Proceedings of the China-U.S. Forum on Science and Technology Policy

Appendices

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Appendix A - U.S. and Chinese Steering Committee Members

U.S. Members

Dr. Edward David (U.S. co-chair)
Science Adviser to President Richard Nixon
President, EED, Inc.

Mr. Erich Bloch
Former Director, National Science Foundation and
Member, President's Council of Advisers on Science and Technology

Dr. Mary Brown Bullock
President
Agnes Scott College

Dr. John Gibbons
Science Adviser to President Bill Clinton
President, Resource Strategies

Prof. Neal Lane
Former Director, National Science Foundation and
Science Adviser to President Bill Clinton
Malcolm Gillis University Professor, Rice University

Prof. J. Thomas Ratchford
Distinguished Visiting Professor and
Director, Science and Trade Policy Program
George Mason University School of Law

Dr. Allen Sessoms
President
Delaware State University

Chinese Members

Dr. SONG Jian
Former State Councilor; former Chairman of State Science and Technology Commission (SSTC); former Vice Chairman, Chinese People's Political Consultative Conference (CPPCC); former President, Chinese Academy of Engineering

Ambassador LI Daoyu
Former Ambassador of P. R. China to the USA;
President, China International Public Relations Association (CIPRA)

Mr. WU Yikang
Former Commissioner and Director General of International Science and Technology Cooperation of SSTC; former Minister Counselor for Science and Technology, Chinese Embassy in the USA; former President and currently Honorary President, China Association for International Science and Technology Cooperation (CAISTC)

Dr. ZHOU Yuan
Deputy Director General, National Research Center for Science and Technology for Development (NRCSTD), Ministry of Science and Technology (MOST), P. R. China

Dr. MU Rongping
Director General
Institute of Policy and Management
Chinese Academy of Sciences (CAS)

Mr. HANG Yu
Director General
Bureau of Policy
National Natural Science Foundation of China (NSFC)

Mr. WAN Chunfa
Deputy Director General
Department of Policy Research and Publicity, China Association for Science and Technology (CAST)

Mr. GONG Ke
President
Tsinghua University

Mr. YANG Yuanqing (TBC)
Chairman of the Board
Lenovo Group Limited

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Appendix B - Chinese Delegate List

1. Hu Zhijian
   Deputy Director-General
   Department of Policy, Regulations and Reform
   Ministry of Science and Technology of the People's Republic of China

2. Su Jing
   Division Chief
   Department of Policy, Regulations and Reform
   Ministry of Science and Technology of the People's Republic of China

3. Zhao Huijun
   Deputy Division Chief
   Department of Policy, Regulations and Reform
   Ministry of Science and Technology of the People's Republic of China

4. Gong Ke
   President
   Tianjin University

5. Wu Shanchao
   Division Chief, Bureau of Policy
   National Natural Science Foundation of China

6. Han Xue
   Office of Policy Study
   Chinese Academy of Engineering

7. Fan Hongfu
   Director, Beijing Office
   ZTE Corporation

8. Qian Jianjun
   Deputy Director-General
   Department of International Cooperation Exchange
   Ministry of Education of the People's Republic of China

9. Bian Gang
   Deputy Director
   China Nonferrous Metals Industry Association

10. Chen Feng
    Associate Professor
    Library of Chinese Academy of Sciences

11. Xu Tongzhou
    Head of Office, Institute of High Energy Physics
    Chinese Academy of Sciences

12. Li Zhaoliang
    Division Chief, Science and Technology Education Department
    Ministry of Communications of the People's Republic of China

13. Fan Jingsheng
    Deputy Director of Foreign Affairs Office
    State Bureau of Surveying and Mapping

14. Deng Yongxu
    Principle Section Member, Science & Technology Division
    Department of Population, Social, Science and Technology Statistics
    National Bureau of Statistics of China

15. Wang Chunfa
    Deputy Director General, Investigation and Publicity Department
    China Association for Science and Technology

16. Wu Yikang
    Honorary President
    China Association for International Science and Technology Cooperation,
    Former Scientific Counsellor of Embassy of the People's Republic of China in the United States of America, and
    Former Director of Bureau of International Cooperation
    National Natural Science Foundation of China

17. Pan Baozheng
    Professor
    China Association for International Science and Technology Cooperation, and
    Former Scientific Counsellor of Embassy of the People's Republic of China in the United States of America

18. Wang Zengrong
    Deputy President
    China Association for International Science and Technology Cooperation, and
    Former Scientific Counsellor of Embassy of the People's Republic of China in the United States of America

19. Liu Zhaodong
    Secretary-General, China Association for International Science and Technology Cooperation, and
    Former Scientific Counsellor of Embassy of the People's Republic of China in the United States of America

20. Du Wenpu
    Director, Department of Science Study
    China Association for International Science and Technology Cooperation, and
    Former Scientific Consulor of Huston Consulate-General in the United States of America

21. Zhang Junian
    Director, Department of Science Study
    China Association for International Science and Technology Cooperation, and
    Former Science and Technology Daily's Washington Chief Correspondent

22. Zhang Yujun
    Professor
    China Association for International Science and Technology Cooperation, and
    Former Scientific Counsellor of Embassy of the People's Republic of China in the Czech Republic

23. Chen Jiying
    Division Chief
    China Science and Technology Exchange Center

24. Gu Min
    China Science and Technology Exchange Center

25. Chen Hongyin
    Head of the Lab
    Plant Protection Institute of CAAS

26. Teng Shulong
    Director
    Beijing Science and Technology Sustainable Development Center

27. Chen Sihong
    Deputy Division Chief
    Beijing Municipal Science and Technology Commission

28. Wang Jinyu
    Deputy Director, Institute of Standardization Theory and Strategy
    China National Institute of Standardization

29. Sun Jiangping
    Deputy Director
    NCAIDS/STD

30. Fang Xiang
    Deputy President
    National Institute of Metrology P.R. China

31. Xu Xuelin
    Deputy Director, Department of Planning and Development
    National Institute of Metrology P.R. China

32. Gao Wei
    Deputy Director, Department of Planning and Development
    National Institute of Metrology P.R. China

33. Yue Ning
    Division Chief, Department of International Cooperation
    General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

34. Wang Yuewei
    Division Chief, Department of International Cooperation
    General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

35. Zhao Jian
    Suite, Department of North American and Oceanian Affairs
    Ministry of Foreign Affairs of the People's Republic of China

36. Xi Xiaolin
    Deputy Director, Office of Policy Study
    Chinese Academy of Engineering

37. Huang Jing
    Deputy Director
    Administrative Center for China's Agenda 21

38. Peng Sizhen
    Division Chief
    Administrative Center for China's Agenda 22

39. Xie Xi
    Administrative Center for China's Agenda 23

40. Wang Rongjun
    Deputy Director, Economic Research Lab
    Institute of American Studies
    Beijing Academy of Social Sciences

41. Chen Jiayi
    Deputy Director
    Bureau of International Cooperation
    Chinese Academy of Engineering

42. Wang Jinqian
    Investigator, Division of Technology Evaluation and Promotion
    Science and Technology Education Department
    Ministry of Health of the People's Republic of China

43. Chen Yanjun
    Project Officer
    Bureau of International Cooperation of CAAS

44. Han Fei
    Deputy Principle Section Member
    Bilateral Cooperation Division, Bureau of International Cooperation
    China Meteorological Administration

45. Huang Xiaoguang
    Investigator, Department of International Cooperation
    State Forestry Administration, P.R.China

46. Zhang Jianguo
    Division Chief
    Division of America and Oceania and European Division
    China Science and Technology Exchange Center

47. Du Heting
    Associate Professor, Division of America and Oceania and European Division
    China Science and Technology Exchange Center

48. Li Jie
    Project Assistant, Division of America and Oceania and European Division
    China Science and Technology Exchange Center

49. Wang Meiyan
    Deputy Division Chief
    Division of International Cooperation
    Chinese Academy of Forestry

50. Shen Gongtian
Deputy Chief Engineer
China Special Equipment Inspection and Research Center (CSEI)

51. Xu Tong
Deputy Division Chief
Office of Foreign Affairs
China Aerospace Science and Technology Corporation

52. Hu Zhongmin
Deputy Director
Office of Foreign Affairs
China Aerospace Science and Technology Corporation

53. Tang Yingzhang
Deputy President
Chinese Academy of Inspection and Quarantine

54. Long Kaiyuan
Doctor
National Research Center for Science and Technology for Development

55. He Yali
Intern Researcher
National Research Center for Science and Technology for Development

56. Pan Jinhu
Secretary-General and Professor
Jiangsu Society for Scientific and Technical Information

57. Wang Jinjiang
Investigator, Division of Technology Evaluation and Promotion
Science and Technology Education Department
Ministry of Health of the People's Republic of China

58. Gong Yi
Deputy Secretary-Genera and Head of the Lab
Institute of Quantitative and Technical Economics, Research Centre of Environment and Development, Chinese Academy of Social Sciences

59. Sun Jianxin
Director, Division of International Cooperation
Torch High Tech Industrial Development Center
Ministry of Science and Technology of the People's Republic of China

60. Suan Ruichun
Chairman of the Supervisors, Supervisory Board of the Stateowned Large Business Enterprises, and
Former Deputy Secretary-General, National Natural Science Foundation of China

61. Zhang Wei
Deputy Director, Department of Management Sciences
National Natural Science Foundation of China

62. Sun Xiangdong
Associate Professor and Doctor
Chinese Central Party School (CCPS)

63. Kong Deyong
Executive Deputy Director-general
The Association for Soft Science of China (ASSC)

64. Luo Hui
Division Chief
Office of Investigation and Research, Executive Office
Ministry of Science and Technology of the People's Republic of China

65. Mu Rongping
Director
Institute of policy and Management
Chinese Academy of Sciences

66. Liu Jianfei
Director
Office of Foreign Affairs
Chinese Central Party School (CCPS)

67. Yuan Peng
Deputy Director
Institute of American Studies
China Institutes of Contemporary International Relations

68. Ma Lianjie
Professor and Doctor
College of Public Administration
Huazhong University of Science and Technology

69. Zhu Zuoyan
Deputy Director
National Natural Science Foundation of China

70. Deng Zhonghan
Chairman of the Board
Vimicro Corporation

71. Li Genxin
Secretary-General
China Arms Control and Disarmament Association
China Institute of International Studies

72. Li Daoyu
Former Ambassador of China to the United States of America

73. Xu Guanhua
Minister
Ministry of Science and Technology of the People's Republic of China

74. Jin Xiaoming
Director-General
Department of International Cooperation
Ministry of Science and Technology of the People's Republic of China

75. Xu Heping
Director
Executive Office
Ministry of Science and Technology of the People's Republic of China

76. Su Jing
Division Chief, Division of Comprehensive Policy
Department of Policy, Regulations and Reform
Ministry of Science and Technology of the People's Republic of China

77. Wang Yuan
Director
National Research Center for Science and Technology for Development

78. Zhou Yuan
Deputy Director
National Research Center for Science and Technology for Development

79. Li Xin
Principle Section Member, Division of North American and Oceanian Affairs
Department of International Cooperation
Ministry of Science and Technology of the People's Republic of China

80. Dai Le
Division of North American and Oceanian Affairs
Department of International Cooperation
Ministry of Science and Technology of the People's Republic of China

81. Yang Xuemei
Division of North American and Oceanian Affairs
Department of International Cooperation
Ministry of Science and Technology of the People's Republic of China

82. Zhao Gang
Division Chief
National Research Center for Science and Technology for Development

83. Chen Weihua
Secretary
National Research Center for Science and Technology for Development

84. Chang Yufeng
Secretary
National Research Center for Science and Technology for Development

85. Lin Yuanyuan
Secretary
National Research Center for Science and Technology for Development

86. He Qiong
Secretary
National Research Center for Science and Technology for Development

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Appendix C – U.S. Delegate List

Participants

1. Richard Atkinson
   Former Director, National Science Foundation and
   President Emeritus, University of California

2. William Blanpied
   Visiting Senior Research Scholar
   Science and Trade Policy Program
   George Mason University School of Law

3. Xiangli Chen
   General Manager, Global Technology
   GE Healthcare

4. Edward David (U.S. co-chair)
   Assistant to the President for Science and Technology
   (Second Science Adviser to President Richard Nixon) and
   Former Director of the Office of Science and Technology
   President, EED, Inc.

