

# **I/UCRC Evaluators' Meeting**

## **June 6, 2013**

**Rathindra (Babu) DasGupta,  
Larry Hornak, Shashank Priya  
Program Directors (IIP/ENG)**

**Rita Rodriguez**

**Program Director (CNS/CISE)**

**Alex Schwarzkopf, Expert**

Welcome to the Industry/University  
Cooperative Research Centers

# Outline

- Staff update
- What's New: IUCRC opportunities
- Center status
- Status of Proposals Received in March 2013
- Others:
  - Global positioning of I/UCRC
  - I/UCRC Data Migration (Denis Gray)
  - SBIR/I/UCRC supplement study (Denis)
  - IUCRC Observations (LH)
  - I/UCRC vs I-Corps
  - Updating I/UCRC website



**Donald Senich**  
Academic Partnerships

**Grace Wang**  
Division Director  
Industrial Innovation and  
Partnerships (IIP)

**Joe Hennessey**  
Small Business  
Partnerships

**Errol Arkilic**  
I-CORPS

**Rathindra DasGupta**  
Industry/University Cooperative Research  
Centers (I/UCRC)

**Karlene Hoo**  
Partnerships for Innovation: Accelerating  
Innovation Research (PFI-AIR)

**Sally Nerlove**  
Partnerships for Innovation: Building  
Innovation Capacity (PFI-BIC)

**Larry Hornak**  
I/UCRC

**Shashank Priya**  
I/UCRC

**Gracie Narcho**  
Staff Associate

**Josh Abbott**  
Program Specialist

**Chris Campbell**  
Einstein Fellow

**Lindsay D'Ambrosio**  
Science Assistant

**Alexandria Hale**  
Program Specialist

**Caroline Hale**  
Program Specialist

**Mary Konjevoda**  
Program Analyst

**Willis Phan**  
Program Specialist

**Prakash Balan**  
Chemical & Environmental Technologies

**Juan Figueroa**  
Optoelectronics & Wireless Technology

**Steven Konsek**  
Semiconductors, Electronics, & Photonics

**Glenn Larsen**  
Technology for Education Applications

**Rajesh Mehta**  
Advanced Manufacturing

**Murali Nair**  
Robotics & Sensor Technology

**Ben Schrag**  
Nanotechnologies & Advanced Materials

**Ruth Shuman**  
Biological Technologies

**Jesus Soriano**  
Biomedical Technologies

**\*\*Barb Kenny for AIR**



# Staff Update

Rathindra (Babu) DasGupta, Program Director for I/UCRC - [rdasgupt@nsf.gov](mailto:rdasgupt@nsf.gov)

Shashank Priya, Program Director (IPA) – [spriya@nsf.gov](mailto:spriya@nsf.gov)

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Don Senich, Senior Advisor- [dsenich@nsf.gov](mailto:dsenich@nsf.gov)

**NOTE: For MIPRs/IA...Alexandra Hale is the contact person**



# What is New: Other Opportunities for I/UCRCs

- Veterans Research Supplement (VRS)
- Accelerating Innovation Research (Research Alliance Competition)
- Opportunity for Support of Innovative Managing Director Models in I/UCRC (pilot activity)
- **Stay tuned for more!**

