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Keynote Speakers

Sara Casey

UK Department for Environment, Food & Rural Affairs

Ms. Sara Casey is the UK Department for the Environment, Food, and Rural Affairs (Defra) Chemical, Biological, Radiological, and Nuclear (CBRN) Science Team’s Biological Hazards Lead. Ms. Casey obtained an M.Sc. in applied microbiology and biotechnology from the University of Wolverhampton (England) and is a Chartered Biologist. Ms. Casey was formerly the Biological Hazards Lead of the UK Government Decontamination Service. Previously, Ms. Casey was involved in the remediation of properties in Scotland and Northern England contaminated with *Bacillus anthracis* spores. During the recent nerve agent incident in Salisbury, Ms. Casey represented Defra at technical response and recovery groups, instigated the development of sample plans, and was involved in the generation of waste strategies.

Jason Doerflein

Marion County Public Health Department

Mr. Jason Doerflein graduated from Indiana University (Bloomington) in 2002 earning degrees in biology and chemistry. He started his career in public health with the Marion County Public Health Department in the fall of 2002 as an Environmental Health Specialist in the Housing Department. In January 2005, Mr. Doerflein transferred to the Department of Water Quality and Hazardous Materials Management as an Environmental Health Specialist in Water Quality. In October of 2005, Jason transferred to a full-time Hazardous Materials Specialist position on the Department’s Emergency Response Team and has held that position ever since. Mr. Doerflein has received extensive training in incident command, emergency response, hazardous materials, and chemical, biological, radiological, nuclear, and explosive (CBRNE) incidents. Mr. Doerflein is a member of the Indiana Academy of Science, the Indiana Environmental Health Association, and the National Environmental Health Association.

Norman Govan

UK Defence Science and Technology Laboratory

Dr. Norman Govan is a Defence Science and Technology Laboratory (DSTL) Fellow and Principal Advisor for Hazard Management at the DSTL (Porton Down, UK). He obtained his Ph.D. in chemistry from the University of St Andrews (St Andrews, Scotland). He has extensive expertise in conducting research at the interface of scientific disciplines (chemistry, biology, engineering and mathematics) to develop novel chemical, biological, and radiological hazard mitigation approaches. He is a member of the Organisation for the Prohibition of Chemical Weapons (OPCW) Scientific Advisory Board and during the recent nerve agent incident in Salisbury, he was the principal scientist responsible for planning and executing recovery operations.

John Howard

North Carolina Department of Agriculture & Consumer Services

Mr. John Howard is currently the Director of the North Carolina Department of Agriculture & Consumer Services (NCDA&CS) Emergency Programs Division based in Raleigh, North Carolina. His 31-year career includes various forestry positions with the South Carolina Forestry Commission and the North Carolina Forest Service. In 2017, he moved to NCDA&CS, where his primary focus is devoted to planning and response to agricultural emergencies.

Mr. Howard has been involved in incident management during most of his career serving mainly as Planning Section Chief and Incident Commander. Mr. Howard has participated on wildfire deployments in Oregon, Idaho, Wyoming, Montana, Georgia, Florida, South Carolina, Texas, and North Carolina. He has also been involved in all-risk incidents including numerous hurricanes in the Southeast as well as response to the Columbia Space Shuttle recovery in Texas. Mr. Howard is currently Incident Commander (IC) for the NCDA&CS Incident Management Team as well as an alternate IC for the North Carolina Forest Service. Recently, he helped organize and lead the disposal efforts for approximately 4 million dead poultry in eastern North Carolina resulting from Hurricane Florence flooding.

Mr. Howard has a B.S. degree in forestry from North Carolina State University (Raleigh). He is a resident of Efland, North Carolina and has a wife and two daughters.

Joe Hudyncia

North Carolina Department of Agriculture & Consumer Services

Mr. Joe Hudyncia has been an Environmental Programs Specialist for North Carolina Department of Agriculture & Consumer Services (NCDA&CS) since April 2015. In that role, he addresses environmental and natural resource issues affecting North Carolina agriculture and advises the Commissioner of Agriculture and other department officials on environmental issues associated with agriculture and agribusiness. Mr. Hudyncia also works collaboratively with experts in multiple NCDA&CS divisions, representatives from cooperating programs, and industry partners within the state and across the country in developing and maintaining capabilities for protection of animal health, mitigation of impacts from animal health emergencies, and response and recovery during agriculture emergencies. Mr. Hudyncia serves as departmental lead in the role of subject matter expert for mass mortality composting. As a member of the NCDA&CS Hurricane Florence Mass Mortality Leadership Team, Mr. Hudyncia and colleagues were awarded the Excellence in Team Accomplishment award from the Commissioner of Agriculture in 2019.

Prior to serving in this position, Mr. Hudyncia was a State-wide Nutrient Management planner and technical trainer with the Department's Division of Soil and Water Conservation for seven years. Mr. Hudyncia is a fellow of the North Carolina State University Cooperative Extension (NCSU-CES) Natural Resources Leadership Institute. He holds an M.S. degree in plant pathology from North Carolina State University (Raleigh) and a B.S. in environmental and forest biology from State University of New York College of Environmental Science and Forestry at Syracuse University. Mr. Hudyncia was raised on a family dairy farm and acknowledges it as the best and most important classroom ever.

Robert Kadlec

U.S. Department of Health and Human Services, Assistant Secretary for Preparedness and Response

Dr. Robert Kadlec is the Assistant Secretary for Preparedness and Response (ASPR) at the U.S. Department of Health and Human Services (HHS). The ASPR serves as the Secretary's principal advisor on matters related to public health emergencies, including bioterrorism. The office leads the nation in preventing, responding to, and recovering from the adverse health effects of manmade and naturally-occurring disasters and public health emergencies. As such, the office coordinates interagency activities between HHS, other federal agencies, and state and local officials responsible for emergency preparedness and the protection of the civilian population from public health emergencies.

Dr. Kadlec previously served as Staff Director for Senator Richard Burr’s subcommittee on bioterrorism and public health in the 109th Congress. In that capacity, he was instrumental in drafting the Pandemic and All-Hazard Preparedness Bill which was signed into law to improve the nation’s public health, medical preparedness, and response capabilities for emergencies, whether deliberate, accidental, or natural. Dr. Kadlec also served at the White House from 2002 to 2005 as Director for Biodefense on the Homeland Security Council, where he was responsible for conducting the biodefense end-to-end assessment, which culminated in drafting the National Biodefense Policy for the 21st Century. He served as Special Assistant to President George W. Bush for Biodefense Policy from 2007 to 2009.

Dana Tulis

U.S. Coast Guard

Ms. Dana Tulis assumed the duties of the Director, Emergency Management (CG-5RI) in January 2016. She provides strategic programmatic oversight for the Offices of Search and Rescue, Emergency and Disaster Preparedness, and Marine Environmental Response.