5. Alex DeAngelis
   Director, East Asia and Pacific Programs
   National Science Foundation (retired)

6. Sadeg M. Faris
   Founder, Chairman and CEO
   REVEO

7. John Gibbons
   Assistant to the President for Science and Technology
   (First Science Adviser to President Bill Clinton) and
   Former Director of the Office of Science and Technology Policy
   President, Resource Strategies

8. Neal Lane
   Former Director of the National Science Foundation,
   Assistant to the President for Science and Technology
   (Second Science Adviser to President Bill Clinton) and
   Former Director of the Office of Science and Technology Policy
   Malcolm Gillis University Professor, Rice University

9. Aaron Levine (NSF Young Scholar)
   Ph.D. Candidate in Public Affairs
   Princeton University

10. Jennifer McCormick (Motorola Foundation Young Scholar)
    Postdoctoral Fellow
    Stanford Center for Biomedical Ethics

11. Evan Michelson (NSF Young Scholar)
    Research Associate for the Project on Emerging Nanotechnologies
    Woodrow Wilson Center for International Scholars

12. Kathryn Miller-Jensen (NSF Young Scholar)
    Postdoctoral Associate
    Department of Chemical Engineering
    Massachusetts Institute of Technology

13. Elizabeth Morel (Motorola Foundation Young Scholar)
    B.S. in Chemical Engineering
    University of Kansas, 2006

14. J. Thomas Ratchford
    Distinguished Visiting Professor and
    Director, Science and Trade Policy Program
    George Mason University School of Law

15. Robert Roberts
    Director
    Science and Technology Policy Institute/IDA

16. David Sedney
    Deputy Chief of Mission (DCM)
    The U. S. Embassy of Beijing, China

17. Deborah Seligsohn
    Environment, Science, Technology and Health Counselor
    The U.S. Embassy of Beijing, China

18. Allen Sessoms
    President
    Delaware State University

19. Denis Simon
    Provost and Vice President for Academic Affairs
    Levin Graduate Institute of International Relations and Commerce
    State University of New York

20. Daniel Sui
    Reta A. Haynes Endowed Chair Professor
    Assistant Vice President for Research
    Director, Center for Geospatial Information Science and Technology
    Texas A&M University

21. Richard P. Suttmeier
    Professor of Political Science
    University of Oregon

22. Kathleen Walsh
    Professor of National Security Affairs
    The Naval War College

23. Ling Zhu (NSF Young Scholar)
    Ph.D. Candidate & Research Associate
    Department of Management Information Systems
    University of Arizona Eller College of Management

Observers

24. Cong Cao
    Research Associate
    Levin Graduate Institute
    State University of New York

25. William Y. Chang
    Director
    National Science Foundation Beijing Office

26. Dan Cintron
    Second Secretary
    Environment, Science, Technology and Health Office
    The U.S. Embassy of Beijing, China

27. Amanda Dickins
    Senior Research Associate
    NAMRU / Institute of Health
    University of East Anglia

28. Jason Fults
    Thomas J. Watson Fellow

29. Lee Hwa Gebert
    Acting Director for Office of International
    Science and Technology Cooperation
    Office of Policy and International Affairs
    Department of Energy

30. Reno Harnish
    Principal Deputy Assistant Secretary for Oceans, Environment, and Science
    U.S. Department of State

31. James H. Herrington
    Director, Division of International Relations
    Fogarty International Center
    National Institutes of Health

32. Edward Bruce Howard
    Director, Office of Science and Technology Cooperation
    U.S. Department of State

33. Jason Lee
    Visiting Research Fellow
    School for International Studies
    Peking University

34. Bryan Lohmar
    Economist, Market and Trade Economics Division
    Economic Research Service
    U.S. Department of Agriculture

35. Frances Li
    Director, East Asia and Pacific Programs
    Office of International Science and Engineering
    National Science Foundation

36. Richard Nader
    Program Manager for China
    Office of International Science and Engineering
    National Science Foundation

37. Magdalena Navarro
    International Affairs Officer
    National Institute of Standards and Technology

38. Ebonique Padgett
    China Science and Technology Officer
    Office of Science and Technology Cooperation
    U.S. Department of State

39. Hratch G. Semerjian
    Chief Scientist
    National Institute of Standards and Technology

40. Erica Thomas
    Economic Policy Officer
    The U.S. Embassy of Beijing, China

41. William Wells
    Honored Visiting Professor and Advisor to Institute for S&T Innovation,
    Chinese Academy of Sciences

42. Li Zhang
    Sea Grant Fellow
    Division of Ocean Sciences (OCE)
    National Science Foundation (NSF)

43. Frances Zhao
    Research Scientist
    Columbia University Medical Center

44. Shanying Zeng
    Program Manager, Boeing Technology Ventures
    The Boeing Company

45. Soo Jung Shin
    Program Assistant, Science and Trade Policy Program
    George Mason University School of Law

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Appendix D – Selected Biosketches

Chinese Biosketches

Keynote: HUANG Qitao
Former Vice Minister of Science and Technology, Former Executive Vice Minister of State Science and Technology Commission, Peoples Republic of China

Round Table 1

Speaker 1: WU Yikang
Honorary Chairman, China Association for International Science and Technology Cooperation
Commissioner and Director-General, Dept. of International Cooperation, State Science and Technology Commission (SSTC)
Minister-Counsellor for S&T Affairs, Chinese Embassy to USA

Speaker 2: DUAN Ruichun
Chairman, Supervisory Panels of State-Owned Large and Key Enterprises
Director-general, Department of Policy, Legislation and System Reform, State Science and Technology Commission
Director-general, Office of Intellectual Property Conference Office of State Council
Chief Negotiator, intellectual property negotiations related to science and technology cooperation with United States, EU, Russia

Speaker 3: ZHANG Wei
Deputy Director, Department of Management Sciences of National Natural Science Foundation of China
Professor, Finance and Vice President, Academic Affairs, Tianjin University of Finance and Economics
Associate Director, Committee of Financial Engineering, Chinese Society of Finance

Round Table 2

Speaker 1: MU Rongping
Professor and Director-General, Institute of Policy and Management (IPM), Chinese Academy of Sciences (CAS)
Vice Chairman, the Chinese Association for Science of Science and S&T Policy Studies
Chief-edit, Science Research Management and the Deputy Secretary General of the China High-tech Industry Promotion Society (CHIPS)

Speaker 2: FAN Hongfu
Former Director, Technology Center, ZTE Corporation
Present Director, Beijing Branch in ZTE Corporation
He was responsible for unitary technology roadmap for ZTE Corporation in the beginning. Afterward he is responsible for international strategical cooperation and IPR negotiation, and also national scientific technology policy investigations

Speaker 3: GONG Ke
President, Tianjin University
Executive member, the technical committee of the ministry of information industry
Vice president, Chinese Institution of Electronics, vice president of Chinese Institution of Communication
Vice president, China Institute of Measurement and Instrumentations
Fellow, Russian Academy of Aerospace Sciences (2002)

Dinner Speaker: ZHU Zuoyan
Vice President, the National Nature Science Foundation of China (since 2000)
Member, Chinese Academy of Sciences (1997)
Member, Third World Academy of Sciences (1998)
Professor Zhu is specialized in cell biology, molecular genetics engineering

Luncheon Speaker: DENG Zhonghan
Member, Standing committee of the Chinese Association of Science and Technology
Member, Standing committee of All-China Youth Federation
Chairman and Chief Scientist, Vimicro Corporation (NASDAQ:VIMC), the largest multimedia semiconductor technology company in China

VIP 1: KONG Deyong
President, China Association for Social & Economic System Development
Academician, International Eurasian Academy of Sciences
Director, Advisory Expert Committee for National High and New Technology Industry Development Zone, Ministry of Science and Technology
Honorary President, Beijing Innovation Incubation Association

VIP 2: LUO Hui
Director of Division, Strategy Survey and Research office, Ministry of Science and Technology, P. R. China
Deputy Secretary, the Association for Soft Science of China.
She is now conducting research on key issues relating to S&T strategies, policies, and economic development. Meanwhile, she is also in charge of the National Soft Science Program.

VIP 3: SUN Xiangdong
Associate Professor, Dept. of Political Science and Law, the Party School of the C.P.C. (the Central Party School), Research and Teaching
Teaching Courses to the graduate students: International relations theory, Western

political institutions, and History of Western political ideas
Major interests now: Grand Strategy, Intergovernmental relations, Intersection between international politics and domestic politics

VIP 4: LIU Jianfei
Professor and research fellow, Institute of International Strategic Studies, the Central Party School of C.P.C.
Director, division of Chinese Foreign Affairs of the institute
His most recent research fields are U.S. foreign policy, China's foreign policy and Sino-U.S. relations

VIP 5: MA Lianjie
Professor, Public Administration and Information Studies
Director, Urban Management Department, School of Public Administration of Huazhong University of Science and Technology
Areas of Interest: Public Administration

VIP 6: YUAN Peng
Deputy Director, Institute of American Studies
Director, Center for Trans-Atlantic Relations Studies, China Institutes of Contemporary International Relations (CICIR)
His research focuses on U.S. Foreign Policy, Sino-U.S. Relations, Cross-Strait Relations, and East Asian-Pacific Security Studies

U.S. Biosketches

Richard C. Atkinson

Richard C. Atkinson served from 1995-2003 as the seventeenth president of the University of California system. Before becoming president of the UC System, he served as chancellor of UC San Diego; prior to that he served as director of the National Science Foundation and was a long-term member of the faculty at Stanford University.

