Developing and enabling innovative, collaboration-based programs

University Partnerships

Ali Josephson
*University Partnerships*
INL’s Commitment to University Partnerships and Educational Outreach

• Objectives:
  – Connect innovation of universities with INL capabilities
  – Optimize existing programs
  – Strengthen existing opportunities at the community, state, regional, and national levels
  – Establish new, strategically aligned university relationships
University Partnerships Hosted 695 People from 140 Institutions from 13 Countries in FY 2017
## Distinct Programs Build the Future Talent Pipeline

Developing and enabling innovative, collaboration-based programs to support INL’s strategic objectives

### Students
- Interns
- Co-Ops
- Practicums
- INL Graduate Fellowships

### Researchers
- Postdoctoral Researchers
- Joint Appointments
- International Researchers
- Academic Visitors
- Faculty Researchers
- Teaming Teachers

### Workforce Development
- University-related:
  - YourFIT
  - ESTEC
  - UI Fire Protection
  - EITC RadCon
  - BSU/ISU/UI Cyber
- Community College Grant
- My Amazing Future (150 8th grade girls)

### Internal Staff Development
- Employee Education
- Seminar Series: Mentoring Workshops
- Generations in the Workplace
### University Partnerships—By the Numbers

<table>
<thead>
<tr>
<th>Category</th>
<th>FY18 Lab Wide YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Visitors</td>
<td>3</td>
</tr>
<tr>
<td>Employee Education</td>
<td>289</td>
</tr>
<tr>
<td>INL Graduate Fellows</td>
<td>24</td>
</tr>
<tr>
<td>Interns</td>
<td>360</td>
</tr>
<tr>
<td>Joint Appointments</td>
<td>29</td>
</tr>
<tr>
<td>Postdocs</td>
<td>60</td>
</tr>
</tbody>
</table>

*Data effective 8.20.18*
Internships Program

- ~1,700 applicants from 249 colleges & universities in FY18
- Diverse internship positions (high school, undergraduate, graduate level and Faculty Research Appointments)
- Internship opportunities enable collaboration with experienced scientists and engineers to develop innovative solutions for challenging, real-world projects
- 80% of the intern’s time is spent with their mentor working on their project and getting exposure to the work environment
- 20% of the time is spent participating in enrichment activities (e.g. facility tours, internship breakfast)
INL Graduate Fellowship Program

Designed to identify and recruit exceptional talent in research areas aligned with INL’s strategic agenda; thereby advancing INL’s core capabilities and building leadership strength in mission delivery

Key is identifying research that is of mutual interest to INL and the university.
Postdoctoral Appointee Program

- Supports the research directorates in recruiting, selecting and hiring the next generation of independent researchers

This program develops postdoctoral researchers supporting the establishment of INL as the pre-eminent nuclear energy laboratory.

...and as a leader in the development of unique national and homeland security capabilities and sustainable energy systems.

Anticipate 87 in FY18

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
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<tbody>
<tr>
<td>FY13</td>
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<tr>
<td>FY14</td>
<td>25</td>
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<tr>
<td>FY15</td>
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<tr>
<td>FY16</td>
<td>41</td>
</tr>
<tr>
<td>FY17</td>
<td>42</td>
</tr>
</tbody>
</table>
Distinguished Postdoctoral Program

• Active mentoring with recognized technical leaders and SLT members
• Access to unique capabilities, facilities, equipment, and instrumentation
• Competitive salary and benefit package (as compared to national average for Distinguished Postdocs), including health/dental insurance and relocation allowance
• Research-related travel and conference funds
• Independent, unrestricted choice of research focus and direction within INL’s Research Directorates’ mission
• Two year assignment term with a possible third year extension
• Increased compensation and potential for discretionary research funds
• Access and interaction with INL Director and Deputy Directors
Joint Appointment Program (Seconding)

- Focus on research collaboration
- Actively engage universities with INL research and development mission and strategic objectives
- Utilize universities’ strength in scientific inquiry, critical thinking, innovation and creativity
- Enable recognized, meaningful and productive engagement of university capabilities

<table>
<thead>
<tr>
<th>Master Blanket Agreements (21):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boise State University</td>
</tr>
<tr>
<td>Cal State Long Beach</td>
</tr>
<tr>
<td>Idaho State University</td>
</tr>
<tr>
<td>Indiana University</td>
</tr>
<tr>
<td>James Madison University</td>
</tr>
<tr>
<td>MIT (outgoing)</td>
</tr>
<tr>
<td>North Carolina State University</td>
</tr>
<tr>
<td>The Ohio State University</td>
</tr>
<tr>
<td>Oregon State University</td>
</tr>
<tr>
<td>Penn State</td>
</tr>
<tr>
<td>Purdue University</td>
</tr>
</tbody>
</table>

Seven under negotiation: Colorado School of Mines, Georgia Tech, Texas A&M, University of Michigan, University of New Mexico (NUC), University of Alaska and University of South Carolina (July 2018)
Faculty Researchers & K-12 Educators

