SMA CENTCOM Panel Discussion

Black Swans and Gray Rhinos in the CENTCOM AOR: Vigilance Against the Unsuspected and Keeping Our Eyes On the Prize

Speaker Biographies

Dr. Claudio Cioffi-Revilla (George Mason University)

Dr. Cioffi is University Professor Emeritus, George Mason University, and an independent scientist and consultatnt. He received his first doctorate in quantitative political and social sciences from the University of Florence, Italy (1975) and a second Ph.D. in mathematical models in International Relations from the State University of New York (1979). From 1977 to 2019 he taught at UNC Chapel Hill, and held tenured professorial positions at the University of Illinois at Urbana-Champaign, the University of Colorado-Boulder, and George Mason University, where he became the first Professor of Computational Social Science, founding chair of the Department of Computational Social Science, and founding director of the Center for Social Complexity (2002–2019). His research interests include climate and human security, conflict modeling and deterrence theory, disasters and risk analysis, and social complexity theory and research. His current research projects include theory and applied research on multi-scale disasters in coupled human-artificial-natural systems (CHANS), climate change, and advanced formal methods for hybrid functions in complex systems (foundations of nabladot calculus). His research has been supported by DARPA, NSF, ONR, DHS, NCTC, and ODNI, among other agencies. He is a co-founder and first President of the Computational Social Science Society of the Americas (CSSSA), a member of the American Mathematical Society (AMS, operator theory), SSEER (Social Science Extreme Events Research), KSS (Knowledge Systems for Sustainability), and DOD OSD SMA, among other scientific and policy networks. As a Jefferson Science Fellow of the US National Academy of Sciences, he served as Senior S&T Adviser at the US Department of State/INR, and a DNI's Galileo Awards Finalist. He has authored over one hundred peer-reviewed scientific and policy publications, including seven books, the most recent being *Introduction to Computational Social Science: Principles and Applications*, 2nd edition, pp. 600 (Springer, 2017). In 2020 Dr. Cioffi was elected as honorary Fellow of the AAAS (American Association for the Advancement of Science).

Dr. Lawrence A. Kuznar (NSI, Inc.)

Lawrence A. Kuznar (Chief Cultural Sciences Officer, NSI, Inc., Professor of Anthropology, Purdue University-Fort Wayne) Dr. Kuznar conducts anthropological research relevant to counterterrorism and other areas of national security. His research ranges from advanced statistical and geographical modeling of social instability, to discourse analysis of adversaries including North Korea, China, Russia, Iran, and ISIS (Daesh) to provide leading indicators of intent and behavior. He has developed computational models of genocide in Darfur and tribal factionalism in New Guinea, mathematical models of inequality and conflict, and integrated socio-cultural databases for geo-spatial analysis of illicit nuclear trade and bioterrorism. Dr. Kuznar's recent research has been funded by academic sources, the Office of the Secretary of Defense Strategic Multi-Layer Analysis, Air Force Research Lab (AFRL), the Human Social Cultural Behavior (HSCB) modeling program of the Department of Defense, and by the US Army Corps of Engineers. He has also served on the HSCB Technical Progress Evaluation panel and a National Counterterrorism Center (NCTC) net assessment panel. He conducted extensive research among the Aymara of southern Peru and with the Navajo in the American southwest. Dr. Kuznar has published and edited several books and numerous peer-reviewed articles in journals such as *American Anthropologist*, *Current Anthropology*, *Social Science Computer Review*, *Political Studies*, *Field Methods*, and *Journal of Anthropological Research*. Dr. Kuznar earned his Ph.D. and M.A. in Anthropology, and a M.S. in Mathematical Methods in the Social Sciences from Northwestern University. His B.A. in Anthropology is from Penn State.

Dr. Sean Lawson (University of Utah)

Sean Lawson is Associate Professor in the Department of Communication at the University of Utah and Adjunct Scholar at the Modern War Institute at West Point. His research focuses on the relationships among science, technology, and security. In particular, he focuses on the intersections of national security and military thought with new media, information, and communication technologies (ICTs).