An internationally respected scholar and scientist, his eight-year tenure as president was marked by innovative approaches to admissions and outreach, research initiatives to accelerate the University's contributions to the state's economy, and a challenge to the country's most widely used admissions examination--the SAT 1--that paved the way to major changes in the way millions of America's youth will be tested for college admissions.

Atkinson became the fifth chancellor of UC San Diego in 1980. During his tenure, the campus doubled in size to about 18,000 students while increasing the distinction of its faculty and breadth of its programs. It consistently placed among the top five universities in federal funding for research. In 1995, the quality of its graduate programs was ranked tenth in the nation by the National Research Council.

Atkinson was appointed deputy director of the National Science Foundation by President Gerald Ford in 1975. Two years later, President Jimmy Carter promoted him to director. At NSF, he had a wide range of responsibilities for science policy at a national and international level, including negotiating the first memorandum of understanding in history between the People's Republic of China and the United States, an agreement for the exchange of scientists and scholars.

Atkinson began his academic career at Stanford University after military service in the U.S. Army. He was a member of the Stanford faculty from 1956 to 1980, except for a three-year period at UCLA. In addition to serving as professor of psychology at Stanford, he held appointments in the School of Engineering, School of Education, Applied Mathematics and Statistics Laboratories, and Institute for Mathematical Studies in the Social Sciences.

Atkinson's research dealt with problems of memory and cognition. His theory of human memory has been influential in shaping research in the field. It has helped in clarifying the relationship between brain structures and psychological phenomena, in explaining the effects of drugs on memory, and in formulating techniques that optimize the learning process.

Atkinson has also been interested in the more applied problems of learning in the classroom. He developed one of the first computer-controlled systems for instruction, which served as a prototype for the commercial development of computer-assisted instruction. Reading instruction under computer control for young school children has

been an important application of his work. He was co-founder of the Computer Curriculum Corporation.

Atkinson's scientific contributions have resulted in election to the National Academy of Sciences, the Institute of Medicine, the National Academy of Education, and the American Philosophical Society. He is past president of the American Association for the Advancement of Science, former chair of the Association of American Universities, the recipient of numerous honorary degrees, and a mountain in Antarctica has been named in his honor.

His wife, Rita Atkinson, holds a PhD in psychology. Their daughter, Lynn, has an MD degree and is a neurosurgeon.

A selection of President Atkinson's speeches and articles is available on his Web site at http://www.ucop.edu.

William A. Blanpied

William A. Blanpied is Visiting Senior Research Scholar in the Science and Trade Policy Program at George Mason University. Prior to his retirement from the federal government in January 2003 he had been, since 1983, Senior International Analyst at the National Science Foundation (NSF), except for the period from July 1999 through August 2002 when he served as Director of the NSF Tokyo Regional Office in the US Embassy. He also currently serves as a Senior Advisor to the Global Emerging Technologies Institute (GETI).

Blanpied joined NSF in 1976 as Program Manager for Ethics and Human Values in Science and Technology. Subsequently, he served as Head of the Office of Special Projects in the Office of the Director before joining the Division of International Programs (since 2001 the Office of International Science and Engineering) in 1983. Prior to his service with NSF, he held faculty appointments in the physics departments at Case Western Reserve, Yale, and Harvard Universities, where his research interests were in experimental particle physics. While at Harvard, he established and served as first editor of an international newsletter that has since evolved into the quarterly journal, *Science, Technology and Human Values*. He left Harvard in 1974 to become Head of the Division of Public Sector Programs at the American Association for the Advancement of Science (AAAS), where he was among those responsible for instituting the annual AAAS budget analysis and the series of annual meetings which have evolved into the AAAS Science and Technology Policy Colloquia.

Blanpied received his BS degree from Yale University in 1955 and his PhD in physics from Princeton University in 1959. He is a Fellow of the American Association for the Advancement of Science and the American Physical Society. From 1987 to 1989 he was on leave of absence from NSF as Scholar in Residence at the Graduate School of International Relations and Pacific Studies at the University of California, San Diego, and was an Adjunct Professor at George Mason University's International Institute from 1991

to 1996. He is the author or co-author of three books, and has published numerous articles and reviews in the professional literature on physics, history of science, international science, and science policy, including both its national and international aspects.

In April 2003 Blanpied was designated as an International Affiliated Fellow of the National Institute for Science and Technology Policy in Tokyo. During the Fall 2003 semester he was a Visiting Professor in the School of Public Policy and Management at Tsinghua University, Beijing. In April 2005, he presented a short course on Science and Technology Policy at the Institute of Policy and Management of the Chinese Academy of Sciences in Beijing, and organized a tour of US and Japanese researchers to nanoscience and technology centers in China in October 2005.

Xiangli Chen

Dr. Xiangli Chen is currently General Manager of GE Healthcare Global Technology Organization in China. He leads engineering teams for research and development of new healthcare products and services for the global market, focusing on medical diagnostic technologies such as CT, x-ray, MRI, ultrasound, patient monitoring, and healthcare information systems. He also provides cross-functional leadership to the broader business operation.

From 2000 to 2003, Dr. Chen was the founding Managing Director of the General Electric Company's Global Research Center in Shanghai. He led the creation and growth of the Center, from planning strategically, establishing new organizations, to setting up operating processes, and ensuring program execution. As part of GE's corporate research and development organization, the Center created innovations and leading edge technologies that solidified GE's global technology leadership in multiple businesses.

Dr. Chen held R&D and management positions in GE Global Research Center's headquarters in the United States from 1994 to 2000. He was a leading researcher in the area of industrial laser applications.

He received his bachelor's degree in Physics from the University of Science and Technology of China, and his master's and Ph.D. degrees in Mechanical Engineering from the University of Illinois at Urbana-Champaign.

Edward E. David, Jr.

Dr. Edward E. David, Jr. is President of EED, Inc., advisor to industry, government, and universities on technology, research, and innovation management.

During his career, Dr. David was Science Advisor to the President of the United States and Director of the White House Office of Science and Technology, President of Exxon Research and Engineering Company, and an Executive Director of Bell Telephone

Laboratories.

Dr. David is the retired U.S. Representative to the ***NATO Science Committee***. He is a member of the ***American Philosophical Society***, of the ***National Academy of Engineering***, of the ***National Academy of Public Administration***, of the ***National Academy of Sciences***, the ***American Academy of Arts and Sciences***, and a former trustee of the ***John S. Guggenheim Foundation***. He is a Life Member of the Corporation of the ***Massachusetts Institute of Technology***, and a Life Fellow of the ***Institute of Electrical and Electronic Engineering***. He is former President of the ***American Association for Advancement of Science***. Dr. David is a member of the Board of Governors of the ***American Gemological Trading Association***. Dr. David's engagements in business have included 20 boards of directors and technical advisory boards both nationally and abroad. He is also Vice President and Principal of the Washington Advisory Group. Dr. David is also affiliated with the following organizations:

Acoustical Society of America (Fellow)
American Society for Engineering Education (Honorary Life Member)
Audio Engineering Society (Fellow)
Carnegie Institution of Washington, Trustee-Emeritus
Institute of Electrical and Electronic Engineering (Life Fellow)
Sigma Xi (Full Member)
The Century Foundation, Trustee-Emeritus
University of Pennsylvania, Past Member of Board of Overseers (Arts and Sciences)

He received his Doctorate in electrical engineering from the Massachusetts Institute of Technology, and is a recipient of 12 honorary degrees from such institutions as the University of Pennsylvania, Rutgers University, Lehigh University, Carnegie-Mellon University, the University of Michigan, Rensselaer Polytechnic Institute, and others.

In his consulting practice, Dr. David has advised:

US Department of Energy
Englehard Corp.
Medjet, Inc.
Protein Polymer Technologies
Spacehab
Electric Power Research Institute
Intermagnetics General Corporation
Online Computer Library Center
International Media Research Foundation, Japan
PolyVentures
Georgia Institute of Technology
Rensselaer Polytechnic University
Rice University
Michigan Tech
Massachusetts Institute of Technology
The Copper Union for Advancement of Science and Art
Reveo
DeCorp
Ohio State University

Among others, Dr. David has received numerous awards including:

Eta Kappa Nu eminent Member, 2001
Georgia Institute of Technology Hall of Fame, 1994
Hall of Fame of American Society for Engineering Education, 1993
Silver Stein Award, Massachusetts Institute of Technology, 1991
Delmer S. Fahrney Medal, The Franklin Institute, 1985
Arthur M. Bueche Award, National Academy of Engineering, 1984
"Scientist of Year" Award, Research & Development magazine, 1984
Industrial Research Institute Medal, 1983
New Jersey Science/Technology Medal, 1982
Award for Distinguished Contribution to Research Administration, Society of Research Administrators, 1980
North Carolina Award for Science, 1972
Harold Pender Award, The Moore School of Engineering, University of Pennsylvania, 1972
President's Award of Merit, American Society of Mechanical Engineers, 1971
The Lanchester Prize, Operations Research Society of America, 1971

Sadeg M. Faris

ACHIEVEMENTS & RECOGNITION

Both as scientist and entrepreneur, Dr. Faris has a track record of success in ventures undertaken over the past 20 years. His accomplishments include —

- Prolific Invention with Over 550 Patents issued
- IBM Invention of the Year 1983
- Sold World's First Superconducting Commercial Product
- Patented inventions in many diverse fields
- Started Reveo without VC Funding
- Raised $300+ million investment in Reveo to date, which, to date, has:
    - 350 employees, expect to double by next year
    - More than 50 PhDs in science and technology
    - Diverse ethnic backgrounds
    - Global operations: Offices in New York, California, Massachusetts, Malaysia and Taiwan
    - Guinness World Record, Best of Comdex Award, and other Awards for Inventions and Innovations and Technology Achievements in Science & Technology

- Sadeg M. Faris, as a member of CSAC (Council on Superconductivity for American Competitiveness) meets with President George H.W. Bush.
- **IBM Invention of the Year** - QUITERON, a transistor-like superconducting device, on display at the Smithsonian Museum in Washington, D.C. **1983**
- **IBM Outstanding Innovation Award** - For the invention and development of the

fastest known superconducting oscilloscope **1983**

- **Seven IBM Invention Achievement Awards** - On an annual basis from **1977** to **1983**
- **Automated Measurements Technology Award** – For outstanding contributions in the application of superconductivity to automated measurement technology carried into the millimeter wave range **1989**
- **Comdex Best Rookie** - For MicroPol Steroscopy Optics Technology **1993**
- **Guinness World Records** – For driving two modified production cars powered by metal/air fuel-cells a world distance of 344.67km on public road without refueling or recharging **2000**

REALIZING THE ENTREPRENEUR'S DREAM

In the 1980's, Superconductivity was touted as the next revolutionary technology, capable of changing the world. IBM committed hundreds of researchers over a decade to commercialize its promised potential until it finally abandoned the project after spending hundreds of millions of dollars. But one researcher, unwilling to quit, believed he could make it work.

