

## **Sector 7: Asymmetric Threats - Intelligence - Counter-Terrorism**

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1. **Mr. Kenneth L. Deal Jr**, Chief, CBRN Operational Response Division, US Department of State – “Foreign Consequence Management challenges and programs,” (66)
2. **Prof. Roberto Mugavero**, European Centre for Disaster Medicine, Unirsm, Osdife, Unitov, Italy - “AI, CBRNe Intel and Info sharing” (35)
3. **Prof. Peter Leitner**, National Intelligence University, USA - “Strategic dispersal of CBRN Defense materials for the protection of civilian populations: reviving Civil Defense thinking” (38)
4. **Mr. Mason Soule**, Senior Fellow, Civil Council for Defense and Security, Tblisi, Republic of Georgia - “Introduction to PISCES-INTL, A Cybersecurity Partnership Among Academic Institutions and Under-Served Community Organizations” (36)
5. **Bobby R. Baker, Jr** B.A.Sc., M.P.S, *Principal* Training Specialist, Counter-Terrorism Division, Mission Support and Test Services, Contractor to the Nevada National Security Site, USA – “Technology and Talent: The Synergistic Combination needed to Protect Critical Infrastructure” (65)

## **66. Foreign Consequence Management challenges and programs**

**Mr. Kenneth L. Deal, Jr**

*Chief, CBRN Operational Response Division, US Department of State, USA*

**Abstract (will be added)**

**Biography - Mr. Kenneth L. Deal, Jr**



**Division Chief, CBRN Response Operations, US Department of State**

Kenneth L. Deal Jr, is the Division Chief for CBRN Response Operations at the U.S. Department of State. He previously served 30 years in the US Army in various tactical and WMD assignments. He was commissioned as an Armor Officer in 1986.

As an Armor and Cavalry officer he served in leadership and staff positions at the tactical level throughout the United States, Republic of Korea and Germany. In 2000 he was designated a CWMD and Nuclear Operations Officer (FA52). In that capacity he has worked all areas of the

CWMD mission including Non-proliferation, Counterproliferation, Consequence Management, and Targeting.

Assigned to DTRA from 2000-2005 he conducted Arms Control inspections under the Plutonium Production Reduction Agreement, and Audits and Examinations of Cooperative Threat Reduction projects throughout Russia, Ukraine and Kazakhstan. He organized, trained and deployed as the deputy team chief for a Sensitive Site Exploitation Team during OPERATION IRAQI FREEDOM in 2003, where he participated in combat operations with the 1<sup>st</sup> Marine Division and the 3<sup>rd</sup> Infantry Division.

He returned to Iraq as the J3 (operations) for Task Force DTRA in Baghdad, Iraq, where he coordinated the collection of orphaned radiological sources and yellowcake. Upon his return in 2004 he was appointed Branch Chief for the International Counterproliferation Program that operated in 23 countries throughout Eastern Europe, Central Asia, the Baltic States, and the Balkans delivering over 60 discrete WMD related training and equipping events annually. Mr Deal has served on the Joint Staff as a Nuclear Operations Officer; The Army Staff as the Plans and Operations Chief for the US Army Nuclear and CWMD Agency; and the Office of the Secretary of Defense Staff as the Senior Military Advisor for domestic rad/nuc defense.

In 2011 he deployed to Afghanistan and served as the Chief of Staff (Ops) for the NATO Training Mission – Afghanistan. His final assignment was as the Deputy for operations and training at the Defense Threat Reduction Agency. COL Deal is a graduate of the University of Idaho (1986); Syracuse University (2002); and the Eisenhower School (2009).