Prior to this position, Ms. Tulis served as both the Deputy Office Director and Acting Office Director for the Office of Emergency Management for EPA. She served in these Senior Executive Service positions from 2004 to 2016. She managed a $250 million budget and 75 staff, chaired the 15-Agency National Response Team, and provided direction to the Regional Response Teams and the Agency’s National Incident Coordination Team for preparedness and response for largescale national emergencies. She provided leadership to EPA’s preparedness and response programs for chemical, biological, radiological, and nuclear agents including the management of mobile analytical assets. She also provided strategic direction to EPA’s chemical and oil regulatory prevention programs. During the Deepwater Horizon Response, Ms. Tulis served as EPA’s National Incident Coordinator; overseeing EPA’s Emergency Operations Center and coordinating with the U.S. Coast Guard, National Oceanic and Atmospheric Administration, and EPA leadership. She provided EPA guidance to responses such as Superstorm Sandy, Hurricanes Katrina and Rita, Joplin Tornado, Yellowstone River Oil Spill, Midwest Flooding as well as day-to-day Emergency Responses and Removals.

Prior to the Office of Emergency Management, Ms. Tulis served as the Center Director of the Analytical Operations/Data Quality Center for EPA’s Office of Emergency and Remedial Response. In this role, she directly supported the World Trade Center response and ensured the sampling and interpretation of over 235,000 laboratory analyses and supported the risk assessment and cleanup efforts.

Ms. Tulis’ prior positions at EPA include serving as the Director of the Implementation Division and Chief of the Operations Branch in the Office of Underground Storage Tanks.

Ms. Tulis is a native New Yorker, possesses bachelor’s degrees in biology and psychology from Colby College (Waterville, Maine) and a master’s degree in environmental engineering from Duke University (Durham, North Carolina).

Last Names A-F

Barbara Alexander

National Institute for Occupational Safety and Health

Dr. Barbara Alexander is a Ph.D. Chemical Engineer and a Certified Industrial Hygienist. She joined the National Institute for Occupational Safety and Health (NIOSH) in 2014 after working in the nuclear and chemical industry. At NIOSH, her projects involve assessing hazardous exposures and developing and testing methods of controlling exposures to chemicals and particles in the workplace. She works with engineering controls including ventilation, filtration, and decontamination. Her research has been in multiple areas: emergency response, especially with firefighters, oil and gas extraction, outdoor power equipment, and work with disinfectants. She earlier worked on development of a control for silica dust released during hydraulic fracturing and a handheld field decontamination system. She is the author of several publications in the peer-reviewed literature. This presentation offers the results of a three-year research project for the development of a dry decontamination method.

Rosanna Anderson

U.S. Department of Homeland Security

Dr. Rosanna (Robertson) Anderson is a Program Manager at the Department of Homeland Security, Science & Technology Directorate (DHS S&T) working in the areas of biosurveillance and chemical/biothreat detection. Dr. Anderson came to DHS as a Science and Technology Policy Fellow from the American Association for the Advancement of Science in 2015 and became a Program Manager in 2016.

Dr. Anderson is currently leading a program focused on detection of synthetic opioids, as well as other narcotics and chemicals of concern, that are being smuggled into the U.S. Efforts under this program include development of novel screening approaches, detection standards, and data analytics/algorithms. Her prior work concentrated on advanced analytical tools for biosurveillance applications and biothreat detection technologies. Her research and development portfolio includes multiple international engagements for cooperation on chemical and biological defense, as well as open innovation and crowdsourcing for novel solutions to tough problems.

Prior to DHS, Dr. Anderson was a postdoctoral fellow at St. Jude Children’s Research Hospital studying biochemical mechanisms of antimicrobial resistance and novel antimicrobial drug discovery.

Dr. Anderson earned her Ph.D. in biochemistry/structural biology from the Department of Biochemistry and Molecular Biology at the Medical University of South Carolina (Charleston) and B.S. in biochemistry from the Department of Biochemistry and Genetics from Clemson University (South Carolina).

John Archer

U.S. Environmental Protection Agency

Mr. John Archer is a Research Industrial Hygienist within EPA’s Center for Environmental Solutions and Emergency Response Homeland Security and Materials Management Division. His current research areas include resuspension of biological particles from indoor/outdoor surfaces, outdoor bioaerosol sampling methods and strategies, exposure assessment to chemical, biological, and radiological threats, and chemical/biological decontamination of personal protective equipment and environmental surfaces. He currently manages EPA’s Aerosol Test Facility which includes a large closed-loop aerosol wind tunnel used for aerosol and bioaerosol research studies. Mr. Archer holds an M.S. in environmental sciences and engineering from the University of North Carolina at Chapel Hill and is also a Certified Industrial Hygienist.

J. Nick Benardini

National Aeronautics and Space Administration

Dr. J. Nick Benardini has conducted research in the field of in environmental microbiology studying extreme environments for the past 13 years. He has participated in both applied research and field studies in conducting molecular and traditional microbiological community analysis. He has actively participated in the implementation teams for the Mars Exploration Rovers, Mars Science Laboratory, InSight 2016, and Mars 2020 Missions. Specifically, he has experience in microbial sample collection (air, water, surface), concentration, molecular separation, nucleic acid-based approaches (DNA extraction, PCR, whole genome amplification approaches for low biomass, and custom DNA-microarray), and protein-based approaches (ESI-MS/MS). He has been instrumental in sampling the Mars 2020, InSight, Mars Science Laboratory, JUNO, Mars Exploration Rovers, International Space Station’s ground support loop (Space Station Processing Facility, Kennedy Space Center), and leading the sampling and laboratory support team for the Mars Science Laboratory. He has served as the lead for the InSight 2016 and Mars 2022 missions developing and implementation the spacecraft hardware microbial reduction and verification programs. He is currently one of the National Aeronautics and Space Administration’s (NASA’s) Subject Matter Experts for Planetary Protection and the Forward Planetary Protection lead for the Mars Sample Return Campaign.

Timothy Boe

U.S. Environmental Protection Agency

Mr. Timothy Boe is a Geographer with EPA's National Homeland Security Research Center. Mr. Boe’s work primarily focuses on response and waste management issues following CBRN incidents. He has also been developing computer-based decision support tools to aid decision makers in responding to wide-area contamination incidents. Before joining EPA, Timothy worked as an Oak Ridge Institute for Science and Education (ORISE) Fellow where he conducted research on wide area CBRN remediation. Timothy has an M.S. and a B.S. in applied science from Arkansas Tech University (Russellville).

David Bradley

U.S. Department of Homeland Security

Biography text.