In 1983, this researcher, Sadeg M. Faris left IBM, licensed his patents, and founded Hypres, Inc. In 3 years time, funded with only 6 million dollars, it launched the first commercial Superconducting product, an ultra-sensitive oscilloscope, with switching speeds 1,000 times faster than silicon transistors. The PSP-1000 is still available and is the only device of its kind 18 years after its introduction.

Despite achieving the "impossible," Dr. Faris was not ready to slow down. Driven by his innate curiosity and passion for technology, he felt limited by the restraints of a "Superconducting Company." Ready to take on new challenges and explore his ideas in different fields, Dr. Faris founded Reveo, Inc. in 1991. In Reveo, he was able to formalize his methodology of how to invent, nurture, develop, and commercialize any technology now known as InventQbation^{TM}.

Most recently he was invited by Tun Dr.Mahathir bin Mohammed, Prime Minister of Malaysia, to replicate the InventQbation business model in Malaysia to help achieve Technology Sovereignty and Vision 2020, the date when Malaysia will be a fully developed country. The result of this collaboration is InventQjaya, established in 2003. Since its establishment in 2003, Reveo has set up in InventQjaya a state of the art laboratory, staffed by Malaysia scientists, who invent and commercialize Malaysian Technology Products. Thus, InventQbation is now true solution for Humanity, helping bridge the Technology Gap.

Reveo's accomplishments are due to its ability to combine the best of the innovative entrepreneurial spirit with the best of the venture capitalist's mindset. Reveo's scientists, encouraged by Dr. Faris and his personal history, are free to experiment and work on problems facing humanity, leading to a deep understanding of technologies in diverse fields such as fuel cells, bio-photonics, and microelectronics. At the same time, Reveo is

committed to the practical aspects of running a technology business. A high awareness of intellectual property pervades the research team, ensuring a constant supply of patents to add to the growing portfolio and the security controls to protect them.

REALIZING THE IMPOSSIBLE

Dr. Sadeg M. Faris is the Founder, Chairman and Chief Executive Office of Reveo. His mission is to develop the company's technologies and transfer them into commercial products. His proven track record enabled him to attract highly talented scientists and engineers to Reveo as well as funding from government agencies. The company has built technology infrastructure and presently employs a team of talented scientists, engineers and business leaders dedicated to inventing new technologies and bringing them to market. The Reveo family now has over 250 employees, with over 60 Ph.D.'s and has offices and laboratories in New York, Massachusetts, California, and Taiwan and Malaysia.

In April, 1983, he founded Hypres, Inc. of Elmsford, NY. As President, CEO and chief technical leader, Faris led Hypres and its development of products based on its own superconducting integrated-circuit chips. Two Hypres measurement oscilloscopes hold records for being the fastest and most sensitive products of their kind currently on the market. The products have won several industry awards. While retaining financial interest in that successful company, Dr. Faris left Hypres and superconducting technology to begin implementing his ideas in electro optics in 1989.

Prior to founding Hypres, Dr. Faris worked at the IBM T.J. Watson Research Center in that company's effort to develop an ultra-high-performance computer based on superconducting technology. As a prolific inventor and problem solver there, Dr. Faris was also involved with designing, fabricating, and testing ultra-fast devices and integrated circuits for logic and memory. He received seven Invention Achievement Awards, an Outstanding Innovation Award, and the 1983 Invention of the Year from IBM. Dr. Faris received his BS, MS, and PhD degrees in 1969, 1971 and 1976 in electrical engineering and computer sciences, from the University of California, Berkeley.

John H. (Jack) Gibbons

Jack Gibbons, schooled in physics (Ph.D. Duke, 1954), did experiments for 15 years (mostly at Oak Ridge) in nuclear structure, with emphasis on neutron capture reactions key to understanding nucleosynthesis of heavy elements inside stars. His growing interest in energy resource conservation and environment resulted in his undertaking work on technologies for increased efficiency throughout the system of providing energy services.

He was the first Director of the U.S. Office of Energy Conservation (1973-1974) and led related studies at The National Academies and OTA. He directed the Congressional Office of Technology Assessment (OTA) (1979-1992) and then moved to the White

House as Assistant to the President for Science and Technology (Science Advisor to the President). Since leaving government in April 1998, he has served as Compton Lecturer at MIT (1998-1999), Senior Fellow at the National Academy of Engineering (1999-2000), and President of Sigma Xi (2000-2001). He serves on a number of Boards and Committees in both the public and private sectors. More recently he was named Chairman of the Board of Population Action International. He has received numerous national and international awards and is author of about 100 publications, including *This Gifted Age: Science and Technology at the Millennium*.

J. Thomas Ratchford

Dr. J. Thomas Ratchford is Distinguished Visiting Professor at the National Center for Technology & Law of the George Mason University (GMU) Law School, where he directs the Science and Trade Policy Program. Founder of the GMU Center for Science, Trade, and Technology Policy in 1994, he was its director until 1999. His professional activities involve a variety of global science and technology issues, with special attention to innovation and the interface between trade, technology, and the law. He also serves as Principal of STTA, LC, a consulting firm that provides analytic and advisory services to corporate, educational, and not-for-profit clients in the U.S. and overseas.

Previously Dr. Ratchford was Associate Director for Policy and International Affairs at the White House Office of Science and Technology Policy (OSTP) in the first Bush Administration. Prior to his confirmation by the Senate to his OSTP position in 1989, he was the Associate Executive Officer of the American Association for the Advancement of Science (AAAS). At AAAS he was deputy to the chief executive officer and in addition headed the Association's three program directorates: Education and Human Resources, International Programs, and Science and Policy Programs.

A condensed matter physicist, Dr. Ratchford previously served on university faculties and on staffs of private and governmental laboratories and research management organizations. As a member of the professional staff of the Science Committee of the U.S. House of Representatives in the 1970s, and one of the first scientists to serve the Congress full-time, he dealt with policy and funding for science and technology.

A former Congressional Fellow of the American Political Science Association, Dr. Ratchford was also a Research Scholar at the International Institute for Applied Systems Analysis in Austria. Over the years he has chaired outside advisory panels for organizations such as the Gas Research Institute, the Congressional Office of Technology Assessment, and the National Science Foundation (NSF), and has served as a consultant and advisor to various governmental, university, and industrial organizations. He presently spends much of his time on China-U.S. science and technology issues and co-chairs a China-U.S. initiative in science policy sponsored by the NSF and the Chinese National Natural Science Foundation (NSFC).

Dr. Ratchford received his B.S. in mathematics and physics from Davidson College. The University of Virginia awarded him an M.A. and a Ph.D., both in physics. He is a fellow

of the AAAS and of the American Physical Society (APS), where he has served as chair of the APS Forum on International Physics. His memberships include the Council on Foreign Relations, Phi Beta Kappa, and Sigma Xi. Dr. Ratchford is married to Joanne Walton Causey; they have four children and six grandchildren.

Robert E. Roberts

Robert Roberts is the Director of the Science and Technology Policy Institute and Vice President for Research at the Institute for Defense Analyses (IDA). He is also the former director of IDA's Science and Technology Division. IDA consists of three Federally Funded Research and Development Centers – one focusing on studies and analyses for the Department of Defense, a second on communications and computing for the National Security Agency, and a third on science and technology policy for the Office of Science and Technology Policy.

Before joining the institute, he spent several years with the Department of Energy and prior to that he was associate professor of chemistry at Indiana University. Roberts is founder, former director and mentor for the Defense Science Study Group, a program to foster interest in national security issues among outstanding young professors of science and engineering.

He has served on several advisory boards including the Carnegie Mellon Advisory Board for the Department of Engineering and Public Policy, The Carnegie Mellon Research Institute Advisory Board, the Gas Technology Institute Advisory Council, the University of Kentucky Patterson School Board of Advisors, the University of Arizona Physics Advisory Board and the Purdue University Center for Education and Research in Information Assurance and Security External Advisory Board, the Purdue Homeland Security Institute Advisory Board, and the Purdue Discovery Park Advisory Council. He also serves on government research and advisory panels for both the Office of the Secretary of Defense and the Intelligence Community.

Roberts received his bachelor's degree from the Carnegie Institute of Technology (now Carnegie Mellon) in chemistry and his doctor's degree from the University of Wisconsin in physical chemistry. He was also a National Science Foundation postdoctoral research fellow at MIT.

Allen Lee Sessoms

Dr. Allen Lee Sessoms became the ninth president of Delaware State University on July 1, 2003. Widely respected as an outstanding administrator, leader and visionary, Dr. Sessoms seeks to achieve national prominence for the university and to enable it to emerge as an engine for economic development for the state of Delaware.

Dr. Sessoms already is moving in that direction. The university now offers a doctoral program in applied mathematics and mathematical physics. It is the first-ever doctoral

program in the institution's 106-year history. Dr. Sessoms also has placed in motion the development of other doctoral programs and additional master's degree programs. Through academic restructuring, Dr. Sessoms has laid the foundation to attract more adult learners and enhance online distance learning options. Through strategic planning, Dr. Sessoms would like to see enrollment increase to 10,000 graduate and undergraduate students during the next 10 years.

Dr. Sessoms has taken significant steps to upgrade the institution's athletic programs with the goal of being in the position in five years to move up to NCAA Division I-A in football. Dr. Sessoms is collaborating with the Dover-based Delaware Civic Center Corporation to work toward the construction of a combined Civic Center and Sports Health/Wellness facility. The joint facility would include a 30,000-seat football stadium and a 10,000-seat arena that will serve as the home for the Hornet football and basketball teams. Additionally, the facility would serve as an attractive venue for other sports and entertainment events.

Dr. Sessoms came to DSU after serving at Harvard University as a fellow and lecturer of Public Policy at the Belfer Center for Science and International Affairs in the institution's John F. Kennedy School of Government from 2000-2003. At Belfer, Dr. Sessoms taught on Mexico and led research on international relations, national security, science and technology, and energy research and development.

He also served as president of Queens College, which is part of the City University of New York, from 1995-2000. Under his leadership, the academic standards were raised for both students and faculty, annual alumni giving tripled, and $160 million in building renovations and construction took place. Also during his presidency, the college established major international programs with Latin American, Europe, China, and Japan.

From 1993-95 he served as an executive vice president and from 1994-95 as vice president of Academic Affairs at the University of Massachusetts, a five-campus, 60,000-student university system. Dr. Sessoms served 12 years for the U.S. State Department. He served as a senior technical advisor for the department's Bureau of Oceans & International Environmental and Scientific Affairs in Washington D.C. from 1980-82. From 1982-87, he was the director of the bureau's Office of Technology & Safeguards. From 1987-89, he served as a counselor for Scientific and Technological Affairs in the U.S. Embassy, Paris, France.

