Abstract for an Invited Paper for the APR09 Meeting of The American Physical Society

Leo Szilard Lectureship Award Talk: Science and International Security

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The proliferation of nuclear-weapons technology is one of the gravest dangers facing the world, with potentially devastating consequences if it is not contained. The scientific community has a special role to play in confronting this threat, not only because many of the issues involved are highly technical, and science offers important tools such as hypothesis testing, but also because open communication lies at the heart of scientific research. International dialogs among scientists can thus be uniquely powerful in confronting problems of global concern, especially when political constraints hinder communication between nations. Many view the scientific community as at least partly responsible for major threats confronting the world, but we also have the opportunity to reduce those dangers through the same processes that lead to discovery and advancement of knowledge.