Tony Buhr

Naval Surface Warfare Center Dahlgren Division

Dr. Tony Buhr, Ph.D., is a principal engineer at Naval Surface Warfare Center Dahlgren Division. He has 30 years of microbiology experience. His research goals are to identify select agent surrogates for *Bacillus anthracis*, *Francisella tularensis*, and Ebola; and to develop standardized biological warfare test methods that generate high levels of practical and statistical confidence. He is the Naval Sea Systems Command voting member on the ASTM antimicrobial committee and is an Etter award winner as a top engineer in the U.S. Navy.

Patrick Burton

Sandia National Laboratories

Biography text.

Hong Chen

U.S. Department of Agriculture

Dr. Hong Chen accepted his Ph.D. in entomology from the Pennsylvania State University. He is currently serving as a biological scientist for the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service’s Plant Protection and Quarantine program’s Center for Plant Health Science and Technology. His primary interests include insect biology and pest control technology. Previous to his current appointment, Dr. Chen conducted field and laboratory research on crop pests and disease vectors in North America, Central America, East Africa, and East Asia. He has already published more than 60 research papers and also served as peer reviewer for several research funding agencies and many journals in biology, entomology, and pest management.

Amy Dean

U.S. Army Edgewood Chemical Biological Center

Biography text.

Martin Denison

Reaction Engineering International

Dr. Martin Denison has over 20 years of experience in modeling complex physical systems as a postdoctoral researcher and research engineer primarily in the area of combustion and heat transfer. He was the principal developer of Reaction Engineering International’s (REI’s) ADAPT reacting Computational Fluid Dynamics (CFD) code, an adaptive mesh, parallelized tool used by REI to model furnaces fired with low/ultra-low NOx gas burners. He was the principal investigator for a Defense Threat Reduction Agency Small Business Innovation Research Phase I project that developed a Graphic Processing Unit parallel CFD code for compressible flow for use in blast event simulation. He was a lead engineer on a Navy Phase II Small Business Technology Transfer that involved the development of detailed chemical kinetics for JP-10. He was also one of the lead engineers for a successful Army Phase II project that involved creating a new comprehensive blast simulation modeling tool that involved time-step-level coupling a sophisticated multi-material, particle-based model with the LS-DYNA finite element code. He has also been involved in reservoir modeling in the oil and gas area.

Dr. Denison is one of the primary developers of new modeling techniques at REI. He has substantial experience in creating computational models of engineering systems that contain complex physics and chemistry. He is well-versed in the mathematics, physics, and software programming methods associated with multiphase CFD and finite element-based methods that use Eulerian or Lagrangian formulations.

Evan Durnal

MRIGlobal

As a Principal Chemist and group lead at MRIGlobal, Mr. Evan Durnal has more than 15 years of experience in the test and evaluation of commercial-off-the-shelf and emerging chemical detection and decontamination products. He is also well versed on the development and validation of chemical collection devices and CBRNE-related detection and decontamination products. In addition to holding multiple hazardous chemical handling and response certifications, Mr. Durnal has experience in chemical agent handling, as well as the synthesis, detection, and decontamination of fentanyl and numerous analogs. In addition to multiple peer-reviewed publications and professional presentations, he has been recognized internationally in *The Economist* and has been the recipient of multiple MRIGlobal awards. He was named one of *Ingram’s Magazine’s* “2012 Twenty in their 20’s” and in 2014, he co-founded and developed CBRNE Tech Index©, an online CBRNE-related product database powered by MRIGlobal that now hosts over 6,000 users per month as an unbiased source for CBRNE product information. Mr. Durnal holds a B.S. in molecular bioscience from Baker University (Baldwin City, Kansas) and an M.S. in criminal justice from the University of Central Missouri (Warrensburg).

Gary Flory

Virginia Department of Environmental Quality

Mr. Gary Flory is the Agricultural and Stormwater Program Manager for the Virginia Department of Environmental Quality. In this role, Mr. Flory provides leadership on numerous issues surrounding the nexus of agriculture, the environment and public health. Mr. Flory has been a lead investigator or numerous research projects focused on providing new tools in the fight against animal diseases and natural disasters affecting agriculture including many waste management and decontamination projects. Mr. Flory also founded [G.A. Flory Consulting](https://gafloryconsulting.com/), a global consulting firm, to help clients with a range of services including animal disease and natural disaster response, agricultural emergency planning, and emergency response training. Mr. Flory has conducted trainings, given presentations and deployed on numerous animal disease outbreaks around the country and internationally in the Dominican Republic, Vietnam, Tunisia, Korea, Cambodia, Laos, Malaysia, and Azerbaijan. He also serves as a Technical Reviewer and Subject Matter Expert on agricultural issues for a variety of organizations including the U.S. Department of Agriculture (USDA), the Food and Agriculture Organization of the United Nations (FAO), the Defense Threat Reduction Agency, and EPA.

Last Names G-L

Lindsay Gabbert

Plum Island Animal Disease Center

Lindsay has worked as a microbiologist supporting the U.S. Department of Homeland Security’s (DHS’) Transboundary Animal Disease Research and Development Branch at the Plum Island Animal Disease Center for over 9 years. She holds a master’s degree in homeland security with a specialization in agricultural biosecurity & food defense from Penn State University (Pennsylvania). As a Subject Matter Expert for the design of validation studies to assess viral inactivation, much of her recent work has focused on decontamination and inactivation of select agent foreign animal diseases such as Foot-and-Mouth-Disease and African Swine Fever by chemical and physical means. Prior to her work with DHS, Lindsay worked with the Centers for Disease Control as an Emerging Infectious Disease Research Fellow studying the pathogenesis of mosquito-borne viral diseases.

James Goodrich

U.S. Environmental Protection Agency

Dr. James (Jim) Goodrich is a Sr. Science Advisor with the EPA Office of Research and Development Center for Environmental Solutions & Emergency Response located in Cincinnati, Ohio. Dr. Goodrich has a Ph.D. and B.S. from the University of Cincinnati (Ohio) and an M.S. from Florida State University (Tallahassee). During his career, he has managed large multidisciplinary programs relative to water infrastructure protection, drinking water distribution systems, small community drinking water and wastewater needs, and spill modeling of drinking water supplies. He is currently the Team Lead for the EPA Water Security Test Bed that conducts full-scale distribution system, premise plumbing decontamination challenges, and development of mobile emergency water treatment systems.

William Guglielmo

ITL Solutions

William (Bill) Guglielmo is CEO of ITL Solutions, a Service-Disabled Veteran-Owned Small Business (SDVOSB) specializing in equipment design, sales, and service for the U.S. government and Department of Defense. ITL Solutions provides engineering and system solutions for the chemical, biological, radiological and maritime industries. ITL Solutions is the U.S. representative for Cristanini S.p.A., a world leader in chemical, biological, radiological, and nuclear decontamination systems.

