Workshop on the Military and Geo-Strategic Implications of China’s Rise as a Global Technological Power

University of California Washington D.C. Center
November 18-19, 2010

This workshop explores China’s intensifying efforts to become a global science and technology champion and will be divided into two parts. Day One (18 November) will be devoted to an examination of key issues related to China’s intensifying efforts to become a world-class science, technology and innovation power over the next 1-2 decades, and the challenges that it faces in meeting this objective. Presentations will be made by leading experts from the DOD-funded Minerva Project on Chinese Technology and Security.

On Day Two (19 November), the workshop will turn to brainstorming discussions of the "Policy Implications for the U.S. of China's Growing Technological and Innovation Capabilities and Intentions". This will be an invitee-only event for senior DOD officials and select experts from the Minerva Project on Chinese Technology and Security.

China’s Efforts to Become a Leading Science, Technology and Innovation Power: Domestic, External and National Security Perspectives

Agenda

Thursday, November 18 (Day One)

8am: Opening Remarks

8.15am-9.30am: Understanding Military Innovation: Chinese Defense S&T in Historical and Theoretical Perspective (Tom Mahnken)

9.45-10.45am: The Leadership and Organizational Structures of the Chinese Civilian, Defense S&T and PLA Systems (Alice Miller)

11.00am-12.00pm: Evolving Chinese Geo-Strategic Thinking and Implications for U.S.-China Relations and Security in East Asia (Susan Shirk)

12.00pm-1.00pm: Lunch

(Breakout Session on China Minerva Database Project -David Meyer)

1.00pm-2.00pm: Chinese Grand Strategic Thinking on Security and Technology (Tai Ming Cheung)
2.15pm-4.15pm: The Chinese Defense Economy’s Long March From Imitation to Innovation (Tai Ming Cheung)

4.15pm-5.00pm: Small Group Discussions

5.00pm-6.00pm: Q&A Panel Discussion

6:00pm: Optional dinner (To Be Confirmed)

Policy Implications for the U.S. of China's Growing Technological and Innovation Capabilities and Intentions

Agenda

Friday, November 19 (Day Two)

8am: Welcoming Remarks

8.10am-10.15am: Panel on Assessing China’s Defense Science, Technology and Innovation Potential (Panelists: Tai Ming Cheung, Tom Mahnken, Bates Gill, James Mulvenon, Barry Naughton) Moderator: Tai Ming Cheung

Questions to be Addressed:

1. What are the critical attributes that should be examined in evaluating Chinese approaches and ability to conduct military innovation from a comparative and historical perspective?
2. What are the key features and long-term trends in the development of China’s defense science, technology and innovation capabilities? What does this tell us about China’s ability to engage in innovation, especially as to the nature of these activities? Is China limited to pursuing incremental innovation or is able to conduct more radical breakthrough-style innovation?
3. What is the nature of China’s national technology development model and how will the long-term development of the Chinese economy impact upon the modernization of its technological innovation capabilities? What are the national security implications?
4. What are the prospects for the Chinese defense economy’s catching up with the West over the next decade? Which sectors are best positioned for making progress, what gains can be expected?

10.30am-12.30pm: Panel on How to Deal with China’s Growing Global Technology Presence (Panel Discussion) (Panelists: Bates Gill, Tai Ming Cheung, Barry Naughton) Moderator: Bates Gill

Questions to be Addressed:

1. What is China’s present and long-term place in the global technology order, especially in international innovation and production networks?
2. What is the nature of China’s security and technology relationships with Europe and what are the security implications for the U.S.?
3. What is the nature of the Chinese defense economy’s linkages with the global defense economy, especially with Russia and other sources of technology and knowledge acquisition?

