



Piloting Sandia's Academic Alliance at the University of Illinois



**Sandia
National
Laboratories**

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Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.

Sandia needs a spectrum of academic relationships, including a few very strategic ones



Why create a strategic alliance now?

- Given Sandia's diverse mission and emphasis on development and applied research, the Laboratory should lead in advancing the model by which we maximize the value of partnering with universities with a particular emphasis on engineering
- Many universities are creating mechanisms to enable them to do more applied work in the national security domain; in this context, their strategy will better intersect mission needs
- It is, therefore, timely to explore a model that would allow deeper collaboration and synergy
- No set of institutions has, to our knowledge, demonstrated a highly strategic approach in this context; we aim to do so

Sandia's goals for the strategic alliance

Strategic Research

- Research that neither institution could accomplish fully by itself
- Joint funding of strategic seed research with FFRDCs/UARCs/Research Centers
- Leverage unique infrastructure at each institution
- Access to over-the-horizon thinking about emerging research and technical areas

National Presence

- Joint national advocacy for the importance of engineering excellence
- Greater recognition of the role of the national labs and Sandia in particular
- Further highlighting of NNSA's national security role

Attraction and Retention

- Employer of choice for top graduates from Alliance schools
- Blur the lab-university boundary
 - Regular and intentional exchange of staff, faculty, students, postdocs
 - sabbaticals, joint hires, etc.

Technology Transfer

- Leverage top university connections to industry
- Pilot novel R->D->A concepts involving lab, academia, and industry

Knowledge Transfer

- Example: R&D evaluation approaches
- Example: Curriculum development and delivery of particular relevance to Sandia

Strategic alliance selection criteria

Quality and Culture

- Top tier universities
- Shared values, including an affinity for national security work

Synergistic Competencies/Capabilities

- Parallel relationship with the federal government (e.g., FFRDC, UARC, etc.)
- Recognized excellence in a breadth of fields relevant to Sandia
- Multiple mission area/research challenge/research foundation pull

Existing Relationship

- Existing or high potential for a hiring pipeline
- Campus executive relationship in place

Commitment

- Top-level champion at the institution and strong connectivity at all levels
- Mutual benefit to be gained and are willing to invest in growing the relationship
- Institutional support for collaboration on large-scale proposals/projects

Location

- Geographic diversity, in aggregate, befitting a national laboratory

Developing a focused list of universities

Initial Focus	FFRDCs and University Affiliated Research Centers	Future Considerations
University of Texas, Austin	Caltech (Jet Propulsion Laboratory)	Broadening to additional universities
University of Illinois, Urbana-Champaign	Johns Hopkins University (Applied Physics Laboratory)	
Purdue University		
Georgia Tech		
University of New Mexico		