Mr. Guglielmo served as an Officer in the U.S. Navy as a member of the Surface Warfare and Civil Engineering Corps communities. His tours of duty include Navigator of USS Gettysburg (CG 64), staff in Expeditionary Strike Group Five, Security Force Assistance in the Maritime Civil Affairs and Security Training Command, Civil Affairs and Military Information Support Operations for Naval Special Warfare Unit 10, and as Task Group 56.2 Commander providing construction forces in support of Operation Inherent Resolve to execute construction, engineering reconnaissance, and runway repairs. During USS Gettysburg’s 2009 deployment to the Middle East, Mr. Guglielmo led the ship’s Visit, Board, Search, and Seizure (VBSS) Team capturing 38 suspected pirates and numerous suspected pirate vessels including one mothership.

Mr. Guglielmo was also an Instructor at the U.S. Navy Nuclear Power Training Unit in Charleston, South Carolina on board the Moored Training Ship 635 (ex-USS Sam Rayburn).

Mr. Guglielmo holds a B.S. in mechanical engineering from Lehigh University (Bethlehem, Pennsylvania) and a master’s of engineering management from Old Dominion University (Norfolk, Virginia).

Colin Hayes

Eastern Research Group, Inc.

Biography text.

Katherine Hepler

Argonne National Laboratory

Ms. Katherine Hepler is a fifth year Ph.D. candidate in nuclear, plasma, and radiological engineering at the University of Illinois and a visiting graduate researcher at Argonne National Laboratory. Her research focuses on integrating experimental data with simulation to understand how rapid decontamination logistics following a radiological dispersal event affecting remediation outcomes such as duration and overall decontamination efficacy. She received a M.S. in nuclear engineering from the University of Illinois in 2017 and a B.S. in chemical engineering from the University of Missouri (Columbia) in 2015.

Ryan James

Battelle

Dr. Ryan James, a Battelle Senior Research Scientist, holds a Ph.D. in analytical chemistry which he has applied in support of EPA on various studies that have involved technology testing, evaluation, and large scale demonstration of radiological decontamination technologies, research pertaining to drinking water contaminant detection and distribution system decontamination research, and support of biological sampling and analysis research. Over the past 13 years, Dr. James has led more than 10 projects in the area radiological decontamination applicable to outdoor, indoor, and sensitive equipment applications. In addition to recent radiological decontamination projects, Dr. James is leading the Battelle team that is supporting several projects as part of EPA’s Analysis for Coastal Operational Resiliency (AnCOR) program developing frameworks for biological decontamination sampling and analysis plans, response prioritization, and evaluation of sampling and analysis methodologies.

Michael Kaminski

Argonne National Laboratory

Michael Kaminski received his Ph.D. from the University of Illinois (1998) in nuclear engineering with an emphasis on radioactive waste management. He is a member of the Strategic Security Sciences Division at Argonne National Laboratory and Adjunct Associate Professor in nuclear, plasma, and radiological engineering at the University of Illinois. He has been continuously involved in nuclear waste minimization and stabilization technologies since his undergraduate studies where he developed magnetic polymeric microspheres for selective radionuclide separations from liquid wastes. Over the years, he has evaluated and developed technologies for the decontamination of nuclear facilities and urban centers following a radionuclide release. These include evaluating and testing chemical decontamination technologies for removal of actinide and fission product contaminations from steels; developing a novel gel-based decontamination agent for removal of radioactive isotopes from porous building materials; working with the U.S. military to design interrogation and decontamination methods for radioactively contaminated military vehicles and equipment; and developing a wide-area (city-wide) decontamination system based on common reagents and sequestering materials available world-wide. In total, he has 70 published journal articles, 47 reports, >140 presentations, 29 inventions, and 10 patents garnering over 2100 citations in niche areas of study (H-index = 24).

Zakir Kazi

Defence Research and Development Canada

Dr. Zakir Kazi received his M.Sc. and Ph.D. degrees in chemistry from Kanazawa University (Japan). He worked as a Japan Society for the Promotion of Science postdoctoral fellow at the National Institute for Material Science, and as a research associate at Laurentian University (Sudbury, Canada), where he developed several novel nano-porous adsorbents for organic and inorganic pollution remediation applications. Dr. Kazi has worked in the field of radiation and nuclear (RN) research and development for the past seven years with institutions including the University of Ottawa (Canada) and the Canadian Nuclear Laboratories. He earned expertise in characterization of RN contaminated environments, and in radiochemical analysis of contaminated evidence.

Dr. Kazi is currently working with Defence Research Development Canada which is an organization within the Canadian Department of National Defence. He is leading the RN decontamination program within DRDC. His experience in RN defense includes training of first responders and specialized teams in CBRN defense, development of detector systems for defense, and research in RN decontamination with respect to military operation and maintenance.

Kristen Keteles

U.S. Environmental Protection Agency

Dr. Kristen Keteles is a toxicologist at EPA’s National Enforcement Investigations Center (NEIC) in Denver, Colorado. Prior to joining NEIC, she served as a toxicologist at EPA Region 8 where she conducted human health and ecological risk assessments at Superfund sites. She also provided support during emergency responses, including the Deepwater Horizon Oil Spill and the Gold King Mine Release. At NEIC, Dr. Keteles provides toxicology technical assistance in support of environmental crime investigations, prepares expert reports, and presents expert witness testimony at trials and sentencings. She has a Ph.D. in zoology from Louisiana State University (Baton Rouge, Louisiana) with an emphasis in environmental toxicology. Previously, she worked as a visiting scientist in the Counter Terrorism Forensic Science Research Unit at the FBI Academy (Quantico, Virginia).

Brittany Kiessling

U.S. Environmental Protection Agency

Dr. Brittany Kiessling is a cultural anthropologist with expertise in disaster recovery and community resilience research. She specializes in applying cultural perspectives and qualitative data analysis to address environmental problems. She is a social science post-doc in EPA’s Office of Research and Development, Center for Environmental Solutions and Emergency Response. She is currently helping to develop a tool that communities can use to measure and build their resilience to disasters or emergency incidents. She is also working on a project to help EPA integrate social considerations in environmental remediation and decontamination work. Her research highlights the importance of public engagement and community trust building in the success of environmental cleanup work.

Collin Knox Coleman

University of North Carolina

Mr. Collin Knox Coleman is currently a Ph.D. student in the Department of Environmental Science and Engineering under the advisement of Dr. Jill Stewart and Dr. Mark Sobsey at the University of North Carolina School (UNC) of Public Health (Durham). His research is focused on improving the methods utilized in disinfection testing in the lab to better match the conditions seen in the field. The findings from this research are then used in the testing of disinfectants on lab-grown organisms and organisms harvested from the environment in matrices of varying quality. Mr. Knox Coleman is trying to take these developments out of the lab to be utilized in novel water treatment techniques for drinking and wastewaters in the developing world. Before returning to UNC for graduate school, he worked for three years as a contractor for the EPA National Exposure Research Laboratory in Research Triangle Park. He holds a master’s in public health from UNC where he wrote a thesis on the impact of antecedent bacterial growth conditions on disinfection kinetics under the advisement of Dr. Mark Sobsey. Mr. Knox Coleman also received his bachelor’s from UNC under the advisement of Dr. Hans Paerl and Dr. Rich McLaughlin where he worked in the Fluid Dynamics Laboratory. In his free time, Mr. Knox Coleman enjoys making hot sauces from the family garden and searching for America's best burger.

