Opportunity Title: Developing Techniques to Enable Analytic Teams to Make Accurate Judgments

Opportunity Reference Code: ICPD-2023-31

Organization	Office of the Director of National Intelligence (ODNI)
Reference Code	ICPD-2023-31

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 2/28/2023 6:00:00 PM Eastern Time Zone

Description **Research Topic Description, including Problem Statement:**

Humans solve many cognitive problems better when they talk with one another than when they work alone. A rich tradition in psychology has demonstrated that the benefits of group work are far greater than most people think and that they cover a great range of problems, from classic reasoning problems to real-world tasks. Recent research has found that disagreeing parties who engage even in brief discussion often substantially increase the accuracy of their answers. Chen (2019) used a structured discussion method to increase the rate of correct answers from 67% to 98.8%. Schaerkermann (2018) found that discussion among disagreeing workers leads to substantially higher accuracy than non-discussion-based aggregation techniques.
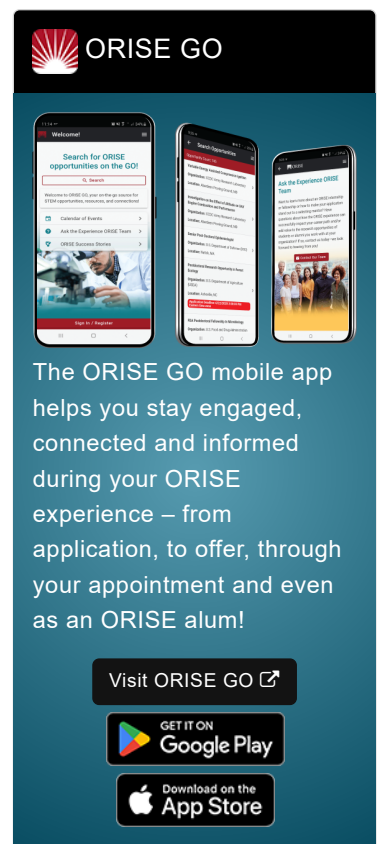
Research is needed to develop effective techniques that would further improve discussions, particularly between people with initially differing answers to complex, real-world problems. The techniques would enable online or in-person groups of people to rapidly make accurate analytic judgments on a wide range of questions, including but not limited to forecasts. The techniques should be easy and natural for busy professionals to use on the job. They should require no formal training or knowledge of logic. The software interface should be self-explanatory.

People with doctorates in these disciplines are particularly encouraged to apply: philosophy, informal logic, reasoning, and computer science (particularly AI/ML and human-machine teaming).

Proposals must conform to this IC Postdoc policy: "The Program will not accept proposals containing human or animal subjects."
https://orise.orau.gov/icpostdoc/applicants/instructions.htm

Example Approaches:

- Techniques that makes it easier for participants to acknowledge that their initial answer was incorrect.
- Methods to help people discover the sources of their disagreements more rapidly.
- Human-machine teaming that enables people to articulate their reasoning more clearly

Relevance to the Intelligence Community (IC):

Develop/enhance analytic tools to identify critical and non-traditional indicators of nation-state instability, and/or threats to U.S. or Allied personnel or interests in a region.

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

Key Words: Reasoning, Informal Logic, Rational Discussion, Expert Disagreement, Expert Elicitation, Human-Computer Interaction, Argumentation

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Communications and Graphics Design** (6 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Earth and Geosciences** (21 👁)
  - **Engineering** (27 👁)
  - **Environmental and Marine Sciences** (14 👁)
  - **Life Health and Medical Sciences** (48 👁)
  - **Mathematics and Statistics** (11 👁)
  - **Other Non-Science & Engineering** (2 👁)
  - **Physics** (16 👁)
  - **Science & Engineering-related** (1 👁)
  - **Social and Behavioral Sciences** (29 👁)