

Opportunity Title: Multi-modal Speech Processing

Opportunity Reference Code: IC-18-43

Organization Office of the Director of National Intelligence (ODNI)

Reference Code IC-18-43

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://orau.org/icpostdoc/>.

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

Application Deadline 3/12/2018 11:59:00 PM Eastern Time Zone

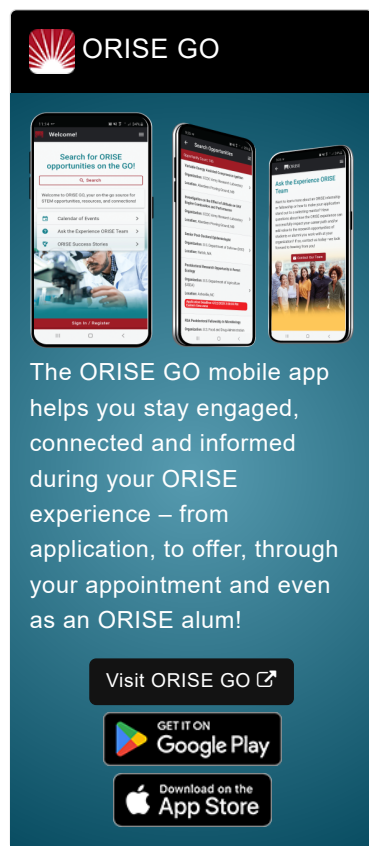
Description **Research Topic Description, including Problem Statement:**

There are certain scenarios where a reasonable quality video feed may be accompanied by poor to marginally intelligible speech, e.g. video call (Facetime, Skype) from a noisy environment. It is well understood that the human brain makes use of both audio and video in determining speech content, to the extent that when contradicting stimuli are presented the result is confused (i.e. McGurk Effect). It is therefore suggested that it may be beneficial to jointly process the audio and video signal together in order to improve the output. Furthermore, there have been parallel advances in both speech-to-text and automated lip-reading technologies, it is suggested that there might be similar benefits in combining the two.

Example Approaches:


There are certain scenarios where a reasonable quality video feed may be accompanied by poor to marginally intelligible speech, e.g. video call (Facetime, Skype) from a noisy environment. It is well understood that the human brain makes use of both audio and video in determining speech content, to the extent that when contradicting stimuli are presented the result is confused (i.e. McGurk Effect). It is therefore suggested that it may be beneficial to jointly process the audio and video signal together in order to improve the output. Furthermore, there have been parallel advances in both speech-to-text and automated lip-reading technologies, it is suggested that there might be similar benefits in combining the two.

Qualifications **Postdoc Eligibility**



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- 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** ([6](#) 👁)
 - **Computer, Information, and Data Sciences** ([16](#) 👁)
 - **Earth and Geosciences** ([21](#) 👁)
 - **Engineering** ([27](#) 👁)
 - **Environmental and Marine Sciences** ([14](#) 👁)
 - **Life Health and Medical Sciences** ([45](#) 👁)
 - **Mathematics and Statistics** ([10](#) 👁)
 - **Other Non-Science & Engineering** ([5](#) 👁)
 - **Physics** ([16](#) 👁)
 - **Science & Engineering-related** ([1](#) 👁)
 - **Social and Behavioral Sciences** ([28](#) 👁)