Jacob Lalley

U.S. Army Engineer Research and Development Center

Mr. Jacob Lalley received his M.S. in environmental engineering from the University of Cincinnati (Ohio) where he studied innovative and sustainable nanotechnologies for water treatment and reuse. In particular, Mr. Lalley focused on the synthesis, characterization, evaluation, environmental applications, and implications of nanostructured functional materials for nutrient remediation. Upon graduation, Jacob accepted a position with the U.S. Army Corp of Engineers’ Engineer Research and Development Center (ERDC) in Vicksburg, Mississippi as a Research Environmental Engineer. Here at ERDC, he has worked on a number of projects related to water treatment, including the Decontamination Effluent Treatment System (DETS) project.

Joanne Larner

University of Hertfordshire

Dr. Joanne (Jo) Larner obtained her Ph.D. from the University of Surrey (Guildford, England) in collaboration with Health Protection Agency (now the Public Health England) and the Defence Science and Technology Laboratory (DSTL) for research into mass casualty decontamination, predominantly studying the mitigation of sulphur mustard exposure. This work contributed to the EU-funded Optimisation through Research of Chemical Incident Decontamination Systems (ORCHIDS) project which aimed to improve the preparedness of EU countries to respond to intentional releases of potentially hazardous chemicals. Since 2012, Dr. Larner has been a Senior Research Fellow within the Toxicology Research Group of the University of Hertfordshire in the UK where she has continued to research optimization of the mass casualty emergency response, specializing in translating *in vitro* findings to confirmatory human volunteer trials. She has been a key member of the research team which has generated the evidence base underpinning the revision of Primary Response Incident Scene Management) (guidance under the sponsorship of the Biomedical Advanced Research Development Authority. This guidance aims to provide strategic, tactical, and operation guidance for U.S. emergency responders to assess the severity of a chemical release incident and effectively attend to mass casualties.

Paul Lemieux

U.S. Environmental Protection Agency

Dr. Paul Lemieux is a senior research engineer in EPA’s Office of Research and Development in the Homeland Security and Materials Management Division of the Center for Environmental Solutions and Emergency Response. Dr. Lemieux has a B.S. in chemistry from Seattle University (Seattle, Washington) and a Ph.D. in chemical engineering from the University of Utah (Salt Lake City). He has been with the EPA’s Office of Research and Development for 32 years, where he initially studied formation and control of pollutants from combustion systems. More recently, Dr. Lemieux has been working on the management of residues from cleanup after chemical/biological/radiological incidents and foreign animal disease outbreaks. He also has been working on decision support tools to aid decision makers during wide-area contamination incidents.

Bruce Letellier

Alion Science and Technology

Biography text.

Daniel Lorch

METSS Corp.

Mr. Daniel Lorch has more than 30 years’ experience performing contract research and development (R&D) for the Defense Department, Intelligence Community, independent agencies such as EPA, and private industrial markets. Mr. Lorch’s core expertise includes microbiology, microbial decontamination, antimicrobial susceptibilities, antimicrobial coatings, microbiological influenced corrosion (MIC), sterility testing, and assessing microbial analytical equipment, bioaerosol collection techniques, biofilm formation and prevention, and medical device safety validation testing. Mr. Lorch has 21 years of Biological Safety Level Three laboratory experience working with pathogens such as *Bacillus anthracis*, *Yersinia pestis*, and *Clostridium botulinum* and with many environmental and clinical bacterial and fungal isolates, as well as bacteriophage including MS2, PhiX174, and Phi6. He has performed numerous process assessments including those on novel and commercially-available biological decontamination technologies, coliform detection technologies, and bioaerosol collection technologies. Mr. Lorch was instrumental in assessing, developing, and demonstrating a decontamination process for large frame aircraft and jet fighters. Mr. Lorch has also served as Study Director for the U.S. Food and Drug Administration and regulated studies and as Task Order Leader for numerous projects for EPA. Mr. Lorch maintains a Project Management Professional certification.

Last Names M-R

Matthew Magnuson

U.S. Environmental Protection Agency

Dr. Matthew (Matt) Magnuson is a Research Chemist for EPA’s Homeland Security Research Program/Center for Environmental Solutions and Emergency Response, and has been with EPA in Cincinnati, Ohio since 1996. He received his Ph.D. in chemistry in 1994 from the University of Oklahoma (Norman), and is author of over 50 peer reviewed publications in areas including homeland security, analytical chemistry, environmental chemistry, and forensic analysis. He is currently involved in homeland security programs related to analysis and environmental fate of chemical, biological, and radiological (CBR) contaminants. A major focus of his work is management and treatment of large volumes of CBR contaminated water and wastewater. Collaborations include U.S. Department of Defense, Department of Homeland Security, and National Institutes of Justice.

Keely Maxwell

U.S. Environmental Protection Agency

Dr. Keely Maxwell is a General Anthropologist at EPA. She works in the Office of Research and Development’s Center for Environmental Solutions and Emergency Response. An environmental anthropologist and ecologist by training, she first came to EPA as an American Association for the Advancement of Science & Technology Policy Fellow. Dr. Maxwell is the principal investigator for three research projects: community resilience to disasters, the social dimensions of environmental cleanups, and social acceptance of disaster waste.

Kate McCarthy-Barnett

U.S. Department of Homeland Security

Dr. Kate McCarthy-Barnett works for the U.S. Department of Homeland Security Federal Emergency Management Agency and has a specialized focus on CBRN decontamination response for at-risk casualties. Her current research interests and publications include the optimization of decontamination procedures during mass casualty chemical incidents. She was one two authors from the U.S. to contribute to the development of the U.S. Department of Health and Human Services Primary Response Incident Scene Management Guidance for Chemical Incidents and has presented her work at international and national conferences.

She has over 25 years of strategic leadership specializing in emergency management and civil rights and was hired as one of the first U.S. Department of Homeland Security Federal Emergency Management Agency Regional Integration Advisors to lead the transformation of inclusive emergency management across the nation. Dr. McCarthy-Barnett has led inclusive response operations for over 40 federally declared disasters and served as a member of the Regional Incident Management Assistance Team responding to tornadoes, hurricanes, severe winter storms, mudslides and flooding.

She serves as a representative to the United Nations Office for Disaster Risk Reduction focused on developing implementation guides for the Sendai Framework for Disaster Risk Reduction. Dr. McCarthy-Barnett is a Certified Emergency Manager from the International Association of Emergency Managers.