12.30pm-1.30pm: Lunch

1.30pm-3.30pm: Panel on Assessing the Current and Long-Term Political, Economic, Social, Military, and Strategic Drivers Shaping China’s Technological Development and Grand Strategy, and the Implications for U.S. National Security (Panelists: Susan Shirk, Alice Miller, Bates Gill, Barry Naughton, Tai Ming Cheung) Moderator: Tom Mahnken

Questions to be Addressed:

1. Is China presently undergoing a major shift in its external grand strategy? If so, what are the key reasons behind this development and what changes are occurring? What are the implications for its security and technology policies?
2. What are the most important political, economic, internal, military and strategic drivers that will shape China’s technological development over the next 5-10 years?
3. Does China have a clearly defined vision and coherent grand strategy for its long-term technological development and catching up?

3.30pm: Wrap-Up

4pm: Cocktail Reception
Speaker Bios

Tai Ming CHEUNG is senior research fellow at the UC Institute on Global Conflict and Cooperation (IGCC). He is in charge of the Institute’s Minerva project "The Evolving Relationship Between Technology and National Security in China: Innovation, Defense Transformation, and China’s Place in the Global Technology Order" and serves as an associate adjunct professor at the School of International Relations and Pacific Studies at UC San Diego. He is a long-time analyst of Chinese and East Asian defense and national security affairs. Cheung was based in Asia from the mid-1980s to 2002 covering political, economic and strategic developments in greater China. He was also a journalist and political and business risk consultant in northeast Asia. Cheung received his Ph.D. from the War Studies Department at King's College, London University in 2006. His latest book, Fortifying China: The Struggle to Build a Modern Defense Economy, was published by Cornell University Press in 2009.

Bates GILL has a long record of research and publication on international and regional security issues, including regarding arms control, non-proliferation, peacekeeping and military-technical development, especially with regard to China and Asia. In recent years, his work has broadened to encompass other contemporary security-related trends, including multilateral security organizations, the impact of domestic politics and development on the foreign policies of states, and the nexus of public health and security. Dr. Gill was appointed by the Swedish government to become the seventh director of the Stockholm International Peace Research Institute (SIPRI), starting in October 2007.

Thomas G. MAHNKEN is currently the Jerome E. Levy Chair of Economic Geography and National Security at the U.S. Naval War College and a Visiting Scholar at the Philip Merrill Center for Strategic Studies at The Johns Hopkins University’s Paul H. Nitze School of Advanced International Studies (SAIS). Dr. Mahnken served as the Deputy Assistant Secretary of Defense for Policy Planning from 2006-2009. He was the primary author of the 2008 National Defense Strategy and contributing author of the 2006 Quadrennial Defense Review. Prior to joining the Defense Department, he served as a Professor of Strategy at the U.S. Naval War College. From 2004 to 2006 he was a Visiting Fellow at the Merrill Center at SAIS. His areas of primary expertise are strategy, intelligence, and special operations forces.

David MEYER is professor of mathematics and the George W. and Carol A. Lattimer Campus Professor at UC San Diego. He works on a wide range of topics in mathematics and physics, including discrete models for quantum gravity, knot theory, and the foundations of quantum mechanics. His recent research has focused on quantum information processing, a subject into which he introduced the ideas of quantum lattice gas automata and quantum games, and on topological data analysis, specifically of partially ordered data and in connection with wavelet analysis of scaling dimensions. Meyer's interest in the latter topics is largely motivated by his interest in mathematical modeling of social systems. As part of the IGCC project, "The Evolving Relationship Between Technology and National Security in China: Innovation, Defense Transformation, and China's Place in the Global Technology Order," he is designing relational
databases to organize qualitative data on China's science and technology development system, and developing statistical methods to analyze the data therein.

