

# 2019 Nuclear Scholars Initiative Research Agenda

PONI is accepting applications for the 2019 Nuclear Scholars Initiative. Over the course of the 6-month program, Scholars are required to prepare a research product and write a blog post. The research product options include a journal article, an op-ed, a presentation or participation in a collaborative research product. Research proposals will be accepted on all topics, but several are of particular interest.

### **Emerging Technologies and Nuclear Risk**

Rapidly developing technologies are transforming how both the United States and its adversaries understand and compete within the strategic operating environment. Some of these new capabilities, particularly uninhabited systems, space systems, decision support systems, electronic warfare, and cyber capabilities, promise the potential to enhance U.S. situational awareness and degrade the situational awareness of its adversaries. PONI research funded by the Carnegie Corporation of New York explores how these new situational awareness capabilities may also impact strategic stability. This project analyzes the potential impact of these technologies through a series of technology primers and scenario driven tabletop exercises. Select scholars from the 2019 class will have an opportunity to contribute and participate in this project.

## **Future of Arms Control**

In the current security environment of heightened power competition between the United States, Russia, China, and other states, the prospects for arms-control agreements appear bleak. What are the prospects for future bilateral and multilateral arms control agreements and what role should the United States and other nuclear weapon states play in reaching those accords?

### The Ethics, Legality and Morality of Nuclear Weapons

In recent years the Humanitarian Initiative Movement and Nuclear Weapons Ban Treaty have raised important questions about the morality and legality of nuclear weapons in the international system. At the same time, the uncertain security environment and subsequent modernization programs have challenged progress towards arms control and disarmament. What international and domestic laws constrain nuclear weapons? If the Nuclear Weapons Ban Treaty comes into force, what are next steps for the nonproliferation regime? How does the nonproliferation regime address the growing divide between NWS and NNWS? What are next steps for pursuing to prepare for the 2020 NPT RevCon? How should the nuclear community engage a wider audience on deterrence, arms control and disarmament?

# **Crisis Management and Escalation**

Traditional formations of escalation dynamics appear inadequate for analyzing the multitude of potential nuclear escalation scenarios. The concept of the escalation ladder is insufficient when a nuclear crisis involves growing complexity and intensity between multiple actors largely focused on managing regional influence and conflict. What are different conceptualizations for understanding escalation dynamics particularly in regional crisis scenarios? How does thinking on escalation differ between nuclear armed states?

