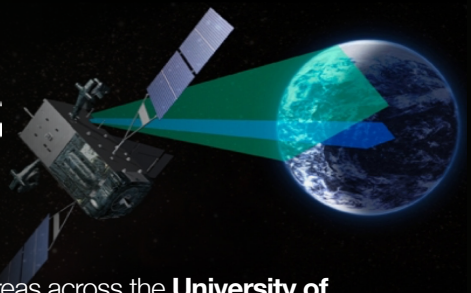
NSI | CENTER FOR NATIONAL SECURITY INITIATIVES



High-impact national security research and workforce development enabled by world-class research scientists and essential infrastructure

The **Center for National Security Initiatives (NSI)** has established core capability research areas across the **University of Colorado Boulder** campus, engaging with **60+ research faculty** that align to research and development priorities of the Department of Defense (DoD) and the intelligence community, and providing advanced training for the next generation workforce.

As the **sole Tier-1 research institution in Colorado**, CU Boulder creates a prime opportunity for on-demand collaboration among technical experts in the aerospace and defense enterprise.

Applied and fundamental research supporting national security priorities

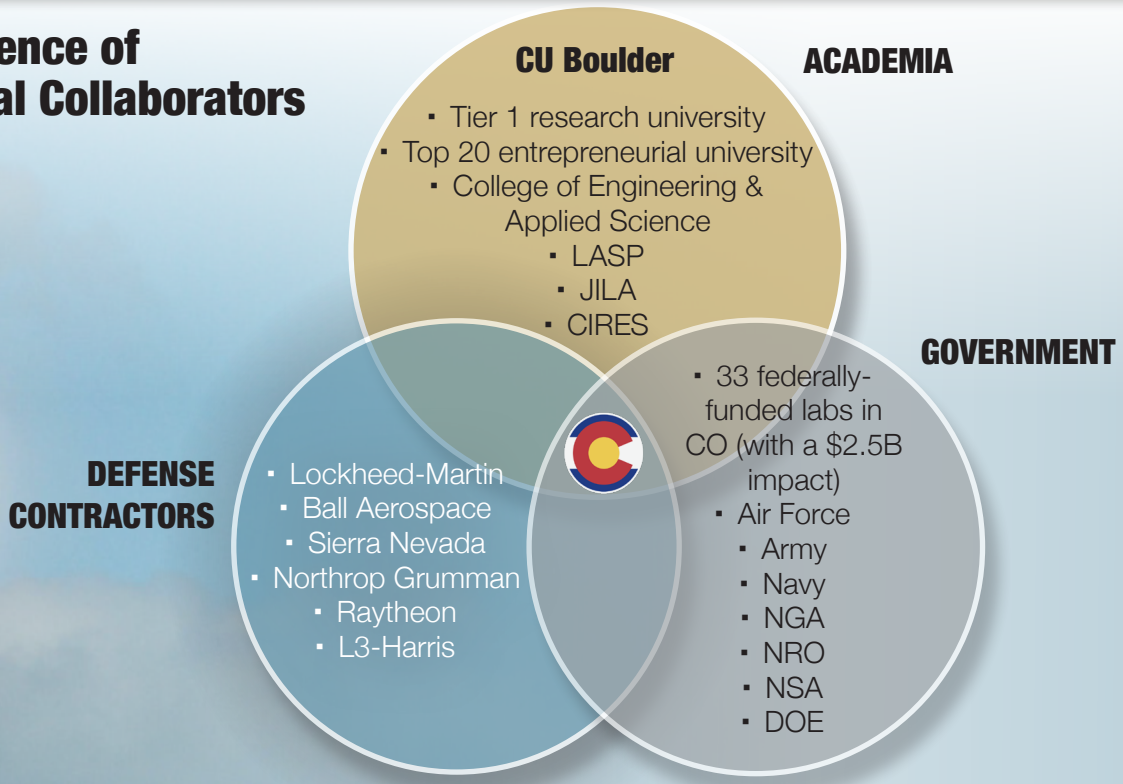
Workforce development including hiring, internships and student projects

Access to intellectual capital through world-class faculty, specialized academic programs and topical studies

Core Capabilities

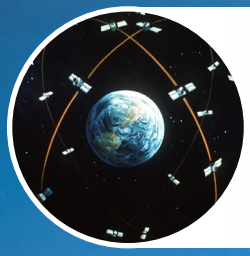
- Geospatial Data Analytics
- Autonomous Systems
- Space Domain Awareness
- Positioning, Navigation & Timing
- Hypersonics
- RF Engineering
- Remote Sensing
- Quantum Technologies
- Space Weather
- SmallSat Technologies
- Materials Science
- Human Performance

A Powerful Convergence of Research & Technical Collaborators



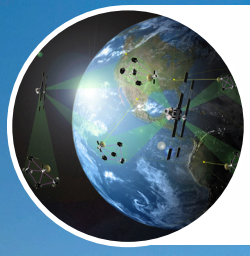
Be Boulder.

CU Boulder National Security Capabilities: Highlights



Space Domain Awareness

Missions: Space ops, anomalies
Challenges: Info fusion, perception, human factors, space environment, activity interference
CU Strengths: Astrodynamics, sensor tasking, autonomy, estimation, GNC, space weather
NSI Research Leader: Marcus Holzinger



Position, Navigation & Timing

Missions: Pervasive to land/sea/air/space ops
Challenges: GNSS limited/denied environment, high precision, resilient operation, low SWaP
CU Strengths: GNSS science, instrumentation, algorithms, vision & LIDAR, quantum sensing
NSI Research Leader: Dennis Akos

Hypersonics

Missions: Strike, defense, ISR
Challenges: Strongly coupled physics, materials, testing, validation
CU Strengths: Aerothermodynamics, high-temperature materials, structures, GNC
NSI Research Leader: Iain Boyd

Autonomous Systems

Missions: Swarm, Urban/Subterranean, Space
Challenges: Non-determinism, certification, test & evaluation
CU Strengths: Field robotics, assured algorithms, control theory
NSI Research Leader: Chris Heckman

Colorado's Front Range: A World-Class Innovation Ecosystem

Colorado is the **2nd largest** aerospace economy in the nation

Home to **Space Command**, **NORTHCOM** and 4 DoD installations

Colorado's aerospace industry generates **$15.4B** in total annual output

CU Boulder is the **#1 public university recipient** of NASA research awards (#2 overall)

900+ active duty, reserve, National Guard and veteran students

1,800+ patents filed and/or issued for CU Boulder inventions since 2006

Colorado Front Range is one of the **top entrepreneurial ecosystems** in the nation

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University of Colorado **Boulder**