

**Opportunity Title:** Reducing Belief-Driven Thinking

**Opportunity Reference Code:** ICPD-2020-13

**Organization** Office of the Director of National Intelligence (ODNI)

**Reference Code** ICPD-2020-13

**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](mailto: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:**

A person with a strongly held belief may have an exaggerated sense of the support for that belief, may avoid seeking or considering contrary evidence, and may misinterpret the evidence that is considered. This tendency, which affects even intelligent, well-informed people, is called "belief-driven thinking." Psychologists have investigated several types of belief-driven thinking, including searching only for supporting evidence (confirmation bias), selective recall (myside bias), and evaluating an argument based on the plausibility of the conclusion instead of the support provided by the premises (belief bias). They have also studied the double standards that scientists often use when evaluating experimental results (evaluation bias) and the tendency of even highly numerate people to misinterpret simple statistical data so that it aligns with their beliefs (motivated numeracy). Cognitive scientists have developed theories of the origins of some types of belief-driven thinking, but there has been little research on effective interventions to reduce this phenomenon. Currently there is no easy, attractive procedure for organizations to adopt to counter belief-driven thinking. The Postdoc will conduct research to develop and test effective, easy-to-use techniques for reducing belief-driven thinking. Such techniques will enable busy analysts in intelligence and other disciplines to reason more rigorously and accurately on a wide range of issues. Ideally the techniques will require no formal training and will be adopted because transparently produce better analysis.

Literature for review:

- Shynkaruk, J. & V. Thompson (2006). Confidence and accuracy in deductive reasoning. *Memory & Cognition*.
- Stanovich, K., R. West & M. Toplak (2013). Myside bias, rational thinking, and




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intelligence. Current Directions in Psychological Science.

- Kahan, D., E. Peters, E. Dawson & P. Slovic (2017). Motivated numeracy and enlightened self-government. Behavioural Public Policy.
- Hergovich, A., R. Schott & C. Burger (2010). Biased evaluation of abstracts depending on topic and conclusion. Current Psychology.
- Mercier, H. & D. Sperber (2017). The enigma of reason. Harvard University Press.
- Felton, M., A. Crowell & T. Liu (2015). Arguing to agree. Written Communication.
- Villarroel, C., M. Felton & M. Garcia-Mila (2016). Arguing against confirmation bias. International Journal of Educational Research.

**Example Approaches:**

Individuals answer a question, and then discuss it with someone who has provided a different answer. Groups composed of people with different opinions argue for their views before providing their answers, which may be submitted anonymously. After working individually, people work in small groups to produce a consensus answer. Reputational incentives for individuals and groups.

**Relevance to the Intelligence Community:**

Reducing intelligence analysts' belief-driven thinking will lead to better-reasoned analysis.

**Key Words:** Cognitive Biases, Group Reasoning, Motivated Reasoning

## Qualifications







**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):**
  - **Chemistry and Materials Sciences** (12 )
  - **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** (45 )

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- **Mathematics and Statistics** (10 )
- **Other Non-Science & Engineering** (2 )
- **Physics** (16 )
- **Science & Engineering-related** (1 )
- **Social and Behavioral Sciences** (27 )