Alice Lyman MILLER is a research fellow at the Hoover Institution and teaches in the Departments of History and Political Science at Stanford University. She is also a senior lecturer in the Department of National Security Affairs at the U.S. Naval Postgraduate School in Monterey, California. Prior to coming to Stanford in 1999, Miller was an analyst at the Central Intelligence Agency from 1974-1990. From 1990–2000, she was associate professor of China Studies and, for most of that period, director of the China Studies Program at the School of Advanced International Studies (SAIS) at Johns Hopkins University in Washington, D.C. Miller's research focuses on foreign policy and domestic politics issues in China and on the international relations of East Asia. She is currently editor of the China Leadership Monitor, which, now in its ninth year, offers authoritative assessments of trends in Chinese leadership politics. Additionally, she is author of two books: Science and Dissent in Post-Mao China: The Politics of Knowledge (University of Washington Press, 1996) and, with Richard Wich, Becoming Asia: An International History Since World War II (Stanford University Press, 2011). She is currently working on two book projects, one with IGCC Director Susan Shirk on the politics of oligarchy in China, and the second, tentatively entitled The Evolution of Chinese Grand Strategy, 1550–Present, which brings a historical perspective to bear on China's rising power in the contemporary international order.

James MULVENON is Vice-President of DGI’s Intelligence Division, as well as co-founder and Director of its Center for Intelligence Research and Analysis, where he has recruited and trained a team of nearly twenty Chinese, Arabic, Farsi, Dari, Pashto, Urdu, Russian, and Korean linguist-analysts performing cutting-edge contract research and analysis for the US intelligence community. Previously, Dr. Mulvenon was a Political Scientist at the RAND Corporation in Washington, DC and Deputy Director of RAND's Center for Asia-Pacific Policy, where he built a team of ten Chinese linguist-analysts providing research for the Department of Defense and the US Government. A Chinese linguist and a specialist on the Chinese military, his current research focuses on Chinese cyber issues, C4ISR, defense research/development/acquisition organizations and policy, strategic weapons doctrines (computer network attack and nuclear warfare), patriotic hackers, military leadership and corruption, and the military and civilian implications of the information revolution in China. His book Soldiers of Fortune (Armonk, NY: M.E. Sharpe, 2001), examines the rise and fall of the Chinese military’s multi-billion dollar business empire. Dr. Mulvenon received his Ph.D. in political science from the University of California, Los Angeles.

Barry NAUGHTON’s most recent book is The Chinese Economy: Transitions and Growth, a comprehensive survey of the Chinese economy that was published by MIT Press at the beginning of 2007. Naughton is an economist and professor at the University of California, San Diego, who was named the So Kuanlok Professor of Chinese and International Affairs at the Graduate School of International Relations and Pacific Studies in 1998. Naughton has published extensively on the Chinese economy, with a focus on four interrelated areas: economic transition; industry and technology; foreign trade; and Chinese political economy.
Naughton’s research on economic interactions among China, Taiwan and Hong Kong, focusing on the electronics industry, led to the edited volume *The China Circle: Economics and Technology in the PRC, Taiwan and Hong Kong* (Brooking Institution, 1997). Since then, Naughton has continued to follow the electronics industry and technology policy in China and Taiwan, and has published several solo and co-authored articles on related subjects. Naughton publishes quarterly analysis of China’s economic policy online at *China Leadership Monitor*.

**Susan SHIRK** is director of the University of California system-wide Institute on Global Conflict and Cooperation and Ho Miu Lam professor of China and Pacific Relations at the UCSD School of International Relations and Pacific Studies. Shirk first traveled to China in 1971 and has been doing research there ever since. During 1997-2000, Shirk served as Deputy Assistant Secretary of State in the Bureau of East Asia and Pacific Affairs, with responsibility for China, Taiwan, Hong Kong and Mongolia. Shirk’s publications include her books, *China: Fragile Superpower; How China Opened Its Door: The Political Success of the PRC’s Foreign Trade and Investment Reforms; The Political Logic of Economic Reform in China; and Competitive Comrades: Career Incentives and Student Strategies in China*. Her edited book, *Changing Media, Changing China*, will be published by Oxford University Press in December 2010. Shirk served as a member of the U.S. Defense Policy Board, the Board of Governors for the East-West Center (Hawaii), the Board of Trustees of the U.S.-Japan Foundation, and the Board of Directors of the National Committee on United States-China Relations. She is a member of the Trilateral Commission, China Council of the World Economic Forum, Council on Foreign Relations, and an emeritus member of the Aspen Strategy Group. As Senior Adviser to The Albright-Stonebridge Group, Shirk advises private sector clients on China and East Asia.
Thursday, November 18 - Attendees

