

GREEN Workshop

Wayne Porter recently retired from the U.S. Navy with the rank of Captain. Additionally, he has completed his PhD in the application of system dynamics to strategic planning. Prior to this, he was assigned by the Secretary of Defense to establish a Chair for Systemic Strategy and Complexity at Naval Postgraduate School.

Wayne's work in strategic planning on the personal staff of both the Chief of Naval Operations and the Chairman of the Joint Chiefs of Staff has received international recognition. His multiple overseas tours of duty included serving as the Assistant Chief of Staff (Intelligence) for U.S. and combined naval forces in the Persian Gulf. He is the co-author of "A National Strategic Narrative," published by the Woodrow Wilson Center for International Scholars, and has written widely in publications that include the *Harvard Business Review*, *Hotspring Journal Quarterly* and *Naval Institute Proceedings*. His work has been cited internationally by such luminaries as former British Foreign Minister David Milliband, former Israeli Foreign Minister Shlomo Ben-Ami and current U.S. Secretary of Education Arne Duncan.

Wayne was born in Fullerton, California and graduated from the University of Southern California. He is a Walton Fellow at Arizona State University's Global Institute of Sustainability and holds two Masters of Science Degrees and his PhD from the Naval Postgraduate School.

Mr. Patrick Ciganer has been, over the past twenty years, an executive in Information Technology development, deployment and management in both the private and public sector.

He is currently Chief Information Officer at DOE's National Renewable Energy Laboratory (NREL). Part of his responsibilities include overseeing the Laboratory's Cyber Defense activities in identifying and mitigating the emerging risks associated with the integration of renewable energy generation, storage, distribution and management into the National Grid and the deployment of "smart grid" technologies and capabilities at both the network and end point levels.

Prior to his position at NREL, Mr. Ciganer was Assistant Deputy Administrator for Program Integration at NNSA's Defense Programs and Executive Vice President for IC Support at In Q Tel.

Michael Vlahos, PhD has taught in the Global Security Studies program at Johns Hopkins University's School of Arts and Sciences since 2011. He is a professor in the Strategy and Policy Department at the US Naval War College, a position he has held since 2010. During the 1980s he was the Director of the Security Studies Program at Johns Hopkins School of Advanced International Studies. He has also worked at the Johns Hopkins University Applied Physics Laboratory, the Center for Naval Analyses, the Department of State and the Central Intelligence Agency.

Dr. Vlahos has been a foreign affairs and national security commentator on contract with CNN, appearing three to five times weekly for seven years, including stints as a regular on Crossfire and Larry King Live. He appeared regularly on Good Morning America and Canada AM as a national security commentator. Since 2001 he has been a regular featured guest of the John Batchelor Show on WABC.

Matthew (“Matt”) M. Mars, Ph.D. is Assistant Professor of Agricultural Leadership and Communications in the Department of Agricultural Education at The University of Arizona. Dr. Mars is also the Director of Graduate Studies in the same department. Dr. Mars teaches undergraduate and graduate courses aimed at a range of topics specific to leadership, innovation, and communication. Dr. Mars has a deep interest in entrepreneurial leadership and social innovation. This interest is illustrated through his research agenda, which generally focuses on the processes of innovation, change, and transformation within both agricultural and educational environments. For example, Dr. Mars has published research that explores the enhanced capacity of college students to leverage university capital in support of entrepreneurial activities and the efficacy of entrepreneurial leadership models for achieving social impact.

Dr. Mars’ current work in part includes a partnership with Dr. Judie Bronstein (University of Arizona) that is focused on the application of ecosystem thinking and models to the study of the development and stability of organizations, organizational fields, and social systems. The empirical focus of this study is the Arizona charter school sector. Along with Dr. Robert Lusch (University of Arizona) and Dr. Michael Lounsbury (University of Alberta), Matt is examining executive leadership practices and patterns aimed at maintaining organizational cultures and structures through the analysis of university presidential speechmaking. Matt is also partnering with Dr. Hope Schau (University of Arizona) to explore the entrepreneurial underpinnings and evolving markets associated with local food movements and community supported agriculture.

