

I/UCRC Evaluators' Meeting

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Welcome to the Industry/University
Cooperative Research Centers

Outline

- Staff update
- What's New: IUCRC opportunities
- Center status
- Status of Proposals Received in March 2012
- Proposed changes in the various solicitations
- Others:
 - Observations and recommendations (LH)
 - I/UCRC Lineage (LH)
 - IUCRC Best practices (LH)
 - DIMS update (LH and Babu)



Staff Update

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What is New: Other Opportunities for I/UCRCs

- Research Experience for Veterans (REV): NSF 12-063
- Research Experience for Veterans/Teachers (REV/T): NSF 12-073
- Accelerating Innovation Research (Research Alliance Competition): NSF 12-511
 - ❑ 1 IUCRC under consideration for funding
- Advanced Manufacturing Jobs and Innovation Accelerator Challenge:

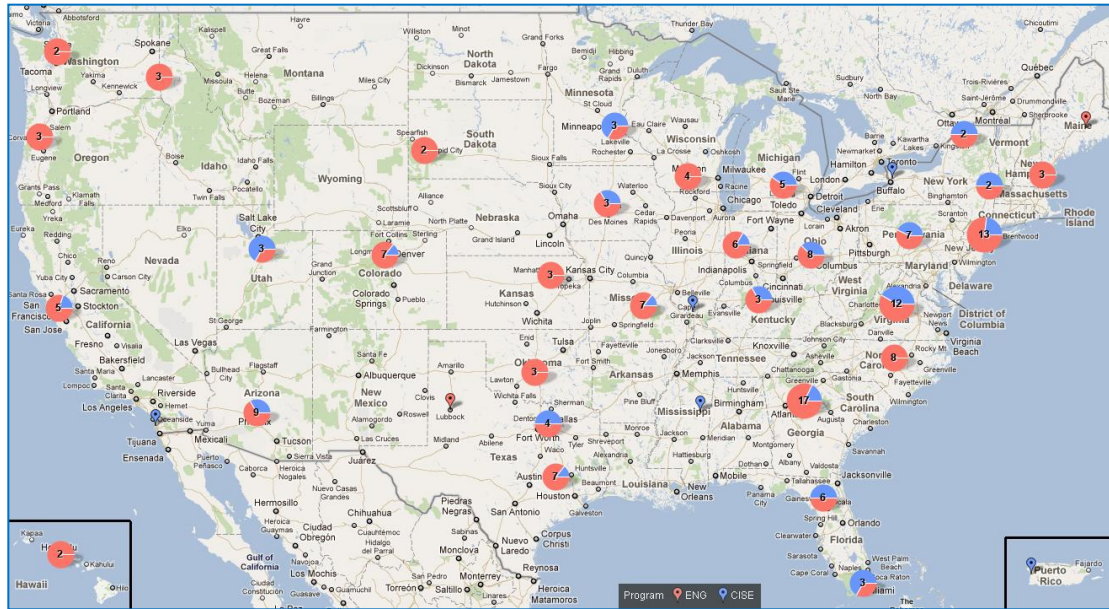
<http://www.manufacturing.gov/accelerator/index.html>



EXISTING CENTERS & SITES
&
POTENTIAL CENTERS & SITES



I/UCRC Fast Facts – Snapshot



ENG
CISE

Program Funding:

- Program Funding (ENG, CISE)
- FY 11: \$118M in Total Center Funding,
- Fy 11: Nearly 8:1 Leveraging of NSF funds

Centers:

- 61 Centers with 178 Sites
- 2 International Sites

Memberships:

- >1000 memberships
- 55% Large Business, 23% SB, 15% Federal Members

Sustainability

- 44 Graduated I/UCRCs remain in operation in 2010 true to model



Industry/University Cooperative Research Centers

ENG Multi-University Centers

1. Advanced Forestry
2. Advanced Packaging and Processing (III)
3. Bio Energy R & D
4. Composites Infrastructure
5. Ceramics Composites Optical Materials Center
6. Computational Materials Design
7. Design of Analog Digital Integrated Circuits (Phase III)
8. Electromagnetic Compatibility
9. Energy Harvesting
10. Friction Stir Processing
11. Fuel Cells
12. Grid-Connected Adv Power Elec
13. Health Org. & Transformation
14. Integrative Joining of Materials for Energy Applications
15. Laser and Plasma for Adv. Mfg.
16. Logistics and Distribution
17. Membrane Science, Engineering & Technology
18. Next Generation Photovoltaics
19. Particulate and Surfactants
20. Pharmaceutical Development

ENG Multi-University Centers

21. Plug-In Hybrid Electric Vehicles
22. Power Systems Engineering Research Center (III)
23. Resource Recovery & Recycling
24. Sensors and Actuators (III)
25. Smart Vehicles Concepts
26. Silicon Solar
27. Advanced Space Technologies
28. Connection One
29. Water and Environmental Technology
30. Water and Equipment Policy
31. Wood Based Composites
32. Metamaterials
33. Biophotonic Sensors and Systems
34. Advanced Non-Ferrous Structural Alloys
35. Energy Efficient Systems
36. Child Injury Studies
37. **Center for Tire Research**
38. **Center for Optical Wireless Applications**
39. **Sustainably Integrated Buildings & Sites**

ENG Single-University Centers

40. Agricultural, Biomedical, and Pharmaceutical Nanotechnology
41. Advanced Vehicle Electronics (III)
42. Electronic Micro-Cooling (III)
43. Non-Destructive Evaluation (III)

