



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

U.S. Army Research, Development and Engineering Command

U.S. Army Research Laboratory

Sensors Technology Areas of Interest

Objective: To provide advance planning information regarding ARL technology areas of interest. Note: The information provided is not a solicitation, a request for proposal or quotation, an invitation for bids or a broad agency announcement.

Requested Innovation: Personnel Identification via Stand-off Non-Cooperative Biometrics-for-Intelligence Sensing, Exploration, Fusion and Enterprise Management

Description: Sensing, processing, exploitation, analysis, and information management technologies used for uniquely detecting, recognizing, identifying, and tracking human beings in groups and complex terrain, based upon one or more intrinsic physical and/or behavioral traits, derived from covertly collected phenomenology in any part of the electromagnetic spectrum, specifically and exclusively for the purposes of intelligence, surveillance and reconnaissance (ISR), tracking, targeting, force protection, and offensive operations, and not for the purposes of access management and control.

Technology Areas of Interest:

- Hardware and software tools to assist in the capture, processing, segmentation, analysis, and assessment of biometric matching across the visible and infrared spectrum.
- Near real-time algorithms that interact with signature collection hardware to optimize signature quality with improved range, subject steering, and illumination performance and improved stand-off and covert metrics.
- Identity matching algorithms with improved performance for partial scans/signatures.
- A cooperative biometric enterprise in which identities and identity matching algorithms reside, seamlessly interacting with multiple databases with minimal access and latency issues
- Architecture or system for collecting, processing, storing, or disseminating covertly collected biometrics data for ISR, exploitation, tracking, and targeting purposes, to include ingestion interfaces or utilities, and semantics for biometrics data or metadata in its object model, database, or fusion framework.
- Modification of fusion and matching algorithms to increase the confidence in fusing and matching against non-cooperatively collected biometrics.

EDGE Call for Innovation (CFI)

“CFI ARL-Personnel ID-002”