## 35. AI, CBRNe Intel and info sharing: leveraging Open-Source Intelligence with innovative applications

**Roberto Mugavero,**

<sup>1</sup>University of Rome "Tor Vergata", Department of Electronic Engineering - DIE,

<sup>2</sup>University of the Republic of San Marino, Centre for Security Studies - CUFS,

<sup>3</sup>Observatory on Security and CBRNe Defense - OSDIFE,

<sup>4</sup>European Centre for Disaster Medicine - CEMEC

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### Abstract

This paper delves into the underlying concepts and features of the OSDIFE Intelligence Platform in the context of its utilization by national and international public organizations dealing with CBRNe threats (Chemical, Biological, Radiological, Nuclear, and explosive materials) and the proliferation of Weapons of Mass Destruction (WMDs).

The platform, developed by the Observatory on Security and Defence CBRNe - OSDIFE in cooperation with the University of Rome "Tor Vergata", Department of Electronic Engineering - DIE, and the University of the Republic of San Marino, Centre for Security Studies - CUFS through international research funding, leverages Artificial Intelligence (AI) and semantic web technologies to enable realtime analysis of unstructured data streams.

Its advanced natural language understanding capabilities facilitate the identification of weak signals and emerging trends associated with the intentional use of radioactive materials.

The study explores the fundamental concepts behind the implemented technology and provides a comprehensive overview of the platform's key features. It highlights the platform's potential applications within public organizations tasked with combating CBRNe threats and WMD proliferation. By automating intelligence processes, enhancing text analysis, and overcoming the limitations of traditional keyword-based search engines, the platform equips organizations with powerful tools for proactive monitoring, risk assessment, and early detection of potential security risks.

The paper emphasizes the relevance and significance of the OSDIFE Intelligence Platform for public organizations at the national and international levels. By harnessing the platform's capabilities, these organizations can enhance their situational awareness, information sharing, and decision-making processes to effectively address CBRNe threats and mitigate the risks associated with WMD proliferation. Overall, this research contributes to the growing field of Open-Source Intelligence (OSINT) and demonstrates how the OSDIFE Intelligence Platform empowers public organizations in their crucial mission to safeguard national and international security.

**Keywords:** OSINT, OSDIFE, environment, hazardous materials, semantic interoperability, asymmetric threats, artificial intelligence, CBRNe, WMD, crime, terrorism, chemical, biological, radiological nuclear, cyber-crime.

### Biography – Roberto Mugavero



Degree in Environmental Engineering, Director and Professor at the "Centre for Security Studies" - CUFS, Director and Professor at the Second Level Master Degree "International Security Studies", Professor of "Environmental Risk Management" - Degree Course in Civil and Environmental Engineering/IASA, Member of the Academic Senate - University of the Republic of San Marino. Professor of "Action Planning for Homeland Security" - Degree Course in Energy Engineering, Scientific Director and Professor at the Second Level Master Degree "Electronic Systems and Technologies for Security, Defence and Intelligence", Head of the Research Area "Security" at the Department of Electronic Engineering - University of Rome

"Tor Vergata" - Italy.

Professor of "Intelligence Analysis" at the Second Level Master Degree "Forensic Sciences" - University of Rome "Sapienza" - Italy. Professor of "Systems and Technologies for Security" at the First Level Master Degree "Urban Manager for Security, Safety and Violence Management" - University of Padova - Italy. Lecturer at the NATO School - Oberammergau - Germany. Visiting Scholar at the Flinders University - Torrens Resilience Institute - Australia. Supervisor and Assistant Supervisor of more than 120 Master Thesis.

Lecturer in many National and International Public/University Courses and Masters. Chairman and Speaker in National and International Conferences, Workshops and Seminars in the Fields of Safety, Security, Defence, Intelligence, Terrorism/Crime Prevention, Territorial Security, CBRNe Risk, WMD Counter-Proliferation, Emergency and Risk Management. Scientific Director and lecturer in more than 120 national and international Advanced Training Courses. Chairman and Speaker in National and International Conferences, Workshops and Seminars in the fields of Security, Defence, Intelligence, Terrorism/Crime Prevention, Territorial Risk, Chemical-Biological-Radiological/Nuclear and explosive (CBRNe) Risk, Weapons of Mass Destruction (WMD) Counter-proliferation.