He moved on to the U.S. Embassy in Mexico, where he held the post of minister-counselor of Political Affairs from 1989-91, and then was elevated to deputy chief minister of missions (deputy ambassador) from 1991-93. In the latter post, he managed the largest U.S. diplomatic mission in the world and coordinated the implementation of all U.S. policies pertaining to Mexico.

After gaining his doctoral degree Dr. Sessoms held post-doctoral positions at Brookhaven National Laboratory in New York and at the CERN in Geneva, Switzerland.

Subsequently he served on the faculty of physics at Harvard University. He has published a number of important papers in scientific journals.

After earning his undergraduate degree from Union College, N.Y. in 1968, he completed a Master of Science Degree in Physics at the University of Washington in 1969. He later earned a Master of Philosophy Degree in 1971 and a Doctor of Science Degree in Physics in 1972 at Yale University. In addition to his native English, Dr. Sessoms also speaks Spanish, French and German.

Denis Fred Simon

Denis Fred Simon is the Provost and Vice-President for Academic Affairs of the Levin Graduate Institute of International Relations and Commerce under the State University of New York in New York City. He also serves as Executive Director of the Center for the Study of Science, Technology and Innovation in China at Levin. The Levin Institute is a newly created education and research institution whose mission is to prepare traditional graduate students and working professionals to work and manage effectively in the globalized economy of the 21st century (see www.suny.edu/levin-institute).

Prior to joining the Levin Institute, from July 2002-August 2004, Dr. Simon served as Dean of the Lally School of Management and Technology at Rensselaer Polytechnic Institute in Troy, New York. Dr. Simon also was a member of the Lally School faculty as a tenured Full Professor of International Business Strategy and Global Technology Management. In addition, he also served as a member of the Dean's Council at Rensselaer as well as being involved in substantial fund-raising activities and representational roles for RPI in various government and non-governmental bodies, e.g. National Academy of Sciences, Council on Competitiveness, and the National Science Foundation.

Prior to joining Rensselaer, Dr. Simon was President of Monitor Group (China). Monitor, which was founded by competitive strategy guru Dr. Michael Porter in the early 1980s, is one of the world's leading business strategy consulting firms--with 29 offices in 24 countries and 1600+ consulting professionals. Prior to joining Monitor, Dr. Simon was Managing Director of the Business Strategy and Architecture Innovation Center in Singapore for Scient Corporation. And, prior to his tenure at Scient, he was an Associate Partner at Andersen Consulting China, where he served as Director of the China Strategy Group. He also served as the General Manager for Andersen Consulting's China practice in Beijing from 1998-1999.

Dr. Simon's distinctive competence is that he is one of a select number of global management experts with dual knowledge of both business strategy & technology management *and* Asian business systems and cultures. Having first visited Asia in 1976 and the China mainland in 1981, Dr. Simon has developed an extensive network of professional relationships throughout business, government, and academia in the region. He has written and lectured widely regarding innovation, high technology development, foreign investment and corporate strategy in the PacRim and is frequently quoted in the

Western and Asian business press regarding commercial and technology trends in China, HK and the Asia-Pacific region.

Among his key publications are: *Technological Innovation in China* [with Detlef Rehn] (Harper Books, 1987), *Science and Technology in Post-Mao China* [edited with Merle Goldman] (Harvard University Press, 1989), *The Emerging Technological Trajectory of the Pacific Rim* (ME Sharpe, 1995), *Corporate Strategies Towards the Pacific Rim* (Routledge, 1996), and *Techno-Security in an Age of Globalization* (ME Sharpe, 1997). He currently is working on a book-length manuscript dealing with China's scientific and engineering talent pool.

Dr. Simon's achievements have been particularly notable in the context of his management consulting activities dealing with the People's Republic of China. With Andersen Consulting (now Accenture), Dr. Simon helped develop the strategy practice from its very limited beginnings into a 25+-person team of high-quality consulting professionals generating substantial engagements with both multinational firms and Chinese domestic clients. While serving as General Manager of the Beijing practice, he handled the administration, marketing and representational aspects of Andersen Consulting in China. In addition, he has conducted extensive client-related research on many of China's key evolving industries, including electronics, telecommunications, computers, automobiles, petrochemicals, transportation, and assorted consumer products. From 1990-1995, Dr. Simon served as President of China Consulting Associates (Boston), which was one of only four foreign consulting firms approved by China's State Council to operate as a domestically registered management consulting company in the PRC.

Prior to joining the world of professional services in 1995, Dr. Simon served as professor of international business strategy and technology management at the Fletcher School of Law & Diplomacy, Tufts University (1987-1995) and as the Ford International Assistant Professor of Management & Technology at the Sloan School of Management at the Massachusetts Institute of Technology (1983-1987). He received his M.A. degree in Asian Studies in 1975 and Ph.D. in Political Science in 1980 from the University of California at Berkeley. He received his B.A. degree in Asian Studies from the State University of New York in 1974.

Dr. Simon has continued to play an active role as a thought leader regarding international business and global technology developments. He served as a working group member of the National Innovation Initiative under the Council on Competitiveness from 2002-2005. And, he continues to serve as a member of the International Programs Advisory Committee. He also has served as a member of GUIRR (Government-University-Industry Research Roundtable) at the National Academy of Sciences. He is a Board member of the bilateral US-Israel Science and Technology Foundation/Commission. He also recently accepted an invitation to join the Board of the Alliance for Global Education. Finally, he has been a working member of the highly regarded Global Innovation Outlook 2.0 study sponsored by IBM.

His activities regarding developments in China also have continued unabated. In

September 2003, Dr. Simon was the principal organizer of a major international conference at Rensselaer, supported by the National Science Foundation, entitled, "China's Technological Trajectory in the Post-Deng Era." In April 2005, he testified before the special panel on *China's High Technology Development* organized by the US-China Economic and Security Review Commission of the US Congress. In May 2005, he was the keynote speaker before the World Trade Center in Albany, NY, where he spoke about "globalization, technology and China's Role in the Global R&D System." In June 2005, he was one of the co-organizers and keynote speakers, in cooperation with the Nanjing Municipal Government and Jiangsu Province, of an international business symposium titled, "The Emerging Role of Foreign R&D in China: Strategies and Challenges." In December 2005, he addressed a US State Department-sponsored conference at the Atlantic Council on indigenous innovation and foreign investment in China. And finally, in July 2006, in collaboration with China's Ministry of Science and Technology (under the direction of Vice-Minister SHANG Yong), Denis organized a major international 2.5 day conference at the Council on Foreign Relations on "industrial innovation in the People's Republic of China."

Richard P. Suttmeier

EDUCATION:

Ph.D. Indiana University, 1969 (Political Science)
A.B. Dartmouth College, 1963 (Philosophy)

CONSULTING EXPERIENCE:

Witness, US-China Economic and Security Commission, US Congress, Hearing on China's High Technology Development, Palo Alto, April, 2005.

Consultant, World Bank, Knowledge Management Project, Summer, 2000

Consultant, Chinese Ministry of Science and Technology on International Cooperation in Science and Technology, 1998-2000.

Consultant, World Bank, Final Evaluation of UNDP/World Bank "Key Studies Development Project," China, June, 1997.

Member, international team to review a decade of science and technology reforms in China organized by the International Development Research Center of Canada on behalf of the Chinese State Science and Technology Commission, November, 1995.

Consultant, Science Applications International Corp., 1995.

Consultant, World Bank, Mid-Term Evaluation of UNDP/World Bank "Key Studies Development Project," China, January, 1994.

WORK IN PROGRESS:

"Success in "Pasteur's Quadrant?" The Chinese Academy of Sciences and its Role in the National Innovation System" (with Shi Bing) Originally presented at the Tsinghua-Stanford workshop on Greater China's Innovative Capacities: Progress and Challenges, Beijing, May 20-21, 2006. Revised for publication by conference organizers.

"China's 15-Year Science Plan: Mapping Research and Innovation Strategies for the 21st Century." Solicited paper from *Physics Today*. Expected publications, Fall, 2006. (With Cong Cao and Denis Fred Simon).

"State, Self-Organization, and Identity in the Building of Sino-US Cooperation in Science &Technology." Paper prepared for delivery at the conference on "' People on the Move': The Transnational Flow of Chinese Human Capital," Center on Chinese Transnational Relations,

Hong Kong University of Science and Technology, October 20-22, 2005. Revised for publication in a special issue of *Pacific Affairs*.

"China's Innovation Challenge and The Remaking of the Chinese Academy of Sciences" (with Cong Cao and Denis Fred Simon). Submitted for publication in *Innovations: Technology, Governance, Globalization*, Vol. 1 Number 3.

"Standards and the State: Chinese Technology Policy in an Age of Globalization." (with Yao Xiangkui). Submitted for publication by the East Asian Institute, University of Singapore.

"A World United or Divided?: Standardization's Impact on Global Trade." Submitted for publication in *The Standards Edge: Unifier or Divider*.

PUBLICATIONS

Books:

Science, Technology and China's Drive for Modernization. Hoover Institution Press. 1980.

Research and Revolution: Science Policy and Societal Change in China. Lexington Books. 1974**.**

Major Reports:

Standards of Power? Technology, Institutions, and Politics in the Development of China's National Standards Strategy. NBR Special Report. National Bureau of Asian Research, June, 2006 (with Yao Xiangkui and Alex Tan).

China's Post-WTO Technology Policy: Standards, Software, and the Changing Nature of Techno-Nationalism. NBR Special Report. National Bureau of Asian Research, May, 2004 (with Yao Xiangkui).

A Decade of Reform: Science and Technology Policy in China. Ottawa. International Development Research Center, 1997 (contributing author).

Technology Transfer to China. U.S. Congress. Office of Technology Assessment. 1987. (contributing author).

Recent Refereed Articles:

"'Knowledge Innovation' and the Chinese Academy of Sciences." *Science* 312 (April 7, 2006), pp. 58-9. (With Cao Cong and Denis Simon)

"China's New Scientific Elite: Distinguished Young Scientists, the Research Environment, and Hopes for Chinese Science" (With Cao Cong). *The China Quarterly*. 168 (December, 2001). pp.960-984.

Recent Book Chapters:

"Science and Technology: A New World in the Making?" In Ashley Tellis and Michael Wills (eds.). *Strategic Asia 2004-05: Confronting Terrorism in the Pursuit of Power*. Seattle. The National Bureau of Asian Research. 2004.

"Reform, China's Technical Community, and the Changing Policy Cultures of Science." (With Cao Cong). In Merle Goldman and Edward Gu (eds.). *Chinese Intellectuals between Market and State*. London. Routledge-Curzon. 2004.

