Graduate of the 75th Ranger Regiment's Ranger Indoctrination Program.

Mr. Scharre has published articles in *The New York Times, Foreign Policy, Politico, Proceedings, Armed Forced Journal, Joint Force Quarterly, Military Review,* and in academic technical journals. He has presented at the United Nations, NATO Defence College, Chatham House, National Defense University and numerous other defense-related conferences on robotics and autonomous systems, defense institution building, ISR, hybrid warfare, and the Iraq war. He has appeared as a commentator on CNN, MSNBC, NPR, the BCC, and Swiss and Canadian television. Mr. Scharre is a term member of the Council on Foreign Relations. He holds an M.A. in Political Economy and Public Policy and a B.S. in Physics, cum laude, both from Washington University in St. Louis.

Dr. Valerie B. Sitterle

Dr. Sitterle is a Principal Researcher Engineer at the Georgia Tech Research Institute (GTRI), where her current and primary work synthesizes systems science, complex systems, and defense analysis. She is an expert in engineering science, integrating engineering, natural and physical sciences, and mathematics leading to the design and analysis of systems across disciplines. Dr. Sitterle particularly focuses in two areas: (1) evolving analytical methods used in Defense acquisitions to more effectively cope with deep uncertainty and identify driving influences, and (2) integrating operational needs with systems sciences to support design of



complex defense systems for equally complex environments. The former addresses competing materiel development decisions across diverse system types, including characterization of system resilience and functional behaviors. For the latter, she blends sociotechnical environmental analyses across multiple data domains to help characterize potential operational effectiveness for solutions over a broad spectrum of asymmetric warfare challenges in theater. Across both areas, her primary foci involve design, modeling, and analysis methods for situational awareness and cyber-physical systems problems, each with varying degrees of autonomy driving collective performance dynamics. Her efforts have supported various DoD organizations and often included collaboration across other US Government groups, industry, and academia.

Dr. Jason Spitaletta

Jason Spitaletta is a Major in the US Marine Corps Reserve and a psychologist with primary research experience in applied, experimental, political psychology and cognitive neuroscience as well as operational experience in Psychological Operations (PSYOP)/Military Information Support Operations (MISO) and intelligence assignments in the US Marine Corps as well as Joint and Special Operations communities. He has deployed to the Western Pacific, Iraq, and Uganda.

In civilian life, he is a researcher at The Johns Hopkins University-Applied Physics Laboratory as well as an adjunct faculty member at National Intelligence University. He holds a bachelors' degree in biochemistry from Franklin & Marshall College, a master's degree in human factors from Embry-Riddle Aeronautical University and a master's degree and Ph.D. in applied experimental psychology from The Catholic University of America. He also holds a graduate certificate from Stanford University's Summer Institute for Political Psychology.

Dr. Laura Steckman

Laura Steckman, PhD, is a social scientist at the MITRE Corporation. Her work operationalizes theories and methodologies from the social and behavioral sciences to address approaches and solutions to mission-specific problems sets worldwide. She has supported Information Operations (IO) and Military Information Support Operations (MISO) for U.S. Central Command, U. S. Pacific Command and various interagency efforts, and is the former Command Social Scientist for the Marine Corps Information Operations Center (MCIOC). Her current research examines the relationship between societies and emerging technologies, specifically in how the two shape each other and the impact that technology and electronic communications have on culture, language, and behavior.

Dr. John A. Stevenson

John A. Stevenson is a Principal Research Scientist at NSI, Inc. He earned his Ph.D. and M.A. in Political Science at the University of Chicago, and an A.B. in Government from Dartmouth College. Dr. Stevenson's passion is to curate illuminating data narratives to best enable informed decision-making given environmental uncertainty and complexity in support of all kinds of organizational ends. His substantive areas of expertise are multi-method social science methodology, and the statistical and historical modeling of political conflict and radicalization in sub-Saharan Africa and Southeast Asia. His published peer-reviewed work ranges from the effects of genocide memorials on authoritarian regime durability in Rwanda



to an empirical evaluation of the varying effectiveness of differing types of counter-terrorism campaigns against Boko Haram in Nigeria. Prior to joining NSI, Inc., Dr. Stevenson was a lead investigator and senior researcher in the DHS Center of Excellence, National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland, College Park; and served as the elected representative of research and professional faculty to the University Senate.

