

How to Network Nuclear Engineers and Scientists to Bridge the Divide between Science and Policy

Dr. Charles Ferguson
President
Federation of American Scientists

Wednesday, September 14
4:00pm
Hill Hall 202

Abstract. Dr. Charles Ferguson, president of the Federation of American Scientists (FAS), will talk about the power of networked engineers and scientists to educate policymakers and shape public policy. Taking a lesson from the original 1945 Federation of Atomic Scientists, the revitalized FAS over the past four years has been creating task forces of younger to more senior engineers, scientists, and policy experts to develop pragmatic solutions to tough problems in nuclear security, nuclear nonproliferation, and other nuclear risks. One of the keys to this task force model is to find and bring together students and professors from research universities (especially those with programs in nuclear science and engineering and schools of public policy). Another key is to have the task force members brief policymakers and publish their findings in one-page policy memos, reports, peer-reviewed journal articles, and popular articles and blogs. Dr. Ferguson will discuss results of a recently completed task force on assessing the benefits and risks of naval nuclear propulsion and will outline current task force projects convened by FAS. He will conclude with suggested ideas about how students and faculty at the Colorado School of the Mines can work on future task forces with other research universities to deal with complex technical and policy issues such as Iran, North Korea, and proliferation-resistant nuclear power, to name a few salient examples.

Biography. Dr. Ferguson is a Fellow of the American Physical Society. He received his undergraduate degree in physics from the United States Naval Academy in Annapolis, Maryland, and his M.A. and Ph.D. degrees, also in physics, from Boston University in Boston, Massachusetts. After graduating with distinction from the United States Naval Academy, he served as an officer on a fleet ballistic missile submarine and studied nuclear engineering at the Naval Nuclear Power School.



Before becoming President of the Federation of American Scientists Dr. Ferguson served at the Council on Foreign Relations as the project director of the Independent Task Force on U.S. Nuclear Weapons Policy, chaired by William J. Perry and Brent Scowcroft. Before this he had been with the Monterey Institute's Center for Nonproliferation Studies (CNS) as its scientist-in-residence. At CNS, he co-authored the book *The Four Faces of Nuclear Terrorism* and was also lead author of the award-winning report "Commercial Radioactive Sources: Surveying the Security Risks," which was published in January 2003 and was one of the first post-9/11 reports to assess the radiological dispersal device, or "dirty bomb," threat. This report won the 2003 Robert S. Landauer Lecture Award from the Health Physics Society.

From June 2011 to October 2013, he served as Co-Chairman of the U.S.-Japan Nuclear Working Group, organized by the Mansfield Foundation, FAS, and the Sasakawa Peace Foundation. In May 2011, his book *Nuclear Energy: What Everyone Needs to Know* was published by Oxford University Press. In 2013, he was elected a Fellow of the American Physical Society for his work in educating the public and policy makers about nuclear issues.

Dr. Ferguson has consulted with the Oak Ridge National Laboratory, Sandia National Laboratories, and the National Nuclear Security Administration. From 2000 to 2002, he served as a physical scientist in the Office of the Senior Coordinator for Nuclear Safety at the U.S. Department of State, where he helped develop U.S. government policies on nuclear safety and security issues. He has written numerous articles on energy policy, missile defense, nuclear arms control, nuclear energy, nuclear proliferation, and nuclear terrorism. He has also authored or coauthored several peer-reviewed scientific articles and published in top physics journals. And in October 2008, he was named by *Wired* magazine as one of the “Fifteen People the Next President Should Listen To.”