Martin McComb

U.S. Environmental Protection Agency

Martin McComb is a Federal On-Scene Coordinator with EPA’s Emergency Response Program. He works out of EPA’s Region 8 Office in Denver, Colorado but has served in three separate EPA response efforts to wildfires in California including as an Operations Section Chief in 2015 and as the Deputy Incident Commander in both 2017-2018 and 2018-2019.

Leroy Mickelsen

U.S. Environmental Protection Agency

Leroy Mickelsen is an EPA chemical engineer working toward a better, faster, less costly response to chemical, biological, radiological, and nuclear releases. References provided upon request.

Anne Mikelonis

U.S. Environmental Protection Agency

Dr. Anne Mikelonis is a researcher in the EPA’s Office of Research and Development’s Center for Environmental Solutions and Emergency Response Homeland Security and Materials Management Division. Her current work focuses on the fate and transport of biological and radiological contaminants in urban areas. Previously, her research focused on physical/chemical water and wastewater treatment processes and nanoparticle synthesis and characterization. Dr. Mikelonis holds a B.S. in civil engineering from Northwestern University (Evanston, Illinois), a M.Eng. in environmental engineering from the Massachusetts Institute of Technology (Boston), and a Ph.D. in environmental engineering from the University of Texas at Austin. She is also a registered professional engineer in the state of North Carolina.

Scott Nelson

Battelle

Mr. Scott Nelson is a Research Scientist at Battelle in the National Security – Chemical, Biological, Radiological, Nuclear, and Explosive Bioscience Center. He received a B.A. degree in biology from Capital University (Columbus, Ohio). He has worked to solve challenges in diverse focus areas including human genomics and the detection and isolation of environmental microorganisms for over 16 years at Battelle. Mr. Nelson has served as Laboratory Director/Coordinator of a BSL-2/BSL-3 laboratory suite and Operations Coordinator for the Molecular Capabilities Facility at Battelle. He enjoys teaching advanced applied sciences courses to National Guard Bureau personnel and collaborating with experts across scientific disciplines.

Tonya Nichols

U.S. Environmental Protection Agency

With more than 25 years of experience, Dr. Tonya Nichols has led and managed microbiological research in academic, clinical, and government laboratories. Since joining EPA in 2002, Dr. Nichols has held several positions to include senior research microbiologist, team lead for biothreat assessments, and Director for the Threat and Consequence Assessment Division. In these positions, Dr. Nichols’ managed research programs to assess the risks and impacts of exposure to biological agents that have been accidentally or deliberately released into the environment that would require EPA to respond. Primary research projects included dose-response studies, indoor exposure assessment of aerosolized bioagent, and quantification of endemic background biothreat agents for deriving risk-based clean-up goals for biothreat agents. Additional research efforts focused on recovery and detection of pathogens from environmental matrices (air, soil, and water).

Currently, Dr. Nichols serves as a Senior Science Advisor in the Center for Environmental Solutions and Emergency Response. In this role, she focuses on building interagency collaborations with EPA Homeland Security partners and coordination with the Office of Science and Technology Policy and National Security Council workgroups related to biodefense. Also, Dr. Nichols represents the EPA on the Biodefense Coordination Team supporting the implementation of the National Biodefense Strategy.

Dr. Nichols co-sponsors the One Health Academy in Washington, D.C. On a monthly basis, the One Health Academy brings together health professionals, industry, and policy makers to discuss emerging issues at the intersection of human, animal, plant, and environmental health.

AJ Nosek

U.S. Nuclear Regulatory Commission

Dr. AJ Nosek is a Reactor Systems Engineer at the Nuclear Regulatory Commission. For the last 12 years, he has worked as an Offsite Consequence Analyst in the Office of Nuclear Regulatory Research, studying the potential impacts of nuclear power plant accidents. Last year, he received his Ph.D. in industrial and systems engineering. For his dissertation, he developed a new approach on how to assess the recovery from and costs of a nuclear accident, as informed by the Fukushima Daiichi nuclear disaster. More recently, he has worked to model a decontamination and waste management strategy for potential nuclear accidents in the United States. Dr. Nosek also has a B.S. and M.S. in nuclear engineering from the University of Wisconsin-Madison (Madison, Wisconsin).

Lukas Oudejans

U.S. Environmental Protection Agency

Dr. Lukas Oudejans is a Research Physical Scientist with EPA’s Office of Research and Development’s Center for Environmental Solutions and Emergency Response. Over the past 10 years, he has gained vast experience in homeland security programs related to research, development, and evaluation of innovative technologies for the decontamination of materials that are contaminated with chemical or biological agents. Dr. Oudejans is a co-author of EPA’s Fentanyl Fact Sheet for U.S. EPA Federal On-Scene Coordinators who are providing technical advice to state and local responders who may encounter environmental contamination from the fentanyl class of synthetic opioids (including fentanyl analogs). Currently, he is leading multiple research efforts to assess decontamination options for fentanyl contaminated building materials. Dr. Oudejans holds a Ph.D. in experimental physics from Radboud University (Nijmegen, The Netherlands, 1994).

Jonathan Pettit

U.S. Environmental Protection Agency

Mr. Jonathan Pettit is the Data Management Coordinator in the Office of Emergency Management (OEM); he coordinates reporting of response data from the field and operations centers for programmatic reporting. He also supports the new “Accountability Program” in which OEM assesses regional compliance with program policies and procedures. Mr. Pettit develops a wide variety of tools for EPA’s headquarters and the regions. He also serves as OEM’s liaison for several technical work groups.

He came to OEM from the Office of Enforcement and Compliance Assurance (OECA), where his primary duty was assessing EPA and state enforcement of the Clean Water Act, the Clean Air Act, and the Resource Conservation and Recovery Act via the State Review Framework process.  Prior to OECA, Mr. Pettit conducted assessments of EPA organizations in the Office of Environmental Information’s Quality Staff.

Prior to EPA, Mr. Pettit worked as an Air Quality Analyst with the Idaho Department of Environmental Quality (IDEQ), where he was responsible for stationary source permitting and all facets of Agricultural Smoke Management. Additionally, during his last three years at IDEQ, he oversaw the vehicle inspection and maintenance program as the lead project manager. While working for IDEQ, he developed policies, procedures, and guidance; conducted data analysis; managed contracts; and performed oversight activities.

Prior to his role in environmental regulation, he served with the United States Coast Guard, where he was involved with maritime search and rescue coordination and communications on the northern coast of California.

Jonathan graduated with a B.S. in fisheries and wildlife from Michigan State University (East Lansing) and an M.S. in environmental policy and management from the American Military University (Charles Town, West Virginia).