Author of more than 180 papers/articles/technical and scientific publications in magazines, newspapers, books and presentations at national and international conferences and working groups. Editor and Coauthor of books on Security and Defence. President of the "European Centre for Disaster Medicine" Research Institute - Council of

Europe's Major Hazard Agreement. President of the "Observatory on Security and CBRNe Defence" - Italy. Volunteer Firefighter Technical Officer at the Italian Ministry of Interior - National Fire Brigade. President Emeritus of the Italian National Association of Volunteer Firefighters.

Expert of the "CBRN Centres of Excellence" programme promoted by the European Union in cooperation with the United Nations Interregional Crime and Justice Research Institute - UNICRI. CBRNe Defence Expert and Member, as "CBRN Coordination Expert", of the European Civil Protection Task Force.

Expert in charge for Project Evaluation at the European Commission - REA. Project Manager and Expert in many Security & Defence National and International Projects. He collaborates with various Security and Defence Organizations, Associations, Magazines and Research Institutes.

Holder of International Patents related to Electronic Systems and Technologies. He took part in many International Exercises, Operations and Emergency Activities.

## **38. Strategic Dispersal of CBRN Defense Materials for the Protection of Civilian Populations: Reviving Civil Defense Thinking**

**Prof. Peter M. Leitner**, *National Intelligence University, School of Science and Technology Intelligence, USA*

### **Abstract**

While the COVID-19 pandemic revealed a general lack of preparation for the onset of a novel and extraordinarily virulent pathogen, it also reminded us of the endless cycle of learning, unlearning, and relearning the lessons from tragic losses of innocent civilians. The actual number of human lives lost that may be attributed to the failure of public institutions to prepare has yet to be counted.

The pandemic gave rise to heroic individual acts and remarkable examples of leadership on the part of certain national figures against a background of poor and myopic planning by their predecessors.

Perhaps the most disappointing outcome has been the rapid resumption of business as usual as the pandemic recedes from view in the rush to return to normalcy. In the headlong race to get past the over 767,500,000 confirmed cases of COVID-19, including 6,900,000 deaths ([WHO Coronavirus Dashboard](#)), the framework of disaster preparedness is in danger of being ignored—setting the stage for the next mass-casualty event. Mitigating predictable but unexpected tragedy comes at a cost, and it is highly uncertain that governmental and institutional leaders are even willing to consider, let alone invest in, the preparation and structural changes necessary to effectively meet the next challenge.

This presentation addresses many of the lessons previously learned but not implemented from recent disasters and suggests a general course of action to minimize unnecessary casualties from future threats.

### **Biography – Dr. Peter M. Leitner**



Dr. Peter Leitner who holds a Doctorate from the University of Southern California, and four master's degrees, is a Professor with the National Intelligence University, School of Science and Technology Intelligence. He was one of the founders of the National Center for Biodefense and Infectious Diseases at George Mason University. Dr. Leitner, former President of Maxwell USA, a multinational pharmaceutical firm, has also served as a Senior Fellow with George Washington University's Center for Advanced Defense Studies, and as an Advisor on Terrorism with New York University's Law School, and as a Consultant and Expert Witness to the Connecticut Attorney General and Department of Corrections. He was the co-Editor and founder of the Journal of Power and Ethics. Dr. Leitner has provided intelligence and anti-terrorism training to thousands of state and local investigators, law enforcement personnel, the CIA, FBI, Marine Corps and other national agencies through the Higgins Counterterrorism Research Center that he founded. His 43-year government career also includes 21 years within the Office of the Secretary of Defense as a Senior Strategic Trade Advisor, 13 years with the Defense Intelligence Agency, and 7 years as an International Relations Specialist with the International Division of the US General Accounting Office. Dr. Leitner has authored seven books, over 20 articles, testified seven times before both houses of the US Congress, and testified before the Michigan State Senate. In addition, he has been a presenter, keynote speaker, and/or organizer at over 25 international conferences. His fields of expertise include:

- Weapons of Mass Destruction
- The Biological Threat
- Counter/Non-Proliferation
- Weapons of Mass Destruction
- Biological Warfare
- Counterterrorism
- Technology Transfer
- Ocean Mining

- Arctic Issues Advanced Computing
  - Law of the Sea Treaty
  - Research Methods and
  - Infrastructure Vulnerability Assessment.
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## **36. Introduction to PISCES-INTL, A Cybersecurity Partnership Among Academic Institutions and Under-Served Community Organizations**

**Mr. Mason Soule<sup>1</sup>, S. Stein<sup>2</sup>**

<sup>1</sup>Senior Fellow, Civil Council for Defense and Security, Tbilisi, Republic of Georgia

### **Abstract**

The US Government is strengthening its efforts to reduce cyber-security vulnerabilities at public health, chemical and radiological facilities by hardening such CBRN targets by introducing minimal level cyber and information security measures - including introducing awareness trainings and sharing best practices.

This presentation introduces PISCES (Public Infrastructure Security Cyber Education System) and illustrates its potential relevance to the international CBRNe defense and related security communities. PISCES is funded by the US Department of Homeland Security (DHS) to help qualified students with curricula and supervised experiences to act as entry-level cyber analysts.

Students are empowered to analyze streaming data for small communities, municipalities and small businesses which might not otherwise be able to secure and protect their data and networks to the extent needed. Under the supervision of a senior analyst the students gain hands-on experience to identify cyber threats. PISCES' academic partners, which range from universities to community colleges, are currently serving communities in six US States.

Based largely on those ongoing relationships, additional interest is being shown by potential international partners, and so this introduction is being made by Intersect Insight LLC to CSCM participants who may be aware of similar needs in the organizations and communities they represent, especially as it may pertain to training of entry-level analysts.

Engaging such a cadre of students also could indirectly help authorities follow obscure or dark social media sites where possible CBRNe threats could be in planning stages. This coverage also is critical as it occurs at the local level where national security authorities have less of a presence.

This paper describes the program in detail, including case studies and the experiences of participants to date. Key statistics regarding the benefits to students and served community organizations are presented.

**Keywords:** <sup>1</sup>Cybersecurity Training, <sup>2</sup>Cyber Threat Identification

### **Biography – Mason Soule**



Mr. Soule had a 30+ year career with Battelle Memorial Institute (Columbus, Ohio) managing programs and assessing technologies associated with counterproliferation and national security-related industries, primarily in the CBRN arena. His last assignment with Battelle was as an expat on a Defense Threat Reduction Agency (DTRA)-funded program in Tbilisi, Georgia, where he led collaborative team building, commercialization and sustainability, and training activities aimed at identifying international business and scientific collaborators for the Georgian bio-laboratory network. For the past 15 years, he also has been a key organizer of

the CSCM Congresses and helped bring two of the events to Georgia. Still residing in Georgia, he is employed at the International School of Economics, Tbilisi State University as a business developer. He also is a Senior Fellow supporting the Tbilisi-based Civil Council on Defense and Security which has held four forums on regional stability associated with nuclear and radiological threats in the Black Sea region.

## **65. Technology and Talent: The Synergistic Combination needed to Protect Critical Infrastructure**

**Bobby R. Baker, Jr** B.A.Sc., M.P.S.,

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## Abstract

Due to the immediate interest and engagement in defense of civil authorities and Defense of the Homeland hosting the World Cup 2026, world dignitaries and leaders will be visiting five major cities in the United States and another five in the North American hemisphere to include Canada and Mexico. Resilient organizations are often referred to in many government circles, however a further look into the current research shows that the need for more pliable response teams to include multi-domain and intra-agency collaborative teams are needed to overcome complex and often ambiguous response and combat environments. This presentation will take a deep dive into the current threats, technologies and deployment methodologies needed to rapidly detect, characterize, and mitigate all asymmetric threat components in the steady state deployment in protecting critical infrastructure.

**Keywords:** Pliable response teams; Asymmetric Threat Detection integration with AI; Talent Development for CBRNE Environments

## Biography - Bobby R. Baker



Bobby Baker, (RET.) B.A.S, M.P.S., retired after 21 years with the Dallas Fire and Rescue Department to join the Counter-Terrorism Operations Support group at the Nevada National Security Site. He rose through the ranks of the Dallas Fire Department, where he served 14 of his 21 years of service as a front-line fire officer and supervisor. Capt. Baker was very influential in the building and equipping of the City of Dallas Joint Hazards Assessment Team (JHAT), an all-hazards multi-department asymmetric threat protection

team consisting of members from DFD and Dallas Police, primarily deployed to prevent and respond to low-frequency mass casualty events.

Captain Baker is a member of the bachelor's and master's degree programs academic advisory board in Homeland Security at the distinguished George Washington University in Washington, D.C, and currently serves as a Principal CBRNE Training Specialist with the Counter-Terrorism Operation Support team with Mission Support Test Services, LLC, the primary contractor for the Nevada National Security Site with the Department of Energy's National Nuclear Security Administration, where he trains all first responders and military assets in the radiological, nuclear and biological detection and consequence management domains.

Captain Baker is a lifelong learner, holding a Bachelor of Applied Science degree from Dallas Baptist University, a master's degree in Homeland Security from The George Washington University in Washington, D.C., and earned an advanced certificate in paramedicine from the former University of Texas Southwestern Medical School at Dallas Allied Health Paramedic Program. He is currently pursuing his doctorate in public policy with a concentration in Weapons of Mass Destruction and critical infrastructure protection from Liberty University in Lynchburg, Virginia.

Captain Baker is a highly sought-after speaker and trainer both domestically and internationally in high-performance team leadership and the incident command of CBRN incidents. He has presented at CBRN Convergence in Nashville, TN, in the United States and internationally; he has presented twice at the European CBRN Summit in Rome, Italy, in 2017 and 2018 in Birmingham, United Kingdom.

In December 2019, Capt. Baker was asked to lead a pandemic biological tabletop exercise at the 2019 Asian CBRN Summit in Bangkok, Thailand, attended by members of Duke University Singapore, the Royal Thai Army, local first responders, The United States Department of State, and members of the Defense Threat Reduction Agency. In 2020, he was appointed as an honorary international member of the Scientific Committee of the Observatory of Security and Defense in CBRNE based in Rome, Italy, an international think tank established to educate and support the CBRNE training modalities.

Captain Baker continues serving in the DFW community as a volunteer firefighter and hazmat technician with the Plano-Fire and Rescue Department in Plano, Texas. Captain Baker is a certified Hazardous Materials Specialist, an Incident Safety Officer through the National Fire Academy, and a Pro-Board certified NFPA 472 Incident Commander of Hazardous Materials Incidents.

Capt. Baker is an active member of the International Public Safety Association, the American Association of Prevention of Infection and Epidemiology, and active member of the DFW chapter of the World Affairs Council of America.

Captain Baker is a current member of the National Council on Radiation Protection Part 179 Dosimetry Commentary 28 Committee, which seeks to increase dosimetry measurement capabilities for all first responders involved in mitigating radiological and nuclear emergencies in the United States.

In his spare time, he enjoys civil aviation, specifically vintage military aircraft, reading biographies, and volunteering and advising for the safety and medical mission of Watermark Community Church, which aims to serve the underinsured and uninsured population of the City of Dallas.

He and his wife Sheila reside in Dallas, Texas, with their two latest rescue Jack Russel terriers, 10 y/o Bailey and 14 y/o Lucy.