Dr. Gwyneth Sutherlin

Dr. Gwyneth Sutherlin is the Director of Human Geography and Analytics Research at Geographic Services, Inc. She provides analytic expertise in socio-cultural dynamics, geospatial technology, cognitive linguistics, and emerging conflicts. She applies Human Geography research data collection and analysis, operational security, cyber security (software development), and geospatial intelligence (GEOINT). Her work draws from extensive field experience in conflict mediation and security risk analysis including projects for election monitoring in Afghanistan and Peru, training UK MOD on emerging conflicts, providing evaluation of South Sudan and Sudan conflict, and working with policy makers, academics, and parliamentarians on conflict mediation topics in Pakistan as a board member of the journal Peace, Conflict & Development.

Her publications in peer-reviewed information and technology



journals seek to bridge social science and emerging technology. Topics have included humancomputer interaction, an analysis of crowdsourcing data for decision-making in Haiti, Somalia, and the Arab Spring and an integration of cultural variables in open-source communication models supporting policy decisions in the ME. This work is informed by field experience, such as spending much of 2011 in North Africa training local pro-democracy groups how to leverage narratives in multiple languages. Her research is featured in textbooks and UN reports and her conference presentations range from the Africa Writes literature conference to GEOINT technology forums.

Currently, her research in human geography supports various government, military and NGO teams with analysis, including contributions the Strategic Multilayer Assessment group. Dr. Sutherlin has a degree in political science from Indiana University and a PhD in peace and conflict studies from the University of Bradford. She operates in seven foreign languages.

Colonel Scott K. Thomson

Colonel Scott K. Thomson is an Army Reserve Psychological Operations officer who recently completed a National Security Fellowship at Harvard University's John F. Kennedy School of Government, where he focused his research on the application of behavioral science to counter-insurgency and stability operations.

Prior to his fellowship, COL Thomson commanded of the 17th Psychological Operations Battalion in Austin, TX, from 2013-2015, where he provided Military Information Support Operations support primarily to Army South and the United States Southern Command. From 2011-2013, COL Thomson attended the U.S. Army Command and General Staff College



and the School of Advanced Military Studies where he studied operational planning and leadership. From 2009-2011, he activated and commanded the 316th Psychological Operations Company at Grissom Air Reserve Base, IN. Activities included manning, equipping, and training the newlyestablished unit to conduct Military Information Support Operations. Prior to company command, COL Thomson served as the operations officer of the 16th Psychological Operations Battalion in Fort Sheridan, IL from 2007-2009. COL Thomson previously served in the regular Army as an Armor Officer in multiple armor and cavalry assignments, including duty in Germany and Iraq, and was enlisted as a Cavalry Scout for ten years prior to commissioning.

He holds a Masters of Arts in Communications Management from Webster University, and a Masters of Military Arts and Sciences in Operational Art from the Command and General Staff College. His academic interests include application of behavioral sciences such as complexity theory, systems thinking, social psychology, and behavioral economics to national security issues. He currently serves at the Pentagon, working in the Office of the Secretary of Defense focusing on policy issues related to the use of information and communication in national security. He is father to three children who reside in Texas.

Dr. Robert M. Toguchi

Dr. Robert M. Toguchi is currently serving as the Chief, Concepts Division, G9 Directorate, in the U.S. Army Special Operations Command at Fort Bragg, North Carolina. He has spent over 30 years on active military duty while serving as a Functional Area 59 strategist for the U.S. Army. His past assignments included a tour as the Director, Strategic Plans and Chief, ARCIC Initiatives Group, TRADOC. In the Pacific region, he spent a tour with the U.S. Pacific Command while serving as the Deputy Director, J8; and the Chief, Strategic Plans, J5 Directorate, USPACOM. Dr. Toguchi was also assigned to Africa in 2005 while serving as the senior U.S. military observer to the U.N. Mission in Liberia. Previously, he served on the faculty and taught military strategy at the U.S. National War College, National Defense University. Additionally, in the Washington D.C. area, Dr. Toguchi gained valuable experiences within the halls of the Pentagon while serving as a strategist in the