Kathleen (Kate) Walsh

Ms. Walsh is currently Professor of National Security Affairs in the National Security Decision Making Department, Policy Making and Processes Division of the Naval War College in Newport, RI. Her research focuses on China and the Asia-Pacific region, particularly issues related to technology transfer, nonproliferation, and export controls.

Her recent writings and presentations include "China's R&D Field of Dreams," *Asia-Pacific Business Review* (forthcoming) based on a presentation on "Global R&D and

China" at a workshop in Nanjing, PRC co-sponsored by the Nanjing City Government, Levin Institute, and California State University Northridge (May 2005); a presentation on "Driven to Excel: China's Quest for High-Tech" prepared for the conference on "Chinese High-Tech: Strategy & Status" for the Japan Information Access Project's "Asian Science & Technology Forum" (December 2005); a presentation on "Strategic R&D Funding: Implications of R&D Outsourcing to China," prepared for a conference on "R&D Funding for a New Strategic Environment," at the Center for Strategic and International Studies (CSIS) Technology and Public Policy Program and the National Academies (June 2005), and testimony before the US-China Commission Hearing on "China's High Technology Development" (April 2005).

Previous to her War College assignment, Ms. Walsh was an independent consultant on international and Asian security affairs (2004-06). She is formerly Senior Associate at the Henry L. Stimson Center (2000-2004) and at DFI International (1997-2000). Among other works, she is author of *Foreign High-Tech R&D in China: Risks, Rewards, and Implications for US-China Relations* (Stimson Center, June 2003) and *U.S. Commercial Technology Transfers to China* (US Department of Commerce, 1999) in addition to numerous published articles, government briefings, and Congressional testimonies. She has an M.A. in International Security Policy from the School of International and Public Affairs, Columbia University and a B.A. in International Affairs from the Elliott School of International Affairs, George Washington University.

Proceedings of the China-U.S. Forum on Science and Technology Policy

Appendix E - Agenda

Venue: Beijing Xiyuan Hotel

Dates: October 15-17, 2006

OCTOBER 15:

18:30 PM – 20:30 PM	**Welcome Dinner** **MOST representatives and U.S. Delegation members**

OCTOBER 16:

10:00 AM - 12:00 PM	**Inaugural Session** **Chair: JIN Xiaoming,** Director of Department of International Cooperation, Ministry of Science and Technology, People's Republic of China **Rapporteur: Ling Zhu**, Graduate Student in Management Information Systems, University of Arizona
Welcome and Greetings **China Keynote**	**HUANG Qitao,** Former Vice Minister of Science and Technology, Former Executive Vice Minister of State Science and Technology Commission, People's Republic of China
Response	**David Sedney, Deputy Chief of Mission (DCM)** **U. S. Embassy, Beijing**
U.S. Keynote	**Edward David,** Former Science Advisor to President Nixon and Former Director, Office of Science and Technology (OST)
Break	
Forum Objectives and Procedures	**ZHOU Yuan**, Deputy Director-General, National Research Center for Science and Technology for Development **J. Thomas Ratchford**, Director, Science and Trade Policy Program, George Mason University School of Law
Comments	**LI Daoyu,** Former Chinese Ambassador to the USA **XU Heping,** Director, Executive Office, MOST

WANG Chunfa, Deputy Director-General, Investigation and Publicity Department, China Association for Science and Technology
William Blanpied[1]**,** Senior Research Scholar, Science and Trade Policy Program, George Mason University School of Law
Jennifer McCormick, Postdoctoral Fellow, Stanford Center for Biomedical Ethics
Denis Simon, Provost and Vice President for Academic Affairs, Levin Graduate Institute, SUNY

12:00 PM - 2:00 PM **Luncheon**
Chair: WANG Yuan, Director-General, National Research Center for Science and Technology for Development
Rappoteur: Jennifer McCormick

Speaker: Richard Atkinson, Former Director of NSF and President Emeritus, University of California
"Research Universities and the Wealth of Nations"

2:00 PM - 5:00 PM **Roundtable #1**: **Lessons Learned during the Evolution of China-U.S. Relations Since Normalization**.

Chair: LI Daoyu
Rapporteur: Elizabeth Morel, Engineer, ExxonMobil Research and Engineering Company

Invited Presentations

U.S. speaker: **Xiangli Chen**, General Manager, Global Technology, GE Healthcare
"Successes and Challenges of Industrial R&D in China"
Chinese speaker: **WU Yikang**, Honorary president, China Association for Science and Technology Cooperation
"The Evolution and Experiences of Sino-American Scientific and Technological Cooperation"

U.S. speaker: **Denis Simon**, Provost
Levin Institute, State University of New York
"Sino-US Technology Transfer Relations, 1981-2006: The Impact of Globalization"

1. Since Prof. Neal Lane was obliged to cancel his visit to Beijing for personal reasons only two days prior to the conference, Dr. Blanpied took his place as a commentator in this session.

Chinese speaker: **DUAN Ruichun**, Former Vice Secretary General, MOST

"Who is the Winner? – Competition and Cooperation on IPR"

U.S. speaker: **Richard Suttmeier**, Professor, University of Oregon

"China-US S&T Cooperation - Past Achievements and Future Challenges"

Chinese speaker: **ZHANG Wei**, Deputy Director, Department of Management Sciences, NSFC

"Sino-US Cooperation in Management Sciences: A Perspective from NSFC for the Recent 25 Years"

Round Table Discussion

Chinese Members:

LI Daoyu
WU Yikang
DUAN Ruichun
ZHANG Wei
LUO Hui, Division Chief, Office of Investigation and Research, Executive Office, Ministry of Science and Technology of the People's Republic of China
SUN Xiangdong, Associate Professor, Chinese Central Party School
KONG Deyong, Executive Deputy Director-General, Association for Soft Science of China

U.S. Members:

Xiangli Chen
Edward David
John Gibbons, Former Assistant for Science and Technology to President Clinton and Former Director of the Office of Science and Technology Policy (OSTP)
Kathryn Miller-Jensen, Postdoctoral Associate, Massachusetts Institute of Technology
Robert Roberts, Director, Science and Technology Policy Institute/IDA
Denis Simon
Richard Suttmeier

Coffee Break

5:00 PM - 5:30 PM **Open Discussion**
Co-Chairs:
MU Rongping, Director, Institute of Policy and Management, CAS
Kathleen Walsh, Professor of National Security Affairs, Naval War College

7:00 PM - 9:00 PM **Dinner**
Chair: Xiangli Chen
Rapporteur: Aaron Levine, Graduate Student in Public Affairs, Princeton University

Speaker: ZHU Zuoyan, Vice President, National Natural Science Foundation of China (NSFC)
"The Roles of NSFC in Fostering International Collaboration in Science and Technology"

OCTOBER 17:

9:00 AM - 12:00 PM **Chair: John Gibbons**
Rapporteur: Evan Michelson, Research Associate, Woodrow Wilson Center for International Scholars

Roundtable #2: U.S.-China Relations in the Globalized 21st Century

Invited Presentations

Chinese speaker: **MU Rongping**
"The Science and Technology Capacity of the United States and China – Change and its Impact""
U.S. speaker: **Neal Lane**[2]
"A Time of Unprecedented Opportunity for U.S.-China Cooperation in Science and Technology"

Chinese speaker: **FAN Hongfu**, Director of Beijing Office, ZTE Corporation
"ZTE-Qualcomm Cooperation on CDMA"
U.S. speaker: **Sadeg Faris**, Chairman and CEO of REVEO
"How Pioneering Innovations Close the Technology Gap and Achieve Technology Sovereignty"

2. Since Prof. Lane was obliged to cancel his participation in the Forum, his prepared remarks were read by Prof. Ratchford.

Chinese speaker: **GONG Ke**, President, Tianjin University
"Scientific Research and Social Development – The Role of Research Universities and Their Industrial Cooperation"
U.S. speaker: **Allen Sessoms**, President, Delaware State University
"The Role of U.S. Universities in Economic Development"

Round Table Discussion

Chinese Members:
MU Rongping
FAN Hongfu
GONG Ke
LIU Jianfei, Director, Office of Foreign Affairs, Chinese Central Party School
MA Lianjie, Professor, College of Public Administration, Huazhong University of Science and Technology
YUAN Peng, Deputy Director, Institute of American Studies, China Institutes of Contemporary International Relations

US Members:
Sadeg Faris
Elizabeth Morel
J. Thomas Ratchford
Allen Sessoms
Kathleen Walsh

Coffee Break

Open Discussion
Co-Chairs:
Edward David
SU Jing, Division Chief, Department of Policy, Regulations and Reform, MOST

12:00 PM-2:00 PM **Luncheon**

Chair: Deborah Seligsohn, Environment, Science, Technology and Health Counselor, U.S. Embassy, Beijing
Rapporteur: Kathryn Miller-Jensen

Speaker: DENG Zhonghan, Chairman, Vimicro Corporation
"Adding Value Through Innovation"

2:00 PM - 4:30 PM

General Discussion
Co-Chairs:
LI Daoyu
John Gibbons

Session Rapporteurs: Summaries of Inagural Sessions, Roundtables, and Luncheon and Dinner Speeches

Identification of Policy Issues Common to China and U.S. that are Important to the Future of the Bilateral S&T Relationship, organized along the same subject lines as the Roundtables.

General Discussion

Summary Remarks
U.S. speaker: Richard Atkinson
Chinese speaker: MA Junru, Former General Director of State Admnistration of Foreign Experts (SAFEA)

Note: On Thursday, October 19th Mr. MA Junru and Prof. J. Thomas Ratchford presented reports summarizing the Forum results to the 12th Joint Commission Meeting on US-China Cooperation in Science and Technology.

4:30 PM

Adjournment

6:00 PM

Closing Dinner

Chair: LI Genxin, Secretary-General, Institute of International Studies

Speaker: John Gibbons

"Lessons from the Past; Challenges of the Present; Opportunities for the Future"

Proceedings of the China-U.S. Forum on Science and Technology Policy

Appendix F - George Mason University Program of U.S.-China Cooperation in Science Policy, Research and Education

Supported by Grants from the
U.S. National Science Foundation (NSF) to the
Science and Trade Policy Program
National Center for Technology & Law
George Mason University School of Law

Carried out in Cooperation with the
U.S. National Science Foundation (NSF)
National Natural Science Foundation of China (NSFC) and the
Ministry of Science and Technology of China (MOST)

The U.S.-China Cooperation Program in Science Policy, Research and Education began in 1999. It is built on experience gained from more than two decades of prior cooperation between the United States and the People's Republic of China in science and engineering. The productive, long-standing relationship between the National Science Foundation of the United States of America (NSF) and the National Natural Science Foundation of China (NSFC) is a cornerstone of this cooperation. The Ministry of Science and Technology (MOST) of China also played a crucial role, especially in the 2006 Forum. The program aims to utilize the various events of the initiative as a basis for expanded bilateral cooperation in science policy, and to provide a foundation for strengthened partnerships in specific areas of science and engineering.

