PONI 2018 Conference Series Research Agenda

PONI is now accepting presentation proposals for our 2018 Conference Series. The PONI conference series brings together a diverse community of professionals from across the nuclear enterprise to discuss a wide range of nuclear issues. PONI conferences are unique in the high value that they place on highlighting new faces and emerging experts in the field, as panels feature some of the best and brightest young professionals. The conference presentations for the upcoming year will focus on, but will not be limited to, the topics listed in the research agenda below. Travel support is available for presenters lacking university or organizational funding.

Application Materials:

1. **Resume or CV** listing complete educational and professional information and relevant extracurricular and research activities.
2. **Research Proposal Form** outlining your proposed research and methodology, and description of why you are interested in participating in the program.
3. **Letter of Recommendation** from your current employer or professor that references your writing ability, engagement, and interest in nuclear issues.

Online application materials available at: https://nuclearnetwork.csis.org/apply/conference-series/.

Please submit presentation proposals to Will Pittinos at wpittinos@csis.org by Friday, April 6, 2018, if you would like to present at the Summer Conference at Los Alamos National Lab in New Mexico (July 10-11, 2018). Proposals submitted by then may also be considered for the Fall (US Air Force Academy, October 10-11) and Winter conferences (CSIS, December. 4-5).

Possible Research Topics

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. The pace of technological advancement is outstripping our ability to understand how new capabilities may undermine strategic stability or, conversely, how it may improve crisis management capacity. What technological advances might reshape the nuclear deterrence landscape or increase the possibility of nuclear crisis? Additionally, how would new technologies change timelines in a crisis? Do nuclear weapons have a role in deterring offensive cyber attacks?

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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?

Deterring Regional Nuclear Risks
While North Korea grabs many of the headlines, several other countries present or grapple with rising nuclear deterrence challenges, including India, Pakistan, China, and Russia. Growing nuclear arsenals and expanding delivery capabilities are dramatically raising the stakes for nuclear crisis management. Presentations can examine alternative pathways and timelines to regional instability, analyze implications for nuclear security or identify technical, operational and policy options for risk management and reduction, etc. How do advances in missile defense affect these challenges?

The Nuclear Posture Review
Over the coming year, the Trump administration will begin to implement proposed changes to U.S. nuclear policy in the Nuclear Posture Review. This policy document will address important questions regarding modernization, new capabilities, force structure, and posture. What impact will these changes have on U.S. relationships with adversaries and allies? Does the budget support these proposals? How will any new proposed capabilities enhance deterrence or assurance efforts? How should the supporting nuclear enterprise infrastructure fit with these plans? Should changes be made to command and control and/or presidential launch authority?

Future of Arms Control
With serious challenges to the INF Treaty and New START negotiations looming, the prospects for arms-control agreements between the United States and Russia appear bleak. Yet, the humanitarian initiative continues to gain momentum as many non-nuclear weapon states begin signing onto the Treaty on the Prohibition of Nuclear Weapons. 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? Presentations can include legal implications for nuclear weapons states of the ban treaty, arms control in the current security environment, or verification and technical approaches to nonproliferation, etc.

The Evolving Nuclear Security Environment
Particularly as the 50th anniversary of the Nonproliferation Treaty (NPT) approaches, how can the United States and the international community prevent nuclear proliferation, ensure the security of nuclear material, and maintain the integrity of the global nonproliferation regime? Presentations may cover issues such as maintaining and strengthening nonproliferation regimes and norms, combating trafficking of illicit nuclear materials, countering radiological, biological, chemical, and nuclear terrorism, the policy implications of new developments in the field of nuclear forensics and detection; etc.