DAMO-SSP, Strategy and Policy Division, Army G3/5/7; and as a war planner in DAMO-SSW, War Plans Division, Army G3/5/7, 1996-1999. Dr. Toguchi received a B.S. degree concentrating in Engineering, from the U.S. Military Academy in 1980; and received a PhD in History from Duke University in 1994.

Dr. Anthony Vinci

Anthony Vinci, Ph.D., is the Chief Technology Officer (CTO) at the National Geospatial-Intelligence Agency (NGA). He is an executive, entrepreneur and intelligence officer focused on developing new technologies and approaches to solve emerging, global challenges.

As CTO, Dr. Vinci is focused on increasing NGAs ability to instill the necessary next-generation technology, tradecraft and innovative practices into the agency, the GEOINT (geospatial-intelligence) enterprise, and more broadly into the US national security mission. Dr. Vinci's responsibilities include integrating pioneering technology with the experience and expertise of the agency workforce and tackling the broader issue of how NGA and the GEOINT enterprise can use next-generation technologies to derive a competitive edge for the U.S. The CTO develops investment, divestment, operation, structural



and partnership recommendations for NGAs Deputy Director and for NGAs Director as the GEOINT Functional Manager.

Dr. Vinci plays a central role in developing NGAs public-private partnerships and in general interfacing between the agency and commercial industry, academia, laboratories and the non-profit sectors. He is also charged with bridging agency efforts and establishing further collaboration across the National System for Geospatial-Intelligence community, Department of Defense, and the Intelligence Community on technology and technology-integration issues.

Previously, Dr. Vinci served as the Associate Director for Capabilities and the Director of Plans and Programs at NGA.

Dr. Vinci is the founder and former CEO of Findyr, a revolutionary technology company which crowdsources data from around the world. Previously, he was on the executive management team at a company which specialized in machine learning for remote sensing, technology advisor to a private equity firm, and a management consultant at a global consulting firm serving commercial businesses and government entities focused on implementing change.

Earlier in his career he served with the Department of Defense in Iraq, Africa, Asia and throughout the Middle East.

Dr. Vinci received his Ph.D. in international relations from The London School of Economics and studied philosophy at Reed College and Oxford University. He performed fieldwork throughout Sub-Saharan Africa, the Middle East and Southeast Asia. Dr. Vinci is also a writer and filmmaker who has produced and published extensively on topics of security and strategy. He is a Fellow member of The Explorers Club.

Mr. J.C. Walker

J.C. Walker is the Senior Security Advisor for NSI, Inc., DDGO-IO/SMA Office of the Joint Chiefs of Staff. He is currently pursuing his B.A. in Government Security at American Military University.

He's known in the Pentagon as the "go-to-guy" concerning security matters. He's a great troubleshooter and problem solver in his area of expertise.

J.C. Walker is a Motivational Speaker that targets the adolescent population. He has been the guest speaker for Youth Programs, Graduations, School Assemblies, City & State programs, Juvenile Facilities and Adult Probation/Parole Orientations in the New Orleans Metropolitan Area.

J.C. has also been a guest on many talk shows in New Orleans speaking on topics regarding single parenting and forums on

Fatherhood. He's recognized for his compassion for teens encouraging them to strive to do their very best.

He has also participated in programs such as "Baby, Think It Over!" and "The Empathy and Awareness Program" as the Motivational Speaker. JC is now residing in the Washington D.C. Metropolitan Area where he plans to tackle the issues here that are plaguing our youth.

You may have even seen J.C. on the big screen as he is a member of the Screen Actors' Guild with speaking and non-speaking roles in Ray, Skeleton Keys and Glory Road.

He is the Founder and President of the new and exciting Mardi Gras Organization, "The Krewe of Pyros Foundations, Inc." which raises funds for scholarships and aiding in times of need for Louisiana natives residing in the DMV.