43 ACTIVE ENG CENTERS



Industry/University Cooperative Research Centers

CISE Multi-University Centers

1. **Advanced Knowledge Enablement**
2. **Autonomic Computing**
3. **Dynamic Data Analytics**
4. **e-Design**
5. **Embedded Systems**
6. **Experimental Computer Systems**
7. **Hybrid Multicore Productivity**
8. **Identification Technology**
9. **Intelligent Maintenance**
10. **Intelligent Storage**
11. **Net-Centrics Systems**
12. **Reconfigurable Computers**
13. **Search & Rescue Robots**
14. **Security and Software Engineering Research Center**
15. **Surveillance Theory**
16. **Wireless Internet**
17. **Visual Decision Informatics**
18. **Unmanned Aircraft Systems**

**18 ACTIVE COMPUTER AND INFORMATION
SCIENCE AND ENGINEERING (CISE) CENTERS**



New Sites Joining Existing IUCRCs (FY 2012)

- **Next Generation Photovoltaics**
 - *1 Planning Grant Proposal under Consideration*
- **Excellence in Logistics and Distribution**
 - *1 Planning Grant Proposal under Consideration*
- **Integration of Composites into Infrastructures**
 - *1 Planning Grant Proposal under Consideration*
- **Unmanned Aircraft Systems (CISE)**
 - *1 Planning Grant Proposal under Consideration*



New Sites Joining Existing IUCRCs (FY 2012)

- **Security and Software Engineering Research Center (CISE)**
 - *1 Planning Grant Proposal under Consideration*
- **Cloud and Autonomic Computing (CISE)**
 - *3 Planning Grant Proposals under Consideration*
- **e-Design (CISE)**
 - *1 Full Proposal under Consideration*
- **Net-Centric Software Systems (CISE)**
 - *1 Full Proposal under Consideration*



Full and Planning Grant Proposals Under Consideration (FY 2012)

- **Center Proposals:**
 - Smart Vehicle Systems (1): Phase II RENEWAL for Lead
 - Connection One (1): Phase III RENEWAL for Lead
 - Advanced Forestry (4): Phase II RENEWAL for Lead & partners
 - Excellence in Logistics and Distribution (1): Phase III RENEWAL for lead
 - Cooling Technologies (1): Phase III RENEWAL for lead
 - Friction Stir Processing (1): Phase II RENEWAL
- **Planning Grant Proposals:**
 - Arthropod Management Technologies: (2)
 - Dielectrics and Piezoelectrics (2)
 - Novel High Voltage Transmission Materials and Structures (3)
 - Freeform Optics (3)
 - Geothermal Energy Resources (2)
 - Wind Energy Science Technology and Research (4)
 - Smart Ocean Technology (2)
 - Wheat Genetics (1)



Changes in Planning Grant (In Effect)

- ❑ **Boot camp for Planning Grantees at NSF (NSF 10-595)**
- ❑ **Planning grant agenda to be reviewed and approved by NSF**
- ❑ **Must complete planning grant workshop prior to submission of a full proposal**
- ❑ **Presentation at Planning Grant Workshops**
- ❑ **Planning grant workshop deliverables:**
 - **List of ALL POTENTIAL RELEVANT RESEARCH PROJECTS sent to ALL POTENTIAL SPONSORS**
 - **Must include EXECUTIVE SUMMARIES & BACK-UP MATERIAL (if needed)**
 - **Must include VISION and MISSION Statement of the proposed Center**
 - **Sponsors prioritize and send back list to PIs (5+ top research projects)****
 - **PIs sort through and identify the top 5+ research projects**
 - **PIs report back RESULTS to NSF & ALL POTENTIAL SPONSORS**
 - **PIs list these TOP 5+ projects in the FULL PROPOSAL**
 - **If awarded, these VETTED research projects now effectively start the first IAB meeting**



Changes in Solicitation (NSF 12-516)

- NSF's expectation of "cooperative" operation for an IUCRC
- Role & responsibilities of the IAB
- Additional funds for Operations/Dissemination/Communication and Marketing
- Refined responsibilities of evaluators: DIMS and Impact data
- Increased clarity in renewal proposals; greater clarity regarding NSF's expectations from Phase I, Phase II & Phase III completions
- Examples of Center organizational models



Other Important Items

- Fundamental Research proposal – ongoing; **~\$1.6M (IIP); ~\$1M (CISE)**
- SBIR membership in IUCRCs - ongoing
- CORBI – ongoing; **~\$200K (IIP); ~\$200K (CISE)**
- Center Fact Sheet (operational)
- MIPR – complete information on the IUCRC homepage
- Annual report
 - Evaluator's report with Denis' cover page
 - Membership certification
- **Evaluator presence and evaluator trip reports (see next slide)**
 - **What if no PDs from NSF are present**
- **DIMS**
- LIFE forms
 - Role of NCSU (new item)



Expectations from Evaluators

- In the absence of NSF PDs, summarize **in one page**
 - Center membership status per site (note changes)
 - Attendance (particularly members per site)
 - Cooperative Operation (Mode, Dynamic)
 - CONCERNS**, if any (is this the time NSF PD should get involved?)
 - SUCCESS stories** (particularly impact)
 - Others



Example Slide

- Category (ex., retail logistics...)
- Companies and universities involved
- NSF Funding amount and duration
- Brief description (200-300 words max.)
- Economic impact (numbers, if available)
- Important hyperlinks for more information.