Information on the NSFC can be found at: http://www.nsfc.gov.cn

Information on the NSF can be found at: http://www.nsf.gov

Information on the MOST can be found at: http://www.most.gov.cn/eng

The program is composed of a variety of activities. It includes a series of science and technology policy seminars, workshops, forums and related events scheduled over the first decade of the twenty-first century. These activities have explored or will explore issues with significant implications for the vitality of science and engineering in the emerging global, borderless, knowledge-based economy. These and other activities are documented through print and electronic publication. Desired outcomes include better information on science and technology policy issues for policy makers in both countries as well as increased bilateral cooperation between Chinese and U.S. institutions, including those involved in the initiative's activities.

Further information on the initiative can be found at:

http://law.gmu.edu/nctl/stpp/us_china.php

OCTOBER 1999 BEIJING R&D POLICY SEMINAR

The first bilateral event in this program was held in Beijing, October 24-26, 1999. Co-chaired by Wu Weixuan (Chinese Academy of Sciences) and J. Thomas Ratchford (George Mason University Law School), the "Seminar on **R&D and the Knowledge-Based Society:** *Linking the Production, Dissemination, and Application of Research*," was designed to develop guiding principles for the entire initiative. Specific topics addressed at the Beijing seminar include:

- Information and Data Requirements for Policy Making
- Human Resources for Science and Engineering
- Changing Character of R&D
- Challenges for the Future

A short report and Executive Summary of the Seminar can be found at:

http://www.nsftokyo.org/rm00-01.html

A proceedings volume with the full text of papers in both English and Chinese has been published by the NSFC. The complete proceedings are available in English and Chinese at:

http://law.gmu.edu/nctl/stpp/first_scipolicy.php

DECEMBER 2000 BETHESDA BIOTECH SEMINAR

The second major event was the "U.S.-China Policy Forum on **Biotechnology and Biomedicine**," held at the Lawton Chiles International House of the National Institutes of Health, December 4-5, 2000. The co-chairs were Gerald Keusch (National Institutes of Health) and Ji-Sheng Han (Peking University). Topics addressed include:

- Areas that Offer Mutual Advantages from Cooperation, including case studies from the past and current projects that demonstrate factors that make for successful collaborations.
- New Technologies that Facilitate Cooperation, including information technologies, technologies for understanding biocomplexity in the environment, and genomic sciences.
- Biodiversity and Ecology of Infectious Diseases, including wildlife conservation and biodiversity in China and the U.S. and ecology of infectious diseases in the two countries.
- Clinical Research Systems Compared, including cancer research, organization and management of clinical research, and clinical trial oversight.
- Differences in the Chinese and U.S. IPR and Bioethics Systems, including intellectual property rights, as relevant to research, protection of IPR in biotechnology in China, research on the management of IPR for biology and

drug manufacture, technology transfer, ethics in cancer prevention and control in China, and protection of human subjects and harmonization of ethical standards for international research.
- Options for Policy and Procedural Changes to Facilitate Research Cooperation.

An English language report on the seminar is available at the NSF Tokyo web site:

http://www.nsftokyo.org/asia/eaprm01-09.htm

The proceedings of the seminar in both English and Chinese are available at:

http://law.gmu.edu/nctl/stpp/biotech.php

MARCH 2002 WASHINGTON INNOVATION SEMINAR

The national headquarters of the Industrial Research Institute (IRI) in Washington was the site of the third bilateral seminar. The "U.S.-China Seminar on **Technical Innovation**" was held March 18-20, 2002, co-chaired by Lewis Branscomb (Harvard University) and Zhu Zuoyan (National Natural Science Foundation of China). The seminar addressed policies and practice affecting the transition from invention to innovation. Major topics included:

- Creation of Innovations: Research Centers, Institutes and Universities
- Innovations in Large Enterprises and Their Supply Chains
- Globalization: Transnational Dependences in Innovation
- Innovation in Small and New High Tech Enterprises
- Financing Innovations
- Innovation Networks and Social Capital

The agenda and proceedings of the seminar in both English and Chinese are available at:

http://law.gmu.edu/nctl/stpp/tech_innovation.php

JUNE 2002 BEIJING S&T POLICY WORKSHOP

A "China-U.S. Workshop on **S&T Policy Challenges for the Decade**" was held in Beijing, June 24-25, 2002. The agenda can be found at:

http://law.gmu.edu/nctl/stpp/us_china_pubs/nsfc-nsf_workshop_agenda.pdf

The workshop reviewed progress under the initiative and considered revisions to its themes and content. It also considered dissemination strategies that would make results of the initiative and its various activities more helpful to policy makers. Topics for future seminars were discussed and those in preparation for 2002-2003 were confirmed. A

major bilateral seminar to review and compare U.S. and Chinese science and technology policy was recommended for 2004. A workshop report will treat these and other issues in more detail.

OCTOBER 2002 SHANGHAI & BEIJING ENGINEERING EDUCATION SEMINAR

The fifth event was a "China-U.S. Seminar on **Engineering Education for a Global Economy**" held October 20-24, 2002 in Shanghai and Beijing. The co-chairs were Edward Parrish (Worcester Polytechnic Institute) and Weng Shilie (Shanghai Jiao Tong University). Its theme addresses changing demands for engineering education in the global knowledge-based economy. Underlying the selection of this theme is the assumption that a deeper understanding of and appreciation for differing perspectives and approaches to associated issues will improve planning and implementation — nationally, bilaterally, and regionally — for the effective and balanced development of a global workforce.

There were three topical themes:

1. Lifelong Learning & Distance Education. The rapid pace of technological change necessitates means for engineers to learn continuously throughout their careers. How can they best achieve life-long learning and how can universities and companies best provide opportunities for such learning? What role should universities play in retraining engineers for career changes later in life?

2. Globalization of Engineering Education. The development of the global economy has made more companies multi-national based. International cooperation and collaboration for engineering is becoming a common phenomenon. Issues considered include: what influence should globalization have in shaping policies? How should engineering education curricula and programs be adapted to match this changing environment? How should accreditation in different countries be handled?

3. Innovation and Creation in Engineering Education. The soul of engineering is innovation and creation. Explicit knowledge is generally taught well and transferred easily. Implicit or tacit knowledge, frequently referred as "know-how," is not taught well. The seminar considered how can the principles of knowledge management be applied to strengthen engineering education in the global economy? How can students' identity be strengthened and how can students be encouraged to think critically? What role can partnerships and research parks play in preparing students to be future innovators?

The full proceedings in Chinese and English are available at:

http://law.gmu.edu/nctl/stpp/eng_education.php

DECEMBER 2003 HAWAII INTERNET SEMINAR

A Trilateral Seminar on **Science, Society and the Internet** was held December 14-16, 2003 at the East-West Center in Honolulu. For the first time in this program there was Japanese participation, along with delegations from the U.S. and China. The Japan Society for the Promotion of Science (JSPS) joined the National Natural Science Foundation of China (NSFC) and the U.S. National Science Foundation (NSF) in supporting the seminar. The co-chairs of the Trilateral Seminar were Toshihiko Hayashi (Stanford Japan Center, Japanese co-chair); Li Xiaoming (Peking University, Chinese co-chair); and Wesley Shrum (Louisiana State University, U.S. co-chair).

This seminar brought together scientists from the United States, Japan and China, as well as other policy makers and experts from the three countries. These experts were concerned with and knowledgeable about the impacts of the Internet on science and society. Many of the issues discussed at the seminar involved balances and tradeoffs: for example, between the desirability of open communication among scientists, and the imperatives to maintain national and international security and protect personal and institutional privacy. The overall objective of the seminar was to identify and illuminate the most critical issues associated with the impacts of the Internet on science and society, rather than to seek to identify definitive solutions to the significant national and international issues that arise.

The full English language proceedings are available at:

http://law.gmu.edu/nctl/stpp/Internet.php and http://law.gmu.edu/nctl/stpp/us_japan.php

FEBRUARY 2004 BEIJING FORUM ON BASIC SCIENCES

Long range planning for basic research was the topic of the Sino-U.S. Forum on Basic Sciences for the Next Fifteen Years held February 16-17, 2004 in Beijing. The Forum took place in conjunction with efforts by the National Natural Science Foundation of China (NSFC) to coordinate the development of a national basic research plan covering the next fifteen years in that country. This in turn is part of a larger effort, known as "China's Science & Technology Advance Towards 2020," coordinated by the Ministry of Science and Technology in China (MOST), and covering all aspects of science and technology and their roles in education and the economy. Experts from both countries evaluated and compared the content, funding and management of basic research at the national level in the U.S. and China.

The forum provided explicit information about approaches the Chinese scientific community is taking to the complex set of technical and economic issues associated with the support and conduct of basic research during the medium and long-term future. The forum also provided information of a more implicit nature about the attitudes of the Government of the People's Republic of China, and of the Chinese scientific community, towards the support of basic research, and research and development (R&D) more broadly. One set of issues concerned the increasingly significant role of enterprises in

China both in the performance and support of R&D. However, in view of its focus on basic sciences, the "world view" of the forum was primarily that of government.

Information from the Forum will be useful to U.S. and Chinese policy makers in government, universities and industry. Discussions are underway as how best to use the February 2004 Forum as a point of departure for a Forum on Science and Technology Policy in the United States and China. The latter event would examine and compare science and technology policies more broadly than the Forum on Basic Science for the Next Fifteen Years. Co-chairs of the Forum on Basic Science for the Next Fifteen Years were Chen Jia'er, Honorary President of NSFC, and Joseph Bordogna, Deputy Director of NSF.

A detailed English language report on the Forum is available at:

http://law.gmu.edu/nctl/stpp/us_china_pubs/proceedings_sino-US_science_forum.pdf

DECEMBER 2005 BOSTON TRILATERAL SEMINAR ON R&D POLICIES RELATED TO EMERGING AND RE-EMERGING INFECTIOUS DISEASES

A Trilateral Seminar on R&D Policies Related to Emerging and Re-emerging Infectious Diseases was held December 14-16, 2005 at Boston University in Boston, MA. This is the second trilateral event in the series, with the Korea Science and Engineering Foundation (KOSEF) joining the NSFC and NSF in support.

The co-chairs were Wu Guanling (Nanjing Medical University, Chinese co-chair); Hae-Kwan Cheong (Sungkyunkwan University School of Medicine, Korean co-chair); and Gerald Keusch (School of Public Health, Boston University, U.S. co-chair). The four major themes were:

Surveillance. This was a review of existing and potential local and national mechanisms for the early detection and diagnosis of new or emergent infectious diseases. It also covered approaches for international collaboration in surveillance. There was a special emphasis on respiratory infections, notably SARS and influenza. Factors contributing to past successes and failures were considered along with feasible means for improving the relevant mechanisms. Although presentations dealt primarily with national programs there was discussion on how these translate into operations at city and/or local or regional levels.

