

U.S. - Chinese Glossary of Nuclear Security Terms

Committee

Ming-Shih Lu

Chair

Ming-Shih Lu holds a B.S. in Physics from National Taiwan University and a Ph.D in Engineering and Applied Physics from Cornell University. He worked for Brookhaven National Laboratory in various nuclear-related fields: international and domestic safeguards, arms controls, and reactor safety. For example, in safeguards, he developed the foundation for the use of randomized inspections in IAEA integrated safeguards systems, wrote a series of IAEA SSAC guides for complete fuel cycle facilities, studied issues related to unreported production of plutonium in light water reactors, and developed physical models for nuclear measurements and their statistical analysis. In reactor safety, he pioneered the use of coupled reactor and plant system codes dealing with both neutronic and thermal-hydraulic for transients analysis, including Peach Bottom turbine trip tests. He served as a consultant to the US SAGSI Representatives to the IAEA and as a US Representative at the ESARDA NDA Working Group.

Richard L. Garwin

Member

Richard L. Garwin (NAS, NAE, IOM), CISAC China Security Dialogue leader, is IBM Fellow Emeritus of the Thomas J. Watson Research Center of the IBM Corporation. He served the President's Science Advisory Committee, as both a consultant and a member, and was chair of the State Department's Arms Control and Nonproliferation Advisory Board and its predecessors from 1992 to 2001. His extraordinary contributions to science and security have been recognized through the National Medal of Science, and the intelligence community's R. V. Jones Award.

Raymond Jeanloz

Member

Raymond Jeanloz (NAS), is Professor of Earth and Planetary Science and of Astronomy at the University of California at Berkeley. He has done pioneering work in mineral physics, measurement of materials properties and simulation of deep-Earth processes using diamond-anvil and shock-wave experiments, elucidation of the core-mantle boundary as a chemically reactive zone, and study of the role of water in mantle processes and deep earthquake generation. His research and teaching have been recognized through a MacArthur Award, the American Geophysical Union's Macelwane Award, and Fellowship in the American Academy of Arts and Sciences and American Association for the Advancement of Science. He previously served as chair of the National Research Council's Board on Earth Sciences and Resources.

Alastair I. Johnston

Member

Alastair Iain Johnston is the Laine Professor of China in World Affairs in Harvard University's Department of Government. He received his Ph.D. from the University of Michigan. His research and teaching interests include socialization in international institutions, the analysis of identity in the social sciences, and ideational sources of strategic choice, mostly with reference to China and the Asia-Pacific region. He is also a Faculty Associate of the Weatherhead Center for International Affairs, the Olin Institute for Strategic Studies and the Fairbank Center for East Asian Research. Dr. Johnston has written and taught extensively on Chinese foreign policy, military strategy and international relations.

Alvin W. Trivelpiece

Member

Alvin W. Trivelpiece (NAE) was formerly Director of Oak Ridge National Laboratory (ORNL) (January 1989–March 2000). Since May 2000 Dr. Trivelpiece has been a consultant to Sandia National Laboratories. In January 1996 he was appointed President of Lockheed Martin Energy Research Corporation, the managing and operating contractor for ORNL. Dr. Trivelpiece served as the executive officer of the American Association for the Advancement of Science (AAAS) from April 1987 to January 1989. He came to the AAAS from the U.S. Department of Energy, where he served as the director of the Office of Energy Research from 1981 to 1987. Dr. Trivelpiece was head of the 1986 U.S. Delegation on Peaceful Uses of Atomic Energy to the USSR. While on leave from the University of Maryland, from 1973 to 1975, where he was a professor of physics, he served with the U.S. Atomic Energy Commission as assistant director for research in the Division of Controlled Thermonuclear Research. A native Californian, he received his B.S. degree from California Polytechnic State University in 1953, and his M.S. (in 1955) and Ph.D. degrees (in 1958) from the California Institute of Technology. He was a member of the Board of Directors of Bausch & Lomb, Inc. from 1989 to 2001 and of Charles River Laboratories from 1992 to 1999. He was elected to the National Academy of Engineering in 1993. He recently served on the National Academies Review of Technical Issues Related to Ratification of the Comprehensive Test Ban Treaty (July 1, 2000–October 31, 2001). He has also served on the National Academies Committee on Science and Technology Policy Aspects of Selected Social and Economic Issues in Russia (November 1, 1999–November 10, 2000) and other National Academies committees. His research has focused on plasma physics, controlled thermonuclear research, and particle accelerators. He was granted several patents on accelerators and microwave devices and is the author or co-author of two books and many papers. He also serves as an advisor to various government agencies. In addition to involvement in several other scientific organizations, he is a fellow of the APS, the IEEE, and the AAAS and is a member of the American Nuclear Society.