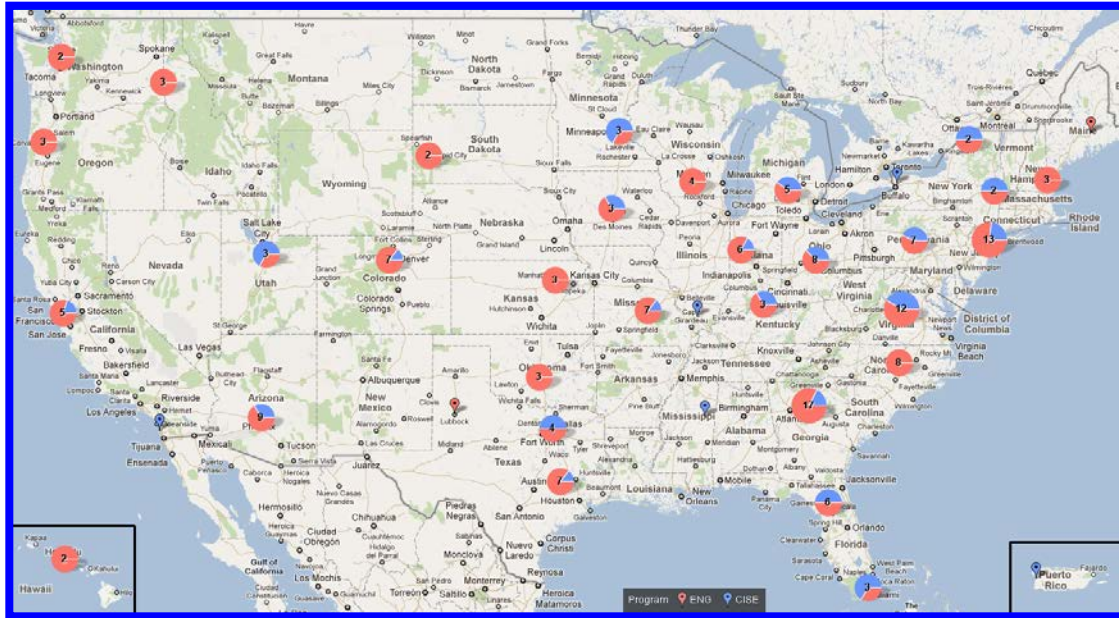


**EXISTING CENTERS & SITES**  
**&**  
**POTENTIAL CENTERS & SITES**



# I/UCRC Fast Facts – FY12 Snapshot

National Science Foundation  
WHERE DISCOVERIES BEGIN



**ENG** – Engineering  
**CISE** – Computer and Info. Sci and Eng.

## Program Funding

- \$16.4M in Program Funding (ENG, CISE)
- \$130M in Total Center Funding,
- 8:1 Leveraging of NSF funds.

## Centers Nationally:

- 61 Centers with 178 Sites
- Over 1080 memberships

- 52% Large Business, 26% SB, 15% Federal Members

## Students

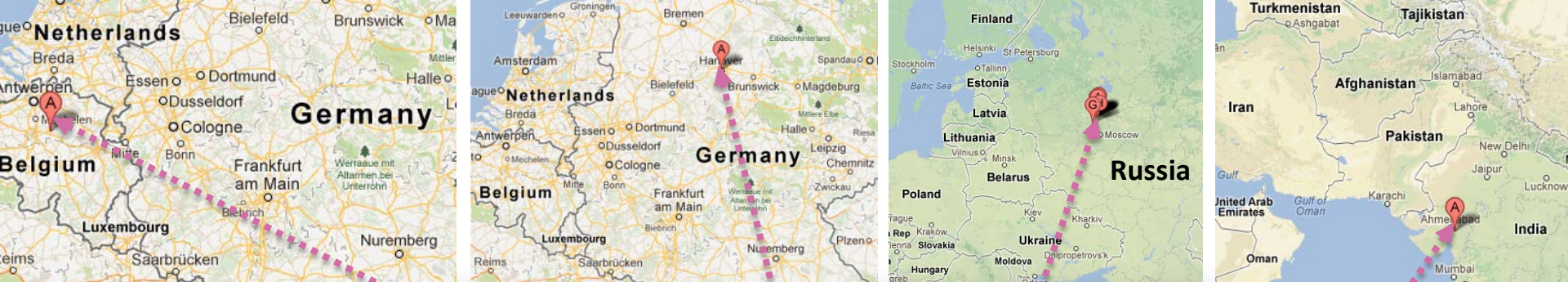
- 2100 students engaged
- 1000 graduated in 2011, over 30% hired by members
- 350 PhDs, 425 MS & 250 UGs graduated in 2011, trained in Center research

## Sustainability

- Over 40 Graduated I/UCRCs remain in operation true to model







Dubna International University (Russia)  
 Katholieke Universiteit Leuven (Belgium)  
 Leibniz University Hannover (Germany)  
 Dharmasinh Desai University (India)

***Strategic partnership that strengthens IAB, education, and research.***





# 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 (4; Rutgers & Miami)
5. Ceramics Composites Optical Materials Center (2; Clemson Lead?)
6. **Computational Materials Design (OUT)**
7. Design of Analog Digital Integrated Circuits (Phase III)
8. Electromagnetic **Compatibility (down to 3)**
9. Energy Harvesting
10. Friction Stir Processing (**down to 4**)
11. **Fuel Cells (status unknown)**
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. (**UMICH OUT; NCSU & UTD?**)
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 (**TAMU?**)
26. Silicon Solar
27. **Advanced Space Technologies (INACTIVE WITH NCE)**
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)

**41 ACTIVE ENG  
CENTERS; 117 SITES**



# Industry/University Cooperative Research Centers

## *CISE Multi-University Centers*

1. Advanced Knowledge Enablement
2. **Autonomic Computing**
3. Dynamic Data Analytics
4. e-Design (UCF & CMU OUT)
5. Embedded Systems
6. Experimental Computer Systems