Dr. Nicholas D. Wright

Dr. Nicholas Wright is a Senior Research Fellow at the University of Birmingham (UK). He applies insights from neuroscience and psychology to decision-making in international confrontations in ways practically applicable to policy. He has conducted work for the UK Government and Pentagon Joint Staff. He was previously an Associate in the Nuclear Policy Program, Carnegie Endowment for International Peace, Washington DC. Prior to joining Birmingham and Carnegie, he examined decision-making using functional brain imaging at University College London (UCL) and in the Department of Government at the London School of Economics. He worked clinically as a neurologist in Oxford and at the National Hospital for Neurology in London. He has published academically (e.g. Proceedings of the Royal Society), in general publications such as the Atlantic or National Interest, and with the Joint Staff at the Pentagon (see www.nicholasdwright.com/publications). He has briefed multiple times at the Pentagon, and also at the UK MoD,



French MoD, German Foreign Office and elsewhere. He has appeared on the BBC and CNN.

Wright received a medical degree from UCL, a BSc in Health Policy from Imperial College London, has Membership of the Royal College of Physicians (UK), has an MSc in Neuroscience and a PhD in Neuroscience both from UCL.

Ms. Mariah Yager

Ms. Mariah Yager serves as Deputy for the Strategic Multilayer Assessment (SMA) Program under the Joint Staff/J-39, DDGO. She is a Senior Research Analyst with NSI. From 2010 to 2017, Ms. Yager helped to develop a scientifically valid, replicable, and operationally trainable discourse analysis methodology. This methodology has been used to examine insurgent writings, the expression of trust and worldview, and cognitive complexity, both in the vernacular and English translations.

Ms. Yager received her Master's in Professional Communication from Purdue University of Fort Wayne and Bachelor degrees in Anthropology and Interpersonal and Group Communication, from



Indiana University and Purdue University, Fort Wayne (IPFW) respectively. Ms. Yager has taught fundamental communication theory and public speaking at IPFW and previously worked in the private sector in client management and assessments for an executive coaching and consulting firm.

INDEX

Α

Agee, Collin	12
Astorino-Courtois, Allison	
Aviles, Weston	14

В

Bowman, Elizabeth	15
Burris, Lieutenant Colonel (P) Brad	

С

Cabayan, Hriar	10
Canna, Sarah	17
Carley, Kathleen M	
Casebeer, William	
Caverlee, James	20
Chessen, Matt	21
Cincotta, Richard	22

D

Deck, Brandt	23
DeGennaro, Patricia	24
DiEuliis, Diane	25
DiGuardo Jr., Captain Joseph	26
Downes, Cathryn	27

Ε

Earnhardt, Rebecca	
Elder, Lt General (Ret) Robert	29

F

Farwell, James P	
Frank, Aaron	
Fry, Suzanne	
11, , , , , , , , , , , , , , , , , , ,	

G

Giordano, James	
Goolsby, Rebecca	
Grynkewich, Brigadier General Alexus G	

Η

J

Jameson, Steve	
Jones, Robert C	
Joseph, Regina	
Κ	

Keravuori, Colonel Eero	38
Koven, Barnett S.	39

Kraft, Jr., Major General James E2
L
Ligon, Gina40
Μ
Maye, Diane L41
McCreight, Robert
McCulloh, Ian
Meredith, Spencer B
Mironova, Vera
Munch, Randall
Ν
Nguyen, Vinh X48
Р
Pate, Amy
Perkins, Charles W5
Peterson, Nicole
Pfautz, Jonathan
Pike, Lieutenant Colonel Tom52
R
Ruddell, Benjamin L53 Rynes, Joel6
S
Scharre, Paul54
Sitterle, Valerie B55
Spitaletta, Jason56
Steckman, Laura
Stevenson, John
Sundiata-Walker, Colonel Senodja F
Т
Thomson, Colonel Scott K
V
Vinci, Anthony62 Votel, General Joseph L1
W
Walker, J.C
-
Yager, Mariah65