

Opportunity Title: Deterrence that Disintegrates in Daylight: Military
Deterrence Based on Hidden Capabilities

Opportunity Reference Code: ICPD-2020-15



Organization Office of the Director of National Intelligence (ODNI)

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How to Apply

Create and release your Profile on Zintellect – Postdoctoral applicants must create an account and complete a profile in the on-line application system. **Please note: your resume/CV may not exceed 2 pages.**

Complete your application – Enter the rest of the information required for the IC Postdoc Program Research Opportunity. The application itself contains detailed instructions for each one of these components: availability, citizenship, transcripts, dissertation abstract, publication and presentation plan, and information about your Research Advisor co-applicant.

Additional information about the IC Postdoctoral Research Fellowship Program is available on the program website located at:
<https://orise.orau.gov/icpostdoc/index.html>.

If you have questions, send an email to ICPostdoc@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline

2/28/2020 6:00:00 PM Eastern Time Zone

Description

Research Topic Description, including Problem Statement:

If two parties agree who would win a fight between them, neither party starts a fight. If, however, there is uncertainty or disagreement on who would win a fight, a fight might start. Preventing war, then, often relies on deterrence, by one party credibly illustrating its relative strength superiority. However, sometimes the way to win a fight is to use a resource or technique that the adversary has never seen before. It is exactly because the adversary has little knowledge of the resource that makes it strong; advertising it would erode its strength. This prevents advertising the resource, which undermines credible illustration of relative strength, which lowers deterrence and increases the probability of a fight. Game theoretical analysis have considered deterrence at length, as well as deterrence under uncertainty, but there has been much less analysis of the strategic ramifications of resources that *must* remain secret to be strengths.

Questions include:

- Are there consistent consequences of such resources being in play, for either or both parties?
- Are there optimal behaviors if one has such resources, or if one suspects an adversary has them?
- Are there conditions in which it is preferable to reveal such resources?
- Are there ways such resources can be stabilizing (i.e. prevent a fight)?
- Are there ways to move from a destabilizing regime to a stabilizing regime?

Example Approaches:

- Analytical game theory
- Simulations (e.g. agent-based modeling)
- Experiments with human subjects (e.g. running 2 or more subjects through a scenario together in lab; running 2 or more platoons through a scenario together in a simulated combat environment)
- Historical analyses

Relevance to the Intelligence Community:

Governments have capabilities that would be relevant in a war, but publicizing these capabilities before war would make them less effective. Capabilities are kept under wraps, but by doing so, prevents the benefits of deterrence, which increases the probability of a war. Determining general principles of the strategic effects of such capabilities and how to handle them would potentially allow for less brinksmanship and war.

Key Words: Deterrence, Game Theory, Hidden Capabilities, Strategic Interactions, Strategic Stability, Peace Studies, Strategic Surprise, Preventing War, Information Theory, Inference

Qualifications

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Postdoc Eligibility

- U.S. citizens only
- Ph.D. in a relevant field must be completed before beginning the appointment and within five years of the application deadline
- Proposal must be associated with an accredited U.S. university, college, or U.S. government laboratory
- Eligible candidates may only receive one award from the IC Postdoctoral Research Fellowship Program

Research Advisor Eligibility

- Must be an employee of an accredited U.S. university, college or U.S. government laboratory
- Are not required to be U.S. citizens

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
 - **Communications and Graphics Design** (2 )
 - **Computer, Information, and Data Sciences** (16 )
 - **Earth and Geosciences** (21 )
 - **Engineering** (27 )
 - **Environmental and Marine Sciences** (14 )
 - **Life Health and Medical Sciences** (46 )
 - **Mathematics and Statistics** (10 )
 - **Other Non-S&E** (2 )
 - **Other Physical Sciences** (12 )
 - **Other S&E-Related** (1 )
 - **Physics** (16 )
 - **Social and Behavioral Sciences** (27 )