Dr. Mars earned a Doctor of Philosophy degree through the Center for the Study of Higher Education at The University of Arizona.

Professor Yaneer Bar-Yam is Founding President of the New England Complex Systems Institute. His research focuses on developing complex systems concepts and applying them to diverse areas of scientific inquiry and to major social problems. He has developed quantitative models for a wide variety of complex system behaviors including network dynamics, market instability and the current financial crisis, negotiation, economic development, pandemics and invasive species, ethnic violence, global food crises, and biological cell function and regulation.

Professor Bar-Yam has advised government agencies, non-governmental organizations and corporations about solving problems using principles and insights from complex systems science. He is chairman of the International Conference on Complex Systems (ICCS), managing editor of *InterJournal* and *Springer* book series on complexity, and author of over 180 research papers in professional journals, including in *Science*, *Nature*, *PNAS*, *American Naturalist*, and *Physical Review Letters*.

Professor Bar-Yam’s work has been described in *The Wall Street Journal*, *Science News*, *Washington Post*, *Wired Magazine*, *New Scientist*, *London’s Daily Telegraph*, *Slate Magazine*, *Seed Magazine*, *Technology Review*, *Reuters*, *Gizmodo*, among others. He has been interviewed by BBC Radio, ABC News, and other media outlets. He received his BS and PhD in physics from MIT in 1978 and 1984 respectively.

Bob Schapiro is a journalist, historian and filmmaker whose current China documentary won an Emmy Award in New York City, where he has written and produced newscasts for WCBS, INN and WNBC. He also reported from El Salvador, Nicaragua, Ethiopia and Lebanon and, more recently, Afghanistan.

Bob wrote and directed *Pirates of New York with Walter Cronkite* and *Geisha, Keisha and American Pie*. His varied career includes writing and directing four of the all-time top ten infomercials, as well as writing for the off-Broadway revue *Style Without Substance*. He teaches at Fordham University in the Department of Communication and Media Studies. He is the co-author of *On the Origins of Propaganda: Bio-Evolutionary Perspectives on Social Cohesion*, published by Routledge in December 2014 as part of the book, *Neuroscience and Media*.

Al Teller has been a major figure in the worldwide music industry for over four decades. Driven by his love of music, Teller entered the record business during the Big Bang birth of the modern music industry in 1969. Rapidly building a reputation as an innovative music marketer, Teller was tapped to run his first major label, United Artists Records, at age 29. He subsequently rose to run two of the world's largest music companies, CBS (now Sony) and MCA (now Universal). As one of the music business' most forward looking executives, Teller was among the first to grasp the looming impact of the Internet and the profound manner in which it would forever alter the industry's future as well as that of all media enterprises. He served as the music industry's sole representative on a commission created by President Bill Clinton to develop public policy regarding the Internet. He currently serves on the Board of Directors of INgrooves, an Internet digital distribution company and consults various organizations on Internet strategy.

Teller served as Chairman and CEO of the MCA Music Entertainment Group as well as Executive Vice-President of MCA Inc. from September 1989 to November 1995. In this position, he was responsible for guiding the overall global activities of the MCA Music Entertainment Group which encompassed its music label, music publishing, sales, distribution, international, concert promotion and merchandising businesses. Mr. Teller was also Chairman, Chief Executive Officer, President, and a Director of Alliance Entertainment Corporation in August 1996 after founding and serving as President of Red Ant Entertainment in July 1996.

Having served as the head of two of the industry's major recording companies, Teller has guided the careers of many world class artists, including such stars as Bruce Springsteen, Billy Joel, Elton John, Tom Petty, The Rolling Stones, Paul McCartney, The Grateful Dead, Pink Floyd, George Michael, Kenny Rogers, Michael Bolton, Electric Light Orchestra, Meat Loaf, George Strait, Reba McEntire, Vince Gill, Marvin Gaye, Julio Iglesias and Wynton Marsalis. Teller was the first major label head to enter the rap music genre, signing Def Jam Records to a deal with Columbia Records in 1985.

