

Opportunity Title: Counterfeit Physical Identity Evidence Supply Chain Tracing

Fellowship

Opportunity Reference Code: ICPD-2024-04

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 3 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 2/28/2024 6:00:00 PM Eastern Time Zone

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

The supply chain for the components used to produce genuine identity documents is not closed unlike others such as currency. This can leave items in the production process able to be acquired by unauthorized entities. Nearly exact materials, or reasonable simulations are widely available from hundreds of public marketplaces and websites. This is problematic, as counterfeiters have access to materials needed to produce documents that closely mimic genuine versions. But this scenario introduces detectable variations in the materials being utilized and creates an opportunity for research.

DHS seeks to expand the ability to link counterfeit documents to include non-destructive and destructive analysis of counterfeit identification documents, publicly available materials, as well as genuine documents. Similar to longstanding approaches to identify geographic sources for illicit drugs, the data from this analysis will allow the association of items and will increase the DHS's ability to trace the origin of counterfeit items, which is expected to improve the detection, disruption and deterrence of identity document counterfeiting or alteration.

Among other forensic and intelligence functions, the forensic assessment of domestic and international travel and identity documents is the purview of the Homeland Security Investigations Forensic Lab (within DHS). The Forensic Lab is the only ANAB (ANSI National Accreditation Board)accredited laboratory in the US tasked with forensic examinations of international travel and identity documents. In support of those forensic examinations, the lab is staffed by bench forensic examiners, as well as physical scientists, and has a variety of scientific equipment.

The selected methods for analysis should be restricted to instrumentation in use at the HSI laboratory, including X-Ray Fluorescence Spectroscopy



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(Micro-XRF); SEM/Energy Dispersive Spectroscopy (EDS); Fourier-transform Infrared Spectroscopy (FTIR); Gas Chromatography/Mass Spectrometry (GCMS); Laser Ablation Inductively Coupled Plasma MS (LA-ICP/MS); Laser Induced Breakdown Spectroscopy (LIBS).

It is expected that data resulting from this research will be appropriate for journal publication or presentation at a professional meeting.

### **Example Approaches:**

Identify a common component that is used across a diversity of counterfeit documents and can be traced to a specific manufacturer, distributor. Develop understanding of certain characteristics that indicate common equipment was used to produce different counterfeit document templates.

### Relevance to the Intelligence Community:

Develop/enhance remote retrieval of biometric, identity, signatures, geospatial, and other data across multiple settings.

**Key Words:** identity, counterfeit, passport, driver's license, document personalization, secure documents, supply chain, logistics, forensics analysis

# 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 appointment start date
- 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 (4\_●)
  - Computer, Information, and Data Sciences (17\_●)
  - Earth and Geosciences (21 ♥)
  - Engineering (27 ●)
  - Environmental and Marine Sciences (14 🍩)
  - Life Health and Medical Sciences (46 ♥)
  - Mathematics and Statistics (11 )
  - Other Non-Science & Engineering (3\_●)
  - Physics (<u>16</u> )
  - Science & Engineering-related (1.●)

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Social and Behavioral Sciences (<u>30</u>.

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