Abstract

From: <https://engineering.purdue.edu/ENE/Research/Seminars/GlobalPolicyIssues>

Leaders throughout the world have been engaged in multinational efforts to understand and respond to projected changes in a world facing global warming, depletion of finite resources, population growth, food and water shortages, environmental degradation, loss of biodiversity, the emergence of globally-transported infectious diseases and invasive species, and much more. These grand-challenge problems are highly interconnected and are termed, “poorly-posed”, complex-coupled, wicked problems. More than ever before science-informed policy making is needed to develop mitigation and adaptation strategies that are implementable and that do not lead to serious unintended consequences.

Purdue University is taking a major step in applying its intellectual resources to address these problems through a faculty-defined and -led Global Policy Research Institute (GPRI). GPRI is affiliated with over 40 centers of research excellence at Purdue engaged in frontier, cross-campus, interdisciplinary research into these global issues. This research is integrated with global partnerships, public outreach and education, and engagement with policy and decision makers at all governmental levels to include leading international research and analysis bodies. This seminar will highlight some of these developments.

Bement, A. (2011). Global Policy Issues in a Changing World.

Bio

<https://engineering.purdue.edu/ENE/Research/Seminars/GlobalPolicyIssues>

Arden L. Bement, Jr., currently serves as the inaugural director for the Global Policy Research Institute and the Chief Global Affairs Officer at Purdue University. Previous to his appointments at Purdue University, he served as the 12th director of the National Science Foundation (NSF), a position he held from November 24, 2004 until June 1, 2010. He had been acting director since February 22, 2004. While director of the NSF, Bement served as a member of the U.S. National Commission for UNESCO and as the vice-chair of the Commission Natural Sciences and Engineering Committee.

Dr. Bement served as ex officio member of the U.S. National Science Board, which guides NSF activities and serves as a policy advisory body to the President and Congress, during his directorship of NSF. He was also a member of the NSB from 1989 to 1995.

Prior to his confirmation as NSF director in November 2004, Dr. Bement served as Director of the National Institute of Standards and Technology of the Department of Commerce, a position he had held since Dec. 7, 2001. At NIST he oversaw an annual budget of about $773 million and an on-site research and administrative staff of 3,000 employees, complemented by a NIST-sponsored network of 2,000 locally managed manufacturing and business specialists serving smaller manufacturers across the United States.

He joined NIST from Purdue University, where he was the David A. Ross Distinguished Professor of Nuclear Engineering and head of the School of Nuclear Engineering. He has held appointments at Purdue University in the schools of Nuclear Engineering, Materials Engineering, and Electrical and Computer Engineering, as well as a courtesy appointment in the Krannert School of Management. He was director of the Midwest Superconductivity Consortium and the Consortium for the Intelligent Management of the Electrical Power Grid.

Dr. Bement joined the Purdue faculty in 1992 after a 39-year career in industry, government and academia. His positions included: vice president of technical resources and of science and technology for TRW Inc. (1980-1992); deputy under secretary of defense for research and engineering (1979-1980); director, Office of Materials Science, DARPA (1976-1979); professor of nuclear materials, MIT (1970-1976); manager, Fuels and Materials Department and the Metallurgy Research Department, Battelle Northwest Laboratories (1965-1970); and senior research associate, General Electric Co. (1954-1965). He has also been a director of Keithley Instruments Inc. and the Lord Corp. and a member of the Science and Technology Advisory Committee for the Howmet Corp., a division of ALCOA.

He has earned numerous awards and served in diverse government advisory roles, including: head of the NIST Visiting Committee on Advanced Technology; head of the advisory committee for NIST Advanced Technology Program; member of the Board of Overseers for the Malcolm Baldrige National Quality Award; chair of the Commission for Engineering and Technical Studies and the National Materials Advisory Board of the National Research Council; and member of the Space Station Utilization Advisory Subcommittee and the Commercialization and Technology Advisory Committee for NASA. He has consulted for the Department of Energy Argonne National Laboratory, Lawrence Livermore National Laboratory, Oak Ridge National Laboratory, Sandia National Laboratory, and the Idaho National Engineering and Environmental Laboratory.

Dr. Bement holds an engineer of metallurgy degree from the Colorado School of Mines, a master&#8217;s degree in metallurgical engineering from the University of Idaho, a doctorate in metallurgical engineering from the University of Michigan, and honorary doctorates from Cleveland State University, Case Western Reserve University, Colorado School of Mines, the Korean Advanced Institute for Science and Technology, and the University of Idaho and an honorary professorship in the Chinese Academy of Sciences Graduate School. He is a retired Lieutenant Colonel of the U.S. Army Corps of Engineers, and a recipient of the Distinguished Service Medal of the Department of Defense. He is a member of the U.S. National Academy of Engineering, a fellow of the American Academy of Arts and Sciences, and a fellow of the American Association for the Advancement of Science. He was awarded the Order of the Rising Sun, with Gold and Silver Star, from the Emperor of Japan in 2009.

Cite this work

Global Policy Issues in a Changing World

<http://cleerhub.org/resources/378>