• Faculty Researchers
  – Open to University Faculty
  – Teams faculty with researchers
  – Expectation is that FR’s will take what they learned at INL back to their classroom
  – “Paid internship”

• K-12 Teaming Teachers
  – 8-10 week summer program
  – Teams teachers with INL scientific and technical educators
  – Teachers are exposed to the “real world” of science, technology and research
  – “Paid internship”
International Researchers

- INL is a Department of Energy Exchange Visitor Program Participant
- Purpose is to provide foreign nationals with opportunities to participate in educational and cultural exchanges in the United States and return home to share their experiences.
- The program currently sponsors exchange visitors on J-1 (or B-1) Visas in the categories of:
  - Government Visitor
  - Specialists
  - Short-Term Scholars
  - Research Scholars
- The program is of critical value to INL scientific community. Over the past several years, this program has enabled INL to bring foreign national researchers and scientists to the U.S.

FY2017 YTD
THIRTEEN
INTERNATIONAL RESEARCHERS.

JAPAN ATOMIC ENERGY AGENCY
8
KOREA ATOMIC ENERGY RESEARCH INSTITUTE
2
VIETNAM ATOMIC ENERGY INSTITUTE
3

New Institutions in FY18 include:
German Biomass Research Center and Beijing Research Institute of Uranium Geology
Resources for International Employees and Visitors

• Local Lodging & Transportation Options

• Other Helpful Tips
  – Visas, customs/US regulations, embassy registration, passports, social security number, travel outside US
  – English as a second language classes, drivers license, buying a vehicle, credit cards, the American school system, post office and mail service, taxes, etc.

• Regional Attractions

• Dedicated to promoting a better understanding and appreciation of the many nationalities and cultures that co-exist within INL

• Offer Mentors

• Offer Linguistics/Translators

• “RW3 Culture Wizard”

• Resources: Immigration Coordinator and International Visitor Specialist
Academic Visitors

- Promotes an interactive culture between university staff, research personnel and INL research organizations.
- Mechanism to provide badging and/or security plans to allow university personnel, with no existing funding or contracts with INL, to have access to INL facilities, as needed to support identified scope.

- Academic visitors can participate in a variety of activities including, but not limited to:
  - Guest Lectures
  - Collaborating with INL researchers
  - Collaborating with INL researchers on projects funded jointly by the university and INL
  - Providing educational opportunities to INL staff
  - Mentoring INL staff on new technology or academic research
  - Discussing topics of mutual interest
University Workforce Development

- INL is leading regional and national efforts to ensure a new generation of technicians and engineering technologists are trained to fill positions vacated by a retiring energy workforce. The need for highly-trained and qualified maintenance technicians and operations staff is especially acute.
- INL’s Energy Workforce Initiative is addressing this need by helping to build technical programs and academic and industrial partnerships that will prepare students to enter the energy industry.
- Invest about ~$300k + resources each year

Examples:
- ESTEC – variety of technicians
- College of Eastern Idaho (CEI)
- CEI Practicums, Radcon program
- UI – Fire Protection Certificate
- Practicums
- Leveraging and building bridges through partnership with Economic Development, Community Giving, HR&D and STEM K-12
Employee Education

- Strengthen the workforce
- Overview
  - ~$3M investment/year
  - Open to all current “regular” employees
  - Enables resources for community
- Advance the missions of INL
  - Options include
    - Degree Seeking
    - Continuing Education Courses
    - Licenses and Certifications Courses

![Bar chart showing the number of employees and those pursuing degrees by fiscal year.](chart)

![Column chart showing tenure as INL employees.](chart)

**289 people YTD, not incl. Fall 2018**
Resources

- University Partnerships Annual Report

- Recruiting Video
  https://www.youtube.com/watch?v=rRUTW5UbbLc&feature=youtu.b

- University Partnerships Page:
  https://www.inl.gov/inl-initiatives/education/

- Contact: Ali Josephson
  Ali.Josephson@inl.gov
  208-526-0940
Mentoring

GOOD EXPERIENCES ARE GOOD BUSINESS
FY17/FY18 INL’s University Partnerships’ Recruiting Events

- Idaho
- Washington
- Oregon
- Nevada
- California
- Alaska
- Washington
- Montana
- Wyoming
- Colorado
- New Mexico
- Arizona
- Texas
- Louisiana
- Florida
- North Carolina
- Georgia
- South Carolina
- Kentucky
- Tennessee
- West Virginia
- Pennsylvania
- New York
- Massachusetts
- Virginia
- Michigan
- Ohio
- Indiana
- Illinois
- Missouri
- Iowa
- Minnesota
- Nebraska
- Kansas
- Oklahoma
- Arkansas
- Mississippi
- Alabama
- Virginia
- New York
- West Virginia
- Pennsylvania
- New York
- Massachusetts
- Virginia
- Michigan
- Ohio
- Indiana
- Illinois
- Missouri
- Iowa
- Minnesota
- Nebraska
- Kansas
- Oklahoma
- Arkansas
- Mississippi
- Alabama
- Virginia

= Recruit Annually
= Alternating