

## ***Providing the tools and information required to proactively respond to our nation's border issues***

The National Center for Border Security and Immigration, led by the University of Arizona in Tucson and the University of Texas at El Paso, is developing technologies, tools, and advanced methods to balance immigration and trade with effective border security, as well as assess threats and vulnerabilities, improve surveillance and screening, analyze immigration trends, and enhance policy and law enforcement efforts.

### **CO-LEAD**

#### **The University of Arizona**



### **CO-LEAD**

#### **The University of Texas at El Paso**



### **Research Objectives**

BORDERS is a consortium of 14 premier institutions dedicated to the development of innovative technologies, proficient processes, and effective policies that will help protect our nation's borders, foster international trade, and enhance long-term understanding of immigration determinants and dynamics.

### **Our Mission and Importance**

BORDERS' focus is to provide government agencies and stakeholders with scientifically informed knowledge to expedite the development of innovative, practical, and cost-effective solutions to meet the ever-changing operational demands at the northern and southern borders. We are developing, testing, and evaluating prototypes both in the laboratory and in the field to inform future design and implementation. In this way, BORDERS provides real, measurable improvements from a practical standpoint, as well as scientific validity from a critical perspective.

### **Education Objectives**

The National Center for Border Security and Immigration (NCBSI) is a Department of Homeland Security (DHS) Center of Excellence. NCBSI's research and education initiatives are designed to meet the needs of DHS, other security-related agencies, and relevant industries as they relate to the areas of border security and immigration in a global context. Research is focused on the unique science, technology, and policy issues within this domain. Educational programs are being developed in order to educate current and/or future practitioners and researchers in the relevant disciplines, and to help define emerging education area. Objectives include:

- Conduct innovative research that provides new capabilities and insights to the fields of border security.
- Deliver a comprehensive integrated homeland security degree programs for current and future Department of Homeland Security employees.
- Employ a multidisciplinary approach to research.

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## BORDERS Partner Institutions

The University of Arizona (lead)  
Arizona State University  
Migration Policy Institute  
New Mexico State University  
New Mexico Institute of Mining & Technology  
Pennsylvania State University  
RAND Corporation  
RTI International  
San Diego State University  
University of California – Irvine  
University of Minnesota  
University of Texas – Pan American  
University of Washington  
West Virginia University



## NCBSI Partner Institutions

The University of Texas at El Paso (lead)  
University of Southern California  
Dartmouth College  
University of Connecticut  
El Paso Independent School District

## BORDERS RESEARCH AREAS

Our research focuses on six interrelated areas:

- Detection: Humans and Vehicles
- Networks: Interoperability, Reliability, and C<sup>3</sup>
- Fusion: Tools and Approaches
- Risk: Mitigation, Assessment, and Alignment
- Immigration: Economics and Policies
- Governance: Law Enforcement and International Cooperation

BORDERS is engaged in both visionary and user-inspired research. The Center will serve as a systems integrator, using lessons learned from multiple disciplines, to help define optimal approaches and speed the implementation of innovative solutions to complex border problems in the form of new technologies and policy recommendations.

## NCBSI RESEARCH PROJECTS

Our research focuses on four topics:

- Robust Solution Methods based on Game Theory for Security Applications
- Intent-Driven Behavioral Modeling of Cross Border Epidemic Spread
- Processes to Improve Visual Vigilance in Human Screeners
- Photographic, Target, and Perceiver Factors in the Perceptual Identification

## Education Program

- Homeland Security (HS) Scholars Academy
- Junior HS Scholars Academy for High School Seniors and Juniors
- Certificate/Degree Programs

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