Teller graduated from Columbia University with both a BS in Electronics Engineering and an MS in Operations Research and went on to earn an MBA from Harvard Business School.

Claudio Cioffi-Revilla, PhD. Professor of Computational Social Science, George Mason University Professor Cioffi received his first doctorate in political and social sciences from the University of Florence in 1975 and his Ph.D. from the State University of New York in 1979. He joined George Mason University in 2002 and is currently Professor of Computational Social Science, former and founding chair of the Department of Computational Social Science, and founding director of the Center for Social Complexity. His research interests include conflict modeling and radicalization, disasters and risk analysis, and social complexity theory and research. His current research projects include theory and applied research on coupled human-artificial-natural systems (CHANS), climate change and conflict, and advanced formal methods for hybrid functions in complex systems. His research is supported by NSF and ONR.

He is founding past president and an active member of the Computational Social Science Society of the Americas, serving also as a Jefferson Science Fellow of the National Academy of Sciences and Senior S&T Adviser at the Office of Geographic and Global Issues in the US Department of State. He has authored over eighty peer-reviewed scientific and policy analysis papers and seven books, the most recent being *Introduction to Computational Social Science: Principles and Applications* (Springer, 2014).

Dr. Carl Hunt is the Owner and Chief Scientist of Pioneer Cyberspace Strategies, LLC, Lewes, DE. He currently works as the Research Director for the Net Assessment Branch of the National Counterterrorism Center's Directorate of Strategic and Operational Planning. He served as the senior scientist for the USAF Institute of Technology's (AFIT) 2012-13 American Cyberspace Science, Education and Operations Initiative and as the founding partner in the AFIT Science Enhanced Network Domains and Secure Social Spaces project (SENDS), and has served on the AFIT Center for Cyberspace Research's Distinguished Review Board since 2004. Dr. Hunt also works with

Kiernan Group Holdings, Inc., Alexandria, VA, as a Senior Analyst and with National Training and Development, Inc., Houston, TX, as a leadership and management consultant for the NASA Johnson Space Center.

Dr. Hunt served 30 years in the Army both as a military policeman and as an information systems technology officer, retiring from active duty service at the rank of Colonel. Dr. Hunt holds the Ph.D. in Information Technology from George Mason University and is a graduate of the United States National War College. Dr. Hunt was also the primary editor and contributor to the SENDS Science of Cyberspace weblog, and continues to lecture on the nature of information technology and science in the United States. He is currently the principle author of the Reconnecting to the American Promise weblog.

Gary Ackerman is the Director of the Unconventional Weapons and Technology Division at the National Consortium for the Study of Terrorism and Responses to Terrorism (START). Prior to taking up his current position, he was Research Director and Director of Special Projects at START and before that the Director of the Weapons of Mass Destruction Terrorism Research Program at the Center for Nonproliferation Studies in Monterey, California. His research encompasses various areas relating to terrorism and counterterrorism, including terrorist threat assessment, terrorist technologies and motivations for using chemical, biological, radiological, and nuclear (CBRN) weapons, radicalization processes and the modeling and simulation of terrorist behavior. Dr. Ackerman possesses an eclectic academic background, including past studies in the fields of mathematics, history, law, and international relations.

Mr. Ackerman was a member of the WMD Expert Advisory Group of the Information Sharing Environment initiative, Office of the Director for National Intelligence (2007-2008) and has testified on terrorist motivations for using nuclear weapons before the Senate Committee on Homeland Security. He has also headed more than ten large government-sponsored research projects in the past five years. Dr. Ackerman is the co-editor of *Jihadists and Weapons of Mass Destruction* (CRC Press, 2009) and has authored several papers relating to the motivational aspects of terrorism. Selected papers and book chapters include: "Connections Can Be Toxic: Terrorist Organizational Factors and the Pursuit of CBRN Weapons" *Studies in Conflict & Terrorism*, Volume 35, Number 3 (2012), with Victor H. Asal and R. Karl Rethemeyer; "Defining Knowledge Gaps Within CBRN Terrorism Research" in *Unconventional Weapons and International Terrorism: Threat Convergence in the Twenty-First Century*, Magnus Ranstorp and Magnus Normark eds. (New York: Routledge, 2009).

Dr. Ackerman received his M.A. in International Relations (Strategic Studies - Terrorism) from Yale University and his Bachelors (Law, Mathematics, International Relations) and Honors (International Relations) degrees from the University of the Witwatersrand in Johannesburg, South Africa. He completed his PhD in War Studies at King's College London, dealing with the impact of emerging technologies on terrorist decisions relating to weapons adoption.

Leo Blanken joined Defense Analysis in the summer of 2008. He received a BA from the University of San Francisco, an MA from Columbia University, and a PhD in political science from the University of California at Davis. His dissertation on patterns of imperial expansion received the best dissertation award from the Western Political Science Association, and has been published by the University of Chicago Press as *Rational Empires: Institutional Incentives and Imperial Expansion*.

His current research focuses on the challenges of military intelligence and metrics in counterinsurgency operations and theoretical issues surrounding conventional force structure planning.

Leo is a USA certified trainer and helps kids learn the basics of boxing by volunteering at Pacific Coast Boxing in Pacific Grove, CA. He also collects and DJs rare soul and funk records from the 1960's and 1970s. He is part of the Soul Lotto crew of DJs based in England, and some of his sets can be accessed at www.soullotto.com

Claudio Cioffi-Revilla, PhD Professor of Computational Social Science, George Mason University. Professor Cioffi received his first doctorate in political and social sciences from the University of Florence in 1975 and his Ph.D. from the State University of New York in 1979. He joined George Mason University in 2002 and is currently Professor of Computation and Social Science, former and founding chair of the Department of Computational Social Science, and founding director of the Center for Social Complexity.

His research interests include conflict modeling and radicalization, disasters and risk analysis, and social complexity theory and research. His current research projects include theory and applied research on coupled human-artificial-natural systems (CHANS), climate change and conflict, and advanced formal methods for hybrid functions in complex systems. His research is supported by NSF and ONR. He is founding past president and an active member of the Computational Social Science Society of the Americas, serving also as a Jefferson Science Fellow of the National Academy of Sciences and Senior S&T Adviser at the Office of Geographic and Global Issues in the US Department of State.

He has authored over eighty peer-reviewed scientific and policy analysis papers and seven books, the most recent being *Introduction to Computational Social Science: Principles and Applications* (Springer, 2014).

Timothy Gulden is a Full Policy Researcher at the RAND Corporation and a Research Assistant Professor (on leave) with the Center for Social Complexity and Department of Computational Social Science in the Krasnow Institute for Advanced Study at George Mason University. He is President of the Computational Social Science Society of the Americas (CSSSA). His research focuses on modeling complex systems in the context of empirical data. He holds a PhD from the University of Maryland School of Public Policy where he explored agent-based modeling as a tool for policy analysis.

He has held research positions at the MITRE Corporation, the Center for International and Security Studies at Maryland (CISSM), and the Brookings Institution's Center on Social and Economic Dynamics (CSED). He attended the Santa Fe Institute's Complex Systems Summer School in 2002. During the 1990's he was the technical director of the GIS program for Westchester County, New York.

His interests include the quantitative study of conflict dynamics based on event data, modeling human/environment interaction and adaptation to a changing climate, decarbonization of the global energy system, understanding the human and economic flows driving changes in the global urban system, and the development of novel urban metrics based on nighttime lights.

Richard P. O'Neill is President of The Highlands Group. The Highlands Group conducts research and facilitates cross-disciplinary gatherings of creative thinkers, working with global policy makers to build strategies for improved governance. In 1994 he established, and still directs, The Highlands Forum, an internationally recognized network bringing ideas from the core and the edge together. Participants from industry, academia, government, journalism, the arts and the professions join senior US government leaders in the Forum for in-depth conversations to extend the emerging concept of security, writ large. He also directs two international forums on foresight in Singapore, one for the Minister of Defence, the other for the Centre for Strategic Futures in the Office of the Prime Minister.

Since 1998 Mr. O'Neill has been a senior advisor to the Center for Strategic and International Studies, a Washington, DC think tank. He is a board member of the international NGO, the Alliance for Peacebuilding. He previously served in government, in his last position as Deputy for Strategy and Policy in the Office of the Assistant Secretary of Defense. Mr. O'Neill graduated from Holy Cross College, receiving a Bachelor of Arts in Political Science.

He holds Masters degrees from Georgetown University, the Naval Postgraduate School and the Naval War College. He entered the United States Navy in 1969 and saw duty aboard combatant

ships and fleet reconnaissance aircraft, retiring as a Captain.

John Robb is an author, an entrepreneur, inventor and a former USAF pilot in special operations. He authored *Brave New War*, which was published in April 2007 by Wiley. He was named a "Best and Brightest" by *Esquire Magazine*.

John has lived, worked, and traveled extensively in Central/South America, Africa, Asia, and Europe. John has been quoted as an expert analytical source in newspapers such as the *New York Times*, *The Economist*, and the *Wall Street Journal* and has been interviewed on the BBC, Fox, NPR, PRI, and CNBC (as well as many independent radio shows). John participated in global operations as a mission commander, pilot, and mission planner in a Tier One unit that worked with Delta Force and Seal Team 6.

Mr. Robb cofounded and was the President/COO of a company that recently (2009) sold for \$295 million. While at the company, he grew it from \$0 to a \$45 million a year in revenue (the run rate of the last quarter John worked there) and 135 people. The company is now a global leader in financial performance testing with customers such as Fidelity, JP Morgan, and Merrill Lynch. John also ran a company that was the pioneer in web logs, the originator of RSS and shipped the first RSS aggregator.

He has managed large software projects from conceptualization to design to development to launch and finally to sales. These projects include a) a global performance testing system for the financial sector (54 cities on 6 continents across 23 Internet backbones), b) a consumer focused Web site in financial services that generated in excess of \$2 m a quarter in revenue, c) one of the first blog publishing systems and the first RSS aggregator, d) a globally decentralized professional print system (24 cities across the globe).

John's education includes: Masters of Public and Private Management, Yale University, New Haven CT. Bachelor of Science in Astronautical Engineering, The United States Air Force Academy, Colorado Springs, CO.

Philip Schrodt, PhD, is a senior research scientist at the statistical consulting firm Parus Analytica In Systems. He received an M.A. in mathematics and a Ph.D. in political science from Indiana University in 1976, and has held permanent academic positions at Pennsylvania State University, the University of Kansas, and Northwestern University. He has also held research appointments in the United Kingdom and Norway, and has taught and done field research in the Middle East.

His major areas of research are quantitative models of political conflict and computational political methodology. His current research focuses on predicting political change using statistical and pattern recognition methods, research that has been supported by the U.S. National Science Foundation, the Defense Advanced Research Projects Agency, and the U.S. government's multi-agency Political Instability Task Force.

Dr. Schrodt has published more than 85 articles in political science, is past president and a fellow of the Society for Political Methodology, and his Kansas Event Data System computer program won the "Outstanding Computer Software Award" from the American Political Science Association in 1995.

Thomas C. Wingfield is Professor Law and Strategy at the UAE National Defense College, where he lectures on law, strategy, information issues, and cyber conflict. In 2009-10, he served as Rule of Law Advisor for General Stanley McChrystal's Counterinsurgency Advisory and Assistance Team. Prof. Wingfield has taught at the US Army's Command and General Staff College and at the George C. Marshall Center in Garmisch-Partenkirchen, Germany.

He holds a J.D. and an LL.M. from Georgetown University Law Center. A former Chair of the American Bar Association's Committee on International Criminal Law, he is the author of "The Law On Information Conflict: National Security Law In Cyberspace" and served on the drafting

committee of the “Tallinn Manual on the International Law Applicable to Cyber Warfare”.

Lawrence A. Kuznar (Professor of Anthropology, Indiana University- Purdue University-Fort Wayne, NSI, Inc.) Dr. Kuznar’s experience spans ethnographic studies of tribal conflict, database and ontology development for social science data, to agent-based modeling of conflict in different cultural contexts to studies of political discourse.

His modeling research includes simulating the environmental basis for genocide in Darfur and the development of tribal factions in New Guinea, and his database development research involves integration of socio-cultural databases for predicting illicit nuclear trade and bioterrorism. He has conducted discourse analysis to understand subtleties in the expression of conflict and enmity in Arabic, Farsi and Pashto, and Natural Language Processing studies of relief organization efforts in humanitarian aid and disaster relief.

Dr. Kuznar’s recent research has been funded by academic sources, the Office of the Secretary of Defense Strategic Multilayer 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 currently serves on a panel for the National Counterterrorism Center (NCTC).

Robi Sen is an experienced inventor, serial entrepreneur, and futurist whose dynamic twenty-plus year career in technology, engineering, and research has led him to work on cutting edge projects for DARPA, RRTO, NASA, DOE, and the DOD. Robi also has extensive experience in the commercial space, including the co-creation of several successful start-up companies.

Mr. Sen is recognized as an application development authority and regularly contributes to papers, articles, and technical books where he continues to help develop and define technology beyond the “bleeding-edge.” Robi has been either author or contributor to numerous patents in wireless technology, in addition to penning award-winning historical primary research into the effects of agency on insurgency and irregular warfare.

Robi is also active as a senior partner in several companies included Twin Technologies Inc., and Department 13, LLC. Robi uses all of these experiences to help guide organizations and individuals through complex problems to create disruptive innovation and solutions in both the commercial sector and national security sector. Robi also provides mentoring and advise to start-ups in the national capital region. Robi has degrees in Mathematics, IT, and more recently a Master’s in Military History.

Jeffery R. Cares is an author, entrepreneur and thought-leader in military innovation. He consults to the most senior levels of the international defense industry and is a leading researcher in collective robotics and networked warfare. He has been the primary author of many of the US military’s transformational warfighting concepts, including Distributed Networked Operations, Sense and Respond Logistics and the Information Age Combat Model. He lectures internationally at senior service colleges on the future of combat, and he develops and conducts military and business war games. Harvard Business Review selected Jeff’s research to the Top 20 list of “Breakthrough Ideas for 2006,” and he has been featured in such Information Age bellwethers as Wired and Fast Company.

He is the author of Distributed Networked Operations: The Fundamentals of Network Centric Warfare and has published pioneering work in the application of Complexity Theory to military problems. The National Research Council’s Committee on Modeling and Simulation for Defense Transformation championed this book as the leading approach to solving the many challenges of modeling IT-centric military systems. He has three new books due out in 2015: Operations Research for Unmanned Vehicles (John Wiley), The Fundamentals of Naval Operational Art, and Operations Research for Networked Military Systems.

Jeff founded and moderates the Alidade Online Discussion, one of the first online military innovation communities. A combat veteran of the first Gulf War, Jeff's military career included multiple command tours, over a decade of service on four-star staffs, service in the Pentagon and all Fleet Headquarters, and joint and combined operations worldwide. He is a retired Navy Captain.

Kelly McRaven is currently a graduate student in Georgetown's Security Studies Program where she focuses on terrorism and substate violence. During her academic career, she has undertaken multiple independent research projects that seek to better understand U.S. counterterrorism and security assistance policies. McRaven has experience working at the Office of the Under Secretary of Defense for Policy, the Defense Intelligence Agency, and the House Armed Services Committee.