Michael Pirhalla

U.S. Environmental Protection Agency

Mr. Michael Pirhalla is a graduate student in the marine, earth, and atmospheric sciences department at North Carolina State University (Raleigh). He is working on his Ph.D. research within EPA’s Homeland Security and Materials Management Division under the Pathways Program. Mr. Pirhalla’s research involves the analysis of turbulence data from the Jack Rabbit II (JRII) field study. He is also working on a laboratory experiment at EPA’s Fluid Modeling Facility Meteorological Wind Tunnel to better understand the wind flow and effluent dispersion within JRII’s mock-urban environment. Results from this study could inform improved atmospheric boundary layer characterizations in fast-response dispersion models, particularly in urban areas.

Viktoriya Plotkin

U.S. Environmental Protection Agency

Ms. Viktoriya Plotkin is the State Engagement Lead for Emergency Management. Ms. Plotkin began her career at EPA in 2010 as an assistant in grants management in the Office of Research and Development’s (ORD) National Center for Environmental Research. Starting in 2012, Ms. Plotkin served as a special assistant for several executives in ORD for the next five years, including the Associate Assistant Administrator, Deputy Assistant Administrator for Management, Assistant Administrator for Science, and the Assistant Administrator. Ms. Plotkin joined the National Homeland Security Research Center in 2018, coordinating policy implementation, state engagement, and interagency engagement. Viktoriya earned a B.S. in accounting and marketing and a master’s in public policy with a specialization in international security and economic policy from the University of Maryland (College Park).

Mitch Pryor

University of Texas at Austin

Biography text.

Katherine Ratliff

U.S. Environmental Protection Agency

Dr. Katherine Ratliff is a Physical Scientist (Postdoctoral Researcher) in the Center for Environmental Solutions and Emergency Response in the U.S. EPA’s Office of Research and Development. Her research focuses on understanding the fate and transport of contaminants and developing modeling tools that aid during response and recovery efforts following outdoor contamination incidents. Dr. Ratliff received her Ph.D. from the Duke University Nicholas School of the Environment (Durham, North Carolina) and her B.A. from Vanderbilt University (Nashville, Tennessee).

William Richter

Battelle

Mr. William Richter is a Research Scientist at Battelle in the high containment tox bio group. He received a B.S. degree in biology from Indiana Wesleyan University (Marion), and has worked at Battelle for over 16 years helping solve challenges in areas including the detection, recovery, persistence, and decontamination of biosafety level three select agents and associated surrogate microorganisms.

Julian Rosenberg

Sabre Companies

Dr. Julian Rosenberg is the Director of Research and Technology Development at the Sabre Companies. He has over 10 years of research and development (R&D) experience applying principles of chemical engineering and microbiology to address energy, environmental, and public health issues. Dr. Rosenberg received his Ph.D. in chemical and biomolecular engineering from Johns Hopkins University (Baltimore, Maryland), where his research interests spanned the continuum of industrial biotechnology, ranging from metabolic engineering to large-scale biological contamination control. The R&D program at Sabre designs and develops decontamination technologies using chlorine dioxide. Dr. Rosenberg has been with Sabre since 2015 and is responsible for leading strategic research initiatives as the company continues to expand the scope of its technical offerings in water treatment, energy production, agriculture, and healthcare. As a sister company to Sabre, bioWALL specifically serves the agriculture and food processing industries, combining chlorine dioxide disinfection and sterilization applications with advanced bioscience to deliver clean drinking water, farm biosecurity, and wide-area biological response.

Last Names S-W

Amanda Schenning

U.S. Army Combat Capabilities Development Command

Ms. Amanda Schenning is a research scientist for the Decontamination Sciences Branch (DSB) of the U.S. Army Combat Capabilities Development Command Chemical Biological Center located on Aberdeen Proving Grounds in Edgewood, Maryland. The DSB specializes in basic and applied research to support the development and evaluation of decontamination technologies to neutralize, destroy, or otherwise mitigate a chemical hazard. The basic and applied research performed on the branch focuses on fundamental understanding of transport and reaction processes associated with decontamination across a wide range of time and spatial scales in order to promote hazard elimination and mitigation for the warfighter.

Ms. Schenning obtained a B.S. in physics from Towson State University (Maryland) and has over 25 years of research and analytical chemistry experience. Her current research efforts are focused on the neutralization and decontamination of synthetic opioids, specifically carfentanil. Ms. Schenning also supports the Advanced CBRNE Training Team as a subject matter expert in the topic of decontamination as part of the Emerging Threats Course provided to members of the National Guard Bureau.

Ellen Shumaker

RTI

Dr. Ellen Shumaker is a research scientist at RTI International in Research Triangle Park, North Carolina. She is the Task Order Leader for the EPA-funded project, “The Use of Virtual Reality to Augment Situational Awareness and Training Efforts by Means of a Head-Mounted Display.” The project involves the development of a training tool using virtual reality (VR) to provide an immersive training environment for training disaster responders in collecting biological surface samples. Dr. Shumaker also led the development of another RTI training platform, Attaway™, for immersive instruction and participant testing applied to food safety, facility inspection, and equipment installation or operation. Dr. Shumaker specializes in risk communication and developing decision support tools.

Alvin Smith

California Institute of Technology, Jet Propulsion Laboratory

Dr. Alvin L. Smith is the Jet Propulsion Laboratory (JPL)’s Lead Planetary Protection Engineer for Backwards Contamination for Mars Sample Return and Manager for the Planetary Protection Center of Excellence. In these roles he provides scientific oversight to several research and development projects to meet stringent engineering requirements for planetary protection, as well as program management for training programs, university outreach, and interagency collaborations. His contributions have been instrumental in planning flight implementation for Mars 2020, Europa Clipper, and the Mars Sample Return campaign. Alvin joined JPL after spending over 16 years in consulting as a biodefense subject matter expert and researcher in high containment laboratories focused on the development of medical countermeasures and biodetection capabilities for human smallpox, Ebola, and other potential biological weapons. Alvin’s expertise in CBRN threats has been leveraged by numerous government agencies including Congress, Department of Defense, Department of Homeland Security, Health and Human Services, and the intelligence community. Alvin holds a doctorate in medical microbiology from Howard University (Washington, D.C.) and a bachelor’s degree in biology from Talladega College (Alabama). He is also a certified Project Management Professional.

Ted Stanich

U.S. Environmental Protection Agency

Biography text.

Jeffrey Szabo

U.S. Environmental Protection Agency

Dr. Jeffrey (Jeff) Szabo has a B.S. in chemical engineering and an M.S. and Ph.D. in environmental engineering, all from the University of Cincinnati (Ohio) and is a registered Professional Engineer in Ohio. He has worked for the EPA for 15 years. He conducts and manages water security research projects at EPA’s Test and Evaluation (T&E) facility and the Water Security Test Bed (WSTB) at the Idaho National Lab (INL). These projects include examining chemical, biological, and radiological contaminant persistence on drinking water and wastewater infrastructure and evaluation of decontamination and water treatment methods.

Sarah Taft

U.S. Environmental Protection Agency

Biography text.