Modeling and Simulation. Emerging and re-emerging infectious diseases occur in the context of uncertainty with regard to their control. However, data from past or similar experiences can be integrated to formulate decision support models. Quantitative variables that describe biological properties (microbial niche, transmission dynamics, natural history with hosts, population immunity profiles), intervention effectiveness (social spacing, vaccines, therapeutics) and operational/logistical response to implement population-based controls, can help describe the impact of an emerging disease and possible response scenarios. This portion of the seminar addressed how some of these

modeling tools have been used to inform decision making in both real time and in future planning. Issues covered included the use and limits of models, collaborations to facilitate data collection/collation and how to address uncertainty.

Products and Technologies. This session considered two aspects of product development for emerging infectious diseases: drugs and vaccine on the one hand, and tools for surveillance, rapid diagnosis and determination of virulence and drug resistance profiles on the other. It covered the technical, development, testing and safety challenges associated with designing and manufacturing drugs and vaccines for these agents, which may be locally important and limited in capacity to spread widely or rapidly pandemic in nature. A second emphasis was on the need for and existing barriers to development and dissemination of new and rapid technologies for epidemiological and clinical use to identify and characterize emerging infectious agents, whether in the environment, in reservoir hosts, or in individual patients. Issues such as sensitivity, specificity, cost and availability were considered. The potential for and barriers to international collaboration in the development of products and diagnostic technologies were highlighted.

Implementation of Effective Policies. This session, based in part on lessons learned from past experience, considered how to put in place feasible national policies and institutional mechanisms for dealing effectively and rapidly with specific threats associated with the spread of infectious diseases. Short-range measures intended to deal with infectious diseases that may emerge within the next five years, as well as longer-term measures were addressed. The long-term measures include areas where additional research should be emphasized, as well as education and career paths for the next generation of scientists and policy specialists.

The full English language proceedings and presentations are available at:

http://law.gmu.edu/nctl/stpp/infectious_disease.php

OCTOBER 2006 BEIJING SCIENCE AND TECHNOLOGY POLICY FORUM

The U.S.-China Science and Technology Policy Forum was held in Beijing, Peoples Republic of China, on October 15-17, 2006. The Forum was held in conjunction with the 12th China-U.S. Joint Commission Meeting, October 18-19, 2006.

The overall objectives of the Forum were to:

- Explore issues important to the future China-U.S. bilateral relationship;
- Be useful to policy makers and decision makers in both countries, including the 2006 (12th) JCM;
- Generate a baseline of knowledge relating to the U.S.-China S&T policy relationship through commissioned background papers;
- Involve outstanding leaders in the Forum with knowledge, experience, and wisdom who will examine issues and synthesize useful ideas and conclusions for better dealing with bilateral S&T policy challenges;

- Provide a structure to participants to examine and discuss issues and ideas;
- Insure participation of outstanding individuals with relevant experience in academia, government, and industry;
- Enhance the understanding of relevant intellectual and practical information and data through careful selection of paper authors and speakers;
- Provide opportunities for young scholars to learn and to participate in dialogue with senior participants, with the possibility of attracting young talented scholars into areas related to some of the bilateral policy issues examined at the Forum;
- Document the background papers, presentations, discussions, and conclusions through print and electronic media; and
- Disseminate the printed and electronic record of the Forum to decision makers and the general public in both countries through a variety of means.

Approximately 120 Chinese and 50 U.S. leaders from government, industry, and academia were invited to attend the Forum. Among these some two dozen each from the Chinese American sides played active roles as Forum participants.

The core of the Forum consisted of two roundtables: the first of these, on *Lessons Learned during the Evolution of China-U.S. Relations Since Normalization*, was held during the afternoon of October 16; the second, on *U.S.-China Relations in the Globalized 21st Century*, was held on the morning of October 17. Each roundtable featured prepared remarks by three Chinese and three American speakers, followed by brief comments on those remarks by additional Chinese and American participants. Both roundtables were followed by open discussion periods.

Six U.S. young scholars, ranging from a June 2006 bachelor's degree recipient to two post-doctoral scholars who had received their PhD degrees within two years of the Forum, were among the participants. Four of the Young Scholars were supported by NSF and two by the Motorola Foundation. They were selected by means of a nationwide competition. These young scholars served as rapporteurs for the various sessions of the Forum. On the two days immediately following the Forum the young scholars visited Tsinghua University, the National Natural Science Foundation of China (NSFC), the Institute for Policy and Management of the Chinese Academy of Sciences (CAS/IPM), and the National Center for Science and Technology for Development (NRCSTD). During these visits they were briefed on various aspects of China's Science and Technology Policy, and had opportunities for open discussion with Chinese attendees.

A detailed English language report on the Forum is available at:

http://law.gmu.edu/nctl/stpp/STPolicy_Forum.php

ADVISORY COUNCIL

An Advisory Council has provided advice and guidance to the program since 2003. Dr. Fred Bernthal, President of Universities Research Association, chairs the panel. Other members are drawn from government, universities, research laboratories and companies.

A core group of council members comprised the U.S. delegation to the June 2002 Beijing Workshop. The Advisory Council held its first meeting in November 2002 and met again on August 2, 2004. Council members have contributed to the program in many ways: serving as authors of papers, participants in seminars, forums and workshops, and members of selection committees. Advice via electronic "virtual meetings" has been the predominant mode recently.

Council members are: Frederick M. Bernthal, Council Chair, Universities Research Association; Mary Brown Bullock, Agnes Scott College; Alex DeAngelis, U.S. National Science Foundation (ret.); James Decker, US Department of Energy (ret.); Paul Gilman, Oak Ridge Center for Advanced Studies; Gretchen Kalonji, University of California; Ruth Kirschstein, National Institutes of Health; J. Thomas Ratchford, George Mason University School of Law; Maxine Savitz, Honeywell (ret.); Allen L. Sessoms, Delaware State University; Denis Simon, Levin Graduate Institute for International Relations & Commerce; and Lilian Wu, IBM Corporation.

PROGRAM WEB SITE

The GMU China Program recognizes that the information generated by the series of seminars and forums on the U.S. and China S&T policy is only as effective as its dissemination. An effort has been made to make the project web site as useful to decision makers and the informed public as possible. It contains not only the collection of proceedings of program events and related publications, but also other recent literature on China S&T policy. Its links to a variety of China S&T policy sites provide additional clues and assistance to the serious researcher, member of the interested public or policy maker interested in China. See

http://www.law.gmu.edu/nctl/stpp/us_china.php

for details.

The program is now beginning an expanded effort to disseminate information on China S&T policy both to decision makers and the interested public in this country. The objective is to use existing material and the input of experts to produce and distribute widely a series of web-linked policy briefs. Objectives of this effort are to:

- Identify policy issues related to the U.S.-China S&T cooperation that are important to policy makers
- Develop a series of "Policy Briefs" related to the identified issues
- Base policy briefs on contents of existing program web site and input from scholars, interested public and policy makers
- Initiate a process that will generate, evaluate and update the briefs and permit their evolution to accommodate changing needs of both the facts and needs of the policy community
- Involve both experts and the broader interested public in the process of identifying, developing and editing these briefs

- Disseminate the products (policy briefs and related information) aggressively

The briefs will be tiered (that is provide different levels of detail). They will start with broad initial topics and then narrow down to specific sub-topics with detailed information, so the readers can choose what to read depending on their interests and needs. The briefs will provide ready access to detailed bibliographic entries on the web.

The briefs will be web-based. This means "home" for the briefs will be the web. They will be posted on the GMU China Program web site and be available to the public. Distribution of printed (and e-mailed) versions will refer to website for updates and changes.

The briefs will be web-linked. This means the contents of each policy brief will be linked to other relevant web sites and/or web documents (a high density of links in each document is likely). This will magnify the degree of detail available to the interested reader. Bibliographic material associated with briefs will make use of linked entries found on GMU China Program web site and others.

A modified "Wikipedia" updating process will be used. A panel of experts for each brief will bring not only their own expertise, but input from policy makers and the interested public will be solicited. The briefs will be updated as needed, after appropriate evaluation of scope, accuracy and content.

FURTHER INFORMATION

In addition to the material on the web sites referred to above, you may obtain further information on the initiative by contacting the project director and principal investigator:

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Appendix G - Acknowledgements

The China-U.S. Forum on Science and Technology Policy was more than three years from concept to reality. During this period many people in both countries worked very hard to bring it to fruition. Some of the people and institutions are acknowledged below. Others, including the speakers and discussants, are noted prominently in the agenda and contents of this volume.

First, the Chinese Ministry of Science and Technology (MOST) and the U.S. National Science Foundation (NSF) generously supported the Forum financially. In addition the Motorola Foundation provided grants to some of the Young Scholars. Without this support the Forum could not have gone forward. Other government agencies heavily involved included the U.S. Office of Science and Technology Policy, U.S. State Department, National Natural Science Foundation of China (NSFC) and the Chinese Academy of Sciences (CAS). The planning and organizational responsibilities were carried out by the National Research Center for Science and Technology for Development (NRCSTD) of the MOST and the George Mason University Science and Trade Policy Program.

Behind these institutions were many talented and industrious individuals. It would be impossible to mention all, but some of those who did not appear on the agenda are especially deserving.

Team leaders for the preparation of the three Chinese background papers were LIU Yun (Beijing Institute of Technology) and ZHAO Gang (NRCSTD). U.S. authors of background papers were Kathleen Walsh (Naval War College), Neal Lane (Rice University) and Alex DeAngelis (consultant). Reviewers for the drafts of these six papers, QING He (Peking University); MA Lianjie (Huazhong University of S&T); Allen Sessoms (Delaware State University); and Mary Brown Bullock (Agnes Scott College). These papers will no doubt add greatly to the knowledge base of China-U.S. S&T policy relationships.

On the Chinese side special kudos go to the following MOST and NRCSTD officials, who made the Forum work smoothly: LI Xin, DAI Le, LIN Yuanyuan, CHANG Yufeng, and CHEN Weihua. CHEN Huai of the NSFC is due special appreciation, not only for her contribution to the planning of the Forum but for her many years of leadership for the series of China-U.S. policy dialogues.

On the U.S. side special thanks are due to Fred Bernthal, chair of the Advisory Council to the GMU S&T Policy Program, and his colleagues on the Council for their continuing

advice and counsel. Staff members of the U.S. Embassy in Beijing provided invaluable support.

Finally, it would be difficult to adequately thank Bill Blanpied and Soo Shin for their superb contributions to the Forum. Dr. Blanpied guided the paper preparation process and served as editor of the proceedings. Ms. Shin used her impressive organizational and diplomatic skills to assure the U.S. side did the right thing at the correct time and that all of this was properly coordinated with the Chinese side.

Deep gratitude is due all of the above. Without their superb contributions the Forum would have not been what it was.

Tom Ratchford

George Mason University School of Law
Science and Trade Policy Program
January 11, 2007