

JTAC 2006 Threat Anticipation Conference
Biographic Information for Speakers, Panelists and Discussants

Ilai Alon is a Visiting Professor in the Department of Near Eastern Languages & Civilizations at the University of Chicago. Alon has been working with Assad Busool of the American Islamic College in Chicago on a dictionary of terms that provides both Palestinian and Israeli definitions of the issues and events that have shaped their decades-long conflict. He is a Professor of Philosophy in Tel Aviv University in Israel.

Daniel Barnard is a PhD candidate in Political Science at the University of Chicago and instructor in Middle Eastern History at the United States Military Academy at West Point. In the summer of 2004, he served as Special Advisor to Commander, 3rd Armored Cavalry Regiment, Tall Afar, Iraq.

Janine Davidson is a Director with the Center for Adaptive Strategies and Threats at Hicks and Associates, Inc., where her work focuses on counterinsurgency, terrorism, stability & reconstruction operations, interagency coordination, Red Teaming, and war-gaming. A former Air Force pilot and Brookings Research Fellow, Dr. Davidson has a B.S. degree in Architectural Engineering from the University of Colorado, and an M.A. and Ph.D. in International Studies from the University of South Carolina. Her dissertation examines the U.S. military's organizational learning systems for stability and reconstruction operations.

Charles Glaser is a Professor and the Deputy Dean in the Harris School of Public Policy at the University of Chicago. Glaser is an expert on international defense and security policy, focusing on international relations, with a special concentration on issues of international security and defense policy. His current research examines U.S. nuclear strategy and forces. Glaser is exploring recent changes in U.S. strategy that call for the use of nuclear weapons in preemptive strikes against rogue-state nuclear forces, as well as against other weapons of mass destruction. He has also published articles that are critical of the U.S.'s current national missile defense policies. Glaser was a post-doctoral fellow at the Center for Science and International Affairs, Harvard University, as well as a research associate at the Center for International Studies, Massachusetts Institute of Technology. Before joining the University of Chicago, Glaser taught political science at the University of Michigan and served on the Joint Staff in the Pentagon. He is the author of *Analyzing Strategic Nuclear Policy*, a product of his earlier research on American nuclear weapons policy.

John Goldsmith is the Edward Carson Waller Distinguished Service Professor in Computer Science and Linguistics at the University of Chicago. He is interested in understanding the nature of symbolic representation, in both natural language and genomic sequences, through the development of software that induces structure from data. In the area of natural language, the focus of his recent work has been the development of a program called *Linguistica* which induces the morphology (the word internal structure) of a language on the basis of a corpus from the language. He is currently working on languages as diverse as Somali and Swahili in addition to more familiar European languages.

Richard L. (Dick) Gullickson is the Director of the Advanced Systems and Concepts Office (ASCO) at the Defense Threat Reduction Agency (DTRA). He has extensive experience in directing research and development programs in nuclear effects and directed energy at DTRA,

Strategic Defense Initiative Organization, Defense Advanced Research Projects Agency, Defense Nuclear Agency, Air Force Office of Scientific Research and in leading research teams at the Lawrence Livermore National Lab and Air Force Weapons Laboratory. Mr. Gullickson has been a visiting scientist at the Laboratory for Ionized Gases in Frascati, Italy, and the Naval Research Laboratory, conducting research on particle acceleration in plasma devices. He retired from the Air Force, joined the Defense Nuclear Agency, and became a member of the Senior Executive Service in 1989. Mr. Gullickson has a M.S.E. in Nuclear Engineering and a Bachelors Degree in Physics from the University of Michigan.

Nancy K. Hayden is a principle member of the technical staff and research analyst at Sandia National Laboratories in Albuquerque, NM. Since joining Sandia in 1978, she has conducted research in a wide range of national and international security programs and has managed several large- scale, complex systems analysis efforts related to energy security. She has led performance assessment and systems prioritization activities for nuclear waste management programs at Yucca Mountain and the Waste Isolation Pilot Plant (WIPP). Ms. Hayden's work on a management team for the WIPP eventually led to the first and only successful license application in the world for a deep geologic nuclear waste repository. Beginning in 1994, Ms. Hayden focused on nuclear nonproliferation initiatives. From 1994-1998, she was Sandia's technical lead for a technical exchange program with counterparts in the commercial and military nuclear industrial complex in the People's Republic of China. From 1998-1999, she served as a subject matter expert and science advisor to the DOE Assistant Secretary of National Security and Nonproliferation, overseeing a portfolio that included the conversion of plutonium reactors in Russia as part of the 1997 US-Russia Plutonium Production Reactor Agreement (PPRA). Since returning to Albuquerque, her career focus has been on advanced concepts and strategic issues. She is currently chair of the Santa Fe Institute working group on complexity and terrorism, and works closely with national and international security communities on the application of these concepts, with a focus on incorporating social and behavioral sciences into complex systems analysis.