Rouzbeh Tehrani

Temple University

Dr. Rouzbeh Tehrani has recently started his tenure-track research position at Temple University. Previously, he has served as an assistant professor of instruction from 2013 to 2018. His Ph.D. dissertation and post-graduation studies were mainly focused on the employment of molecular biology techniques in environmental engineering. He has published the first critical review on the source, fate, and toxicity of hydroxylated polychlorinated biphenyls (OH-PCBs) in the environment. He was also the first to systematically study and publish the bacterial degradation pathways for OH-PCBs and genomic responses of bacterial and plant cells exposed to OH-PCBs. He has previously served as the chair of the Association of Environmental Engineering & Science Professors education committee from 2016 to 2018.

The synthesis, characterization, and innovative use of layered, two-dimensional (2D), and their composite structures in biological and chemical processes, and in molecular biology techniques, are his current passion and new area of research. His current work introduces a holistic approach to overcome the challenges in the synthesis and application of nanoscale materials. His presentation examines the knowledge gap in understanding the impacts of hybrid engineered nanomaterials on human health and vulnerable ecosystems. The continuous global development of engineered nanocomposites and vertically aligned 2D nanosheets, designed explicitly for biomedical or antibacterial purposes, could take a wrong turn and become a severe environmental or security concern in the near future.

Jonathan Thornburg

RTI International

Dr. Jonathan Thornburg is the Director of Exposure and Aerosol Technology at RTI International. He has applied his degree in aerosol physics and engineering to perform research, development, testing, and evaluation on multiple aspects of chemical and biological agents and simulants throughout his 21 years of professional experience. His specialty is agent fate and transport in ambient and indoor environments. This field spans aerosol instrumentation, sample collection methods, personal and building protection, agent movement/translocation, dissemination, and deactivation/decontamination. He has led laboratory studies gain a basic understanding of underlying threat agent physics and chemistry, as well as largescale field studies to evaluate the performance of integrated protection systems.

Christine Tomlinson

U.S. Environmental Protection Agency

Dr Christine (Christy) Tomlinson, Senior Biologist, CBRN Consequence Management Advisory Division, Office of Emergency Management, has recently joined EPA after serving as a scientific advisor for U.S. Federal Government clients for the past nine years. As a technical support contractor, Christy has worked with U.S. Army Special Operations Command, the Chemical and Biological Defense Division within the Science and Technology Directorate at the Department of Homeland Security (DHS), and Defense Advanced Research Project Agency (DARPA), supporting programs involving characterization of biological threats, risk assessments of bioterrorism, viral evolution, synthetic biology, host response to disease, and rapid chem/bio detection systems and clinical diagnostics development. She received her Ph.D. from the University of North Carolina (Chapel Hill) in microbiology and immunology in 2007. Prior to that, she received her B.S. in Biological Sciences from Colorado State University (Fort Collins).

Mark Tucker

Decon7 Systems, LLC

Dr. Mark D. Tucker is the Chief Scientific Officer for Decon7 Systems (Scottsdale, Arizona) and holds a Ph.D. in civil engineering from the University of New Mexico (Albuquerque, New Mexico, 1997), an M.S. in civil engineering from the University of New Mexico (1993), an M.S. in mechanical engineering from the University of Texas at Austin (1983), and a B.S. in engineering from Purdue University (West Lafayette, Indiana, 1980). Dr. Tucker recently retired from a 35-year career at Sandia National Laboratories (Albuquerque, New Mexico) where he was a Distinguished Member of the Technical Staff. While at Sandia, his research was focused on the development of innovative technologies for the decontamination of chemical and biological warfare agents, other toxic chemical materials, and biological pathogens. He is a co-inventor of the original Sandia Decontamination Foam (DF-100) and the inventor of the modified and enhanced DF-200 decontamination formulation. He currently holds 18 U.S. patents related to decontamination and other technologies and is a registered professional engineer in the State of New Mexico.

Antony Williams

U.S. Environmental Protection Agency

Antony Williams is a cheminformatician at the Center of Computational Toxicology and Exposure (CCTE) working on delivering the center’s data to the scientific community (via the CompTox Chemicals Dashboard at <https://comptox.epa.gov/dashboard>). He is an analytical scientist by training, specializing in Nuclear Magnetic Resonance, and has over two decades of experience in cheminformatics and chemical information management. He was involved in the development of the world’s first web-based laboratory information management systems (LIMS) at Kodak, was the Chief Science Officer for the ACD/Labs cheminformatics software company and was the Vice President of Strategic Development for the Royal Society of Chemistry. He has worked extensively on complex data management issues with a focus on internet-based projects to deliver free-access community-based chemistry websites and services, specifically the ChemSpider database, originally his hobby project, which now has over 70 million chemicals and serves 100,000 unique users per day (<http://www.chemspider.com>). He has authored >240 papers, book chapters, and books regarding computer-assisted analysis of data, cheminformatics and chemical information management. He is also passionate about teaching scientists how to benefit from the developing array of social networking tools and is known as the ChemConnector on the networks. Over the years he has had adjunct roles at a number of institutions and is presently adjunct at both the University of North Carolina Chapel Hill (Chapel Hill) and North Carolina State University (Raleigh). He was the recipient of the Jim Gray Award for eScience in 2012 and the American Chemical Society’s North Carolina Distinguished Speaker of the Year award in 2016.

Stuart Willison

U.S. Environmental Protection Agency

Dr. Stuart Willison received his Ph.D. in chemistry from the University of Cincinnati (Ohio). He joined EPA in 2008 and has been heavily involved in its chemical research. His work primarily focuses on chemical sampling and analysis method development and supporting Homeland Security Materials Management Division’s Selected Analytical Methods Program for environmental remediation following a contamination incident. Since joining EPA, Dr. Willison has published numerous chemical methods and reports for the Agency and in peer-reviewed scientific journals related to surface sampling and characterization of hazardous chemicals. His research areas include sampling and analysis in a variety of environmental matrix types, such as soil, water, and surfaces most commonly found in urban settings.

Joseph Wood

U.S. Environmental Protection Agency

Mr. Joseph (Joe) Wood is a senior research engineer with U.S. EPA’s Office of Research and Development, in the Homeland Security and Materials Management Division. He has been with the EPA since 1991 (previously doing air pollution engineering) and has been conducting decontamination research since 2004. His research focuses primarily on the development, testing, and evaluation of technologies for the decontamination of materials contaminated with biological agents and biotoxins. Mr. Wood also investigates the persistence of biological agents as well as treatment and disposal of waste materials contaminated with bioagents. He is the primary author or co-author for over 25 peer-reviewed journal articles and ~ 75 U.S. EPA published reports. He holds a master’s degree in environmental engineering from the University of Illinois (Urbana-Champaign, Illinois) and is a licensed professional engineer. Mr. Wood is also Hazardous Waste Operations and Emergency Response (HAZWOPER)-certified.