Opportunity Title: Voice Liveness detection
Opportunity Reference Code: IC-17-31

Organization	Office of the Director of National Intelligence (ODNI)
Reference Code	IC-17-31

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.

Application Deadline 3/31/2017 11:58:00 PM Eastern Time Zone

Description

Research Topic Description, including Problem Statement:

In common with most biometric systems, speaker verification is susceptible to spoofing attacks where the system can be fooled by using non-live data from the enrolled subject. In the case of speaker verification, one such problem is replaying the enrolled speaker's speech, through speakers, into the recording device. This can either be a recording of the speaker or a synthetic version of the speaker's speech. This project would assess ways to detect speech with is live, rather than having been replayed.
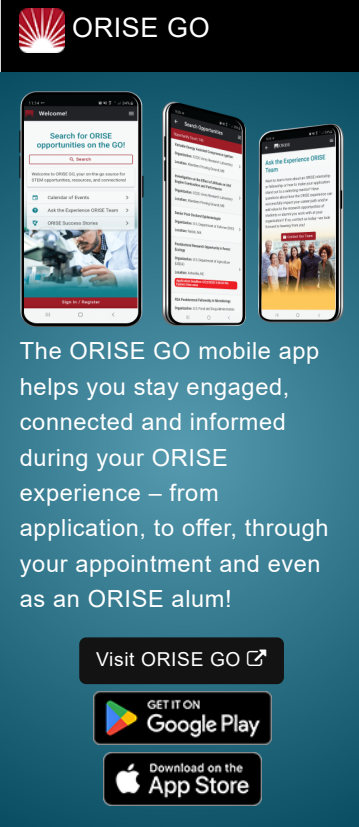
Example Approaches:

An example approach might be the application of machine learning, for example building a supervised classifier to distinguish between live and replayed speech.

Another approach could be to investigate different feature representations of speech to best detect replayed speech. It would also be interesting to explore how current standard representations such as iVectors behave with replayed speech, for example using unsupervised clustering algorithms.

A further avenue of research might be to analyze the effect of different recording conditions (telephony/far-field microphones) on the performance of liveness detection.

Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Business** (11 👁)
  - **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 (13 👁)
- Physics (16 👁)
- Science & Engineering-related (1 👁)
- Social and Behavioral Sciences (28 👁)