Ryan Hohimer is on the Motivation & Intent Ontology Development Team, Pacific Northwest National Laboratory. Since joining the Pacific Northwest National Laboratory in 1996, he has been involved with projects requiring technical expertise in object-oriented programming and design, software engineering, computer systems integration, scientific data analytics, image processing, scientific data management, and data acquisition. In recent years, his research has focused on knowledge representation and reasoning, and the use of formal ontological languages. He holds a B.S. in Electrical Engineering from Washington State University.

Jenna Jordan is a graduate student in the Political Science Department at the University of Chicago, where she specializes in International Security. Her research interests include terrorism, theories of war, military strategies, and International Relations theory.

Kerry M. Kartchner is a detailee from the U.S. Department of State serving as Division Chief of the Strategic/Policy Studies Division of the Advanced Systems and Concepts Office at the Defense Threat Reduction Agency. He has over twenty years experience in policymaking, analyzing and teaching national security affairs. At State, Dr. Kartchner was Senior Advisor for Missile Defense Policy in the Bureau of Arms Control, and had previously served as Senior State Department Representative to the Standing Consultative Commission (for the ABM Treaty), and Senior State Department Representative to the Joint Compliance and Inspection Commission (for

the START Treaty), where he was U.S. Chairman for the Inspections Working Group and the Space Launch Working Group. Dr. Kartchner is also a former staff member of the U.S. Arms Control and Disarmament Agency (ACDA). While at ACDA, he served in both the Bureau of Strategic Affairs, and the Bureau of Verification and Intelligence where he was Chairman of the interagency START Verification and Compliance Analysis Working Group. Before joining ACDA and the Department of State, he was Senior Policy Analyst and Area Leader for Arms Control at Analytic Services (ANSER) in Arlington, Virginia. From 1986 to 1990, he was an Assistant Professor on the faculty of the Department of National Security Affairs at the Naval Postgraduate School in Monterey, California, where he was responsible for developing and teaching courses on nuclear strategy and targeting, arms control, international relations, U.S.-Soviet relations, and NATO security. He has also been a consultant on nuclear weapons policy to the Computer Sciences Corporation and the National Institute for Public Policy in Washington, D.C., a Visiting Scholar at the Hoover Institution, and a graduate student Instructor at the University of Southern California.

Sevag Kechichian is a PhD candidate in Political Science at the University of Chicago. His research interests include: Comparative Politics, Political order and disorder, State-building, political democratization, political and economic liberalization in developing countries, Ethnic conflict and cooperation, Political integration of ethnic and religious minorities, issues of identity, mobilization, and formal and informal state-society linkages.

Jeffery Lantis is Associate Professor of Political Science and Chair of the Department of Political Science at The College of Wooster, where he has taught since 1994. His research focuses on international relations, with a specialization in foreign policy analysis, international conflict and conflict, and European politics. Lantis has significant field research experience in international politics. He served as Visiting Scholar at the Norman Paterson School of International Affairs at Carleton University, in Ottawa, Canada, in the fall 2002. He was a Visiting Researcher at the German Council on Foreign Relations, in Bonn and Berlin, Germany, during several visits from 1996 to 2000, and he has participated in study tours throughout Western Europe. This work contributed to a series of publications, including recent books: *Strategic Dilemmas and the Evolution of German Foreign Policy Since Unification* (2002); *Foreign Policy in Comparative Perspective: Domestic and International Influences on State Behavior*, Editor (2001), and *Domestic Constraints and the Breakdown of International Agreements* (1997).

Charles Macal is the co-director of the Joint Threat Anticipation Center (JTAC) between Argonne and the University of Chicago and is the director of the Center for Complex Adaptive Agent System Simulation (CAS2). He is a Senior Systems Engineer in the Decision & Information Sciences Division, Argonne National Laboratory. He also holds a senior fellow appointment at the University of Chicago. Dr. Macal has over 25 years of experience in developing advanced modeling and simulation applications for the federal government and international agencies. He is developing new applications of agent-based modeling in areas of critical infrastructure, energy security, and social systems. He holds a Ph.D. in Industrial Engineering & Management Sciences from Northwestern University and an M.S. and B.S. in Engineering Sciences from Purdue University. He is a founding member of the North American Computational Social and Organization Science (NAACSOS) professional society and a registered professional systems engineer in the State of Illinois. Recent publications include *Emergent Structures from Trust Relationships in Supply Chains*, *The Simulation of Social*

Agents: An Introduction, and Proceedings of Agent 2002 Conference on Social Agents: Ecology, Exchange & Evolution (ed.).

Joseph P. Masco is an Assistant Professor of Anthropology and of the Social Sciences in the College at the University of Chicago. He investigates the politics of everyday life in the nuclear age and in post-Cold War America. His book *The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico* (Princeton University Press, 2006) explores how the end of the Cold War challenged concepts of security and risk for the diverse communities working in and neighboring Los Alamos National Laboratory in New Mexico. His theoretical interests include science and technology studies, the anthropology of the national security state, the expressive culture of the Cold War, political ecology, and critical theory.

John J. Mearsheimer is the R. Wendell Harrison Distinguished Service Professor of Political Science and the co-director of the Program on International Security Policy at the University of Chicago, where he has taught since 1982. He graduated from West Point in 1970 and then served five years as an officer in the U.S. Air Force. He then started graduate school in political science at Cornell University in 1975. He received his Ph.D. in 1980. He spent the 1979-1980 academic year as a research fellow at the Brookings Institution, and was a post-doctoral fellow at Harvard University's Center for International Affairs from 1980 to 1982. During the 1998-1999 academic year, he was the Whitney H. Shepardson Fellow at the Council on Foreign Relations in New York, and in 2003 he was elected to the American Academy of Arts and Sciences. Professor Mearsheimer has written extensively about security issues and international politics more generally. He has published three books: *Conventional Deterrence* (1983), which won the Edgar S. Furniss, Jr., Book Award; *Liddell Hart and the Weight of History* (1988); and *The Tragedy of Great Power Politics* (2001), which won the Joseph Lepgold Book Prize. He has also written many articles that have appeared in academic journals like *International Security*, and popular magazines like *The Atlantic Monthly*. Furthermore he has written a number of op-ed pieces for the *New York Times* dealing with topics like Bosnia, nuclear proliferation, American policy towards India, the failure of Arab-Israeli peace efforts, and the folly of invading Iraq.

Kathleen Morrison is a Professor of Anthropology and of Social Sciences in the College and the Director of the Center for International Studies at the University of Chicago. She studies the archaeology and historical anthropology of South Asia with a focus on pre-colonial and early colonial South India. Her interests include state formation and power relations, agricultural organization and change, colonialism and imperialism, landscape history, urbanism, urban-rural relations, botanical analysis, Holocene hunting and gathering, and the integration of archaeological, historical, and ecological analysis.

Jonathan Ozik is a Post-doctoral Fellow at Argonne National Laboratory and Visiting Scholar at the Center for International Studies.

Michael North is the Deputy Director of the Center for Complex Adaptive Agent Systems Simulation within the Decision and Information Sciences Division of Argonne National Laboratory. Mr. North has over 14 years of experience developing advanced modeling and simulation applications for various branches of the U.S. federal government, several international agencies, private industry, and academia. In addition, he has published more than 25 journal articles and international conference papers. Mr. North holds nine college degrees in areas such as Computer Science, Mathematics, and Engineering Science including a M.S. in Computer Systems Engineering from the Illinois Institute of Technology, and an MBA. His work has

appeared in the *New York Times*, the *Los Angeles Times*, *Crain's Chicago Business*, and *Computerworld* magazine. More information on Mr. North's work can be found at <http://www.cas.anl.gov/>.

Jonathan Ozik is a JTAC Post-Doctoral Fellow at the Center for Complex Adaptive Agent Systems Simulation in the Decision and Information Sciences Division of Argonne National Laboratory and a Visiting Scholar at the Center for International Studies at the University of Chicago. He holds a doctorate in physics from the University of Maryland. Dr. Ozik's interests include incorporating concepts and methods from the areas of physics, applied mathematics, and computation into social scientific research. His current efforts involve the modeling of social systems with applications to human security issues.

Robert A. Pape is a Professor of Political Science at the University of Chicago specializing in international security affairs. His publications include *Dying to Win: The Strategic Logic of Suicide Terrorism* (Random House 2005); *Bombing to Win: Air Power and Coercion in War* (Cornell 1996), "Why Economic Sanctions Do Not Work," *International Security* (1997), "The Determinants of International Moral Action," *International Organization* (1999); "The Strategic Logic of Suicide Terrorism," *American Political Science Review* (2003); and "Soft Balancing against the United States," *International Security* (2005). His commentary on international security policy has appeared in *The New York Times*, *Washington Post*, *New Republic*, *Boston Globe*, *Los Angeles Times*, and *Bulletin of Atomic Scientists*, as well as on *Nightline*, *ABC News*, *CBS News*, *CNN*, *Fox News*, and *National Public Radio*. Before coming to Chicago in 1999, he taught international relations at Dartmouth College for five years and air power strategy for the USAF's School of Advanced Airpower Studies for three years. He received his Ph. D. from the University of Chicago in 1988 and graduated summa cum laude and Phi Beta Kappa from the University of Pittsburgh in 1982. His current work focuses on the causes of suicide terrorism and the politics of unipolarity.

Keven Ruby is a Ph.D. candidate in the Department of Political Science at the University of Chicago, where he specializes in international security and the study of terrorism and is writing his dissertation on the relationship between fear, the state and the politics of security. Prior to beginning his doctoral studies at the University of Chicago in 2001, he completed an MA in International Affairs at the George Washington University in 1997 and worked four years (1997-2002) in Washington, DC as a senior analyst and project manager in the fields of strategic communications and political psychology.

David Sallach is the Associate Director of the Center for Complex Adaptive Agent Systems Simulation at the Argonne National Laboratory. He received his doctorate in sociology from the University of Nebraska, and has taught sociology at Indiana University, Bloomington and Washington University in Saint Louis. Dr. Sallach served for five years as the Director of Social Science Research computing at the University of Chicago. He is a founding member of the North American Computational Social and Organization Science (NAACSOS) professional society and currently is serving as its president. His research interests are concentrated on the design of interpretive agent models of social processes. Recent publications include *Social Theory and Agent Architectures: Prospective Issues in Rapid-Discovery Social Science* and *Classical Social Processes: Attractor and Computational Models*.

Olaf Schneewind is a Professor in Molecular Genetics & Cell Biology and Chairman of the Committee on Virology at the University of Chicago. Dr. Schneewind's research program examines the mechanisms and strategies whereby pathogenic bacteria cause human diseases. His research has produced more than 75 peer-reviewed publications and several book chapters. Dr. Schneewind has also served as an editorial board member for *Molecular Microbiology*, *Journal of Bacteriology*, and *Trends in Microbiology*. Additionally, he serves as a consultant to many well-known pharmaceutical companies, lending his academic expertise to translational research efforts. Dr. Schneewind has received many honors and awards during the course of his distinguished career. In 1995, he received the Stein-Oppenheimer Research Award and in 2000 he received the Shipley Award from Harvard Medical School. In 2003, he became Principal Investigator of the Great Lakes Regional Center of Excellence (GLRCE) for Biodefense, a program supporting a consortium of now 20 area institutions that is funded by the National Institute of Allergy and Infectious Diseases (NIAID) with more than \$35 million over five years. Under Dr. Schneewind's leadership, the Great Lakes Regional Center will focus on developing vaccines, treatments, and diagnostics for such dread diseases as anthrax, botulism, tularemia, hemorrhagic fever viruses, and plague. In that same year, he aided the successful application for a state-of-the-art Biosafety Level 3 facility, the Howard T. Ricketts Laboratory, to be constructed at Argonne National Laboratory. He currently serves on the Scientific Advisory Board for the Damon Runyon Cancer Foundation as well as on several National Institutes of Health study sections.

Mark Smith is a graduate student in the Political Science Department at the University of Chicago, where he specializes in civil wars and state formation. His research interests include International Relations theory, counter-insurgency, and the role of political parties in political stability. He is currently the National Strategy coordinator at the State Department's Iraq Policy and Operations Group.

Robert Townsend is the Charles E. Merriam Distinguished Service Professor in the Department of Economics at University of Chicago, chair of the University Committee on Demographic Training, and member of the Executive Board of the Population Research Center of the National Opinion Research Center (NORC). His contributions in theory include the revelation principle, costly state verification, optimal multi-period contracts, decentralization with private information, money with spatially separated agents, financial structure and growth, and forecasting the forecasts of others. His major publications include the book *The Medieval Village Economy: A Study of the Pareto Mapping in General Equilibrium Models* (1993), a policy research working paper for the World Bank entitled *Evaluation of financial liberalization: a general equilibrium model with constrained occupation choice* (2003), and a working paper for the Federal Reserve Bank of Chicago entitled *Distinguishing limited commitment from moral hazard in models of growth with inequality* (2003).