JT Abernethy  
Sr. Director, OASD (NII)

Jennifer Bulkeley  
OSD (Policy) / ODASD Strategy

Xanthi Carras  
OSD (Policy) / ODASD East Asia

Wg Cdr Blythe Crawford  
HQ Air Force / A8XS Strategic Engagement

LTC DG Douds  
Joint Staff / J8 (Resources and Plans)

Evi Dzieciolowski  
Army / ODASA Defense Exports and Cooperation

David Epstein  
Office of Net Assessment

John Fischer  
OSD (AT&L) / Director for Labs

MAJ Jeff Geraghty  
HQ Air Force / A8XS Strategic Engagement

COL Brad Gericke  
OSD (Policy) / ODASD Strategy

Nancy Harned  
OSD (AT&L) / DDRE

Jim Harvey  
DDRE / ARO

Shannon Hayden  
OSD (Policy) / ODASD Plans

Pauline Kusiak  
OSD (Policy) / Strategy

Dick McCormick  
DARPA

Phil Midland  
Consultant for OSD Net Assessment

MAJ Eric Murphey  
Joint Staff / J8 (Resources and Plans)

LT Kevin Naughton  
OSD Public Affairs

James O’Brien  
Missile Defense Agency

Jamie Schofield  
Strategy Development Division / J5

Dale Seiber  
STRATCOM / J521

Stanley Siry  
USSECNAV

Dr. Robin Staffin  
Director, Basic Research, DDRE

COL Mike Stapleton  
OSD (Policy) / ODASD Force Development

CDR Lance Thompson  
OSD (CAPE) / Naval Forces Division

COL Brian Veit  
STRATCOM / J81

Tyler White  
Missile Defense Agency

Jeff Wiemer  
OSD (AT&L) / DDRE

Joanna Yu  
OSD (Policy) / ODASD East Asia

29 people total
Friday, November 19 – Attendees

JT Abernethy
Sr. Director, OASD (NII)

Mike Albertson
Office of the Senior Advisor to USDP on START

Jenine Alston
Senior Policy Advisor
Trusted Mission Systems & Networks Directorate
ASD(NII)/DoD CIO

Robert Butler
DASD for Cyber and Space Policy, OSD Policy

Amanda Dory
DASD for Strategy, OSD Policy

Jaymie Durnan
Special Advisor to Principal Deputy, DDRE

David Epstein
Deputy Director for Net Assessment, Office of Net Assessment

Dr. Thomas Ehrhard
Special Assistant to Chief of Staff of the Air Force, USAF

Dr. Web Ewell
Director, Force Structure Assessments
OSD/CAPE

Mark Gorenflo
Principal Deputy, DUSN (Plans, Policy, Oversight & Integration), USN

Nancy Harned
Director, Advanced Components and Prototyping, OSD (AT&L) / DDRE

BG Richard Johnston
Director for Strategy and Plans, USAF AF/A8X

Wendy Kay
Senior Director for Intelligence, Office of the Deputy Undersecretary of the Navy

Ronald Kurjanowicz
Director for Strategy, OSD (AT&L)

Maggie Marcum
Office of the Director of National Intelligence

Dr. Patrick Mason
Chief, Strategic Planning Branch, SAF/AQRS

Phil Midland
Consultant for OSD Net Assessment

COL John Nelson
Strategy Development Division chief, Office of the Deputy Director for Strategy and Policy / JCS J5

COL JT Russell
Deputy Director for Plans, ODASD Plans, OSD Policy

Michael Schiffer
DASD for East Asian Affairs, OSD Policy

Dr. Robin Staffin
Director, Basic Research, DDRE

Rosemary Wenche
Director of Information Operations and Strategic Studies, OUSD (Intelligence)

Whit Wheeler
China Coordinator, Office of the Undersecretary of Defense for Intelligence

Wes Wood
Special Assistant, OSD (CAPE)

24 people total