His most recent book, *Cybersecurity Discourse in the United States*, explores the use of cyber-doom rhetoric in the U.S. public policy debate about cybersecurity. His first book, *Nonlinear Science and Warfare*, traced the use of chaos theory, complexity theory, and network science in the development of theories of information-age warfare.

Dr. Lawson received his Ph.D. in Science and Technology Studies from Rensselaer Polytechnic Institute in 2008. He has an MA in Arab Studies from the School of Foreign Service at Georgetown University and a BA in History from California State University, Stanislaus.

LTC Tom Pike (US Army SSI)

Lieutenant Colonel Tom Pike is a Joint qualified, Strategic Intelligence officer in the US Army. Tom is faculty at the National Intelligence University and Co-Director of the Anticipatory Intelligence and Adaptive Influence (AI2) Center. Tom earned his PhD in Computational Social Science (CSS) from George Mason University in 2019. Tom has studied complex systems and its application to foreign policy from the tactical to the strategic level for the past decade and this interest drove him to attend both the CSS PhD program (as the program is based on complex systems) and the prestigious Santa Fe Institute's Complex Systems Summer School. He has served in the infantry (both light and mechanized) and in military intelligence specialties.

Dr. Jonathan Wilkenfeld (University of Maryland)

Jonathan Wilkenfeld received his Ph.D. in political science from Indiana University in 1969. He has been a Professor of Government and Politics at the University of Maryland since 1969, where he served as chair of the department from 1990 to 2002. He has had periodic visiting appointments at Johns Hopkins University School of Advanced International Studies and in the Department of International Relations at the Hebrew University of Jerusalem. He has lectured at universities in China, Taiwan, Japan, South Korea, Brazil, Argentina, Chile, Germany, France, Sweden, Hungary, Poland, Israel, Dubai, and Egypt.

Wilkenfeld's work has spanned several additional disciplines, including most prominently social psychology and computer science. He has published 12 books on conflict processes, international crises, and conflict resolution, and his research has been published in leading journals in these fields, including *Journal of Conflict Resolution, International Studies Quarterly, Journal of Peace Research, Political Psychology, IEEE Intelligent Systems, and Artificial Intelligence Journal*. His work has been recognized with many awards, including Innovation in Teaching with Technology Award, University of Maryland 2001; American Council on Education/AT&T Foundation Award for Technology as a Tool for Internationalization, 2003; University of Maryland Landmark Award in International Affairs, 2003; International Studies Association Distinguished Scholar Award, 2004, and University of Maryland Distinguished Scholar Teacher Award 2009. In 2008, he was invited to give the keynote address at the annual meeting of the Society for Mathematical Psychology. Wilkenfeld has had research grants from the National Science Foundation (6), US Department of Education (7), US Institute of Peace (3), IBM (2), US Department of Homeland Security (2), US Department of Defense, NCR, Sun Microsystems, Hewlett Foundation, Carnegie (1 each), and the Folke Bernadotte Academy (Sweden).

Wilkenfeld has founded and/or directed some of the leading projects in the field of conflict processes and analysis. These include the Interstate Behavior Analysis (IBA) Project in the 1970s, the International Communications and Negotiations Simulation (ICONS) project beginning in the 1980s through today, the International Crisis Behavior (ICB) Project with Michael Brecher since the mid-1970s, the Minorities at Risk (MAR) and Minorities at Risk Organizational Behavior (MAROB) Projects (founded by Ted Gurr), as well as the Crisis and Negotiations (CAN) Project since the late 1990s. CAN facilitated Wilkenfeld's move into the area of experimental research, bringing to political science some of the methodologies which had heretofore been associated most closely with psychology and social psychology. He has been Director of the Center for International Development and Conflict Management (CIDCM) at the University of Maryland, and he has been one of the principles of the National Consortium for the Study of Terrorism and Responses to Terrorism (START) since its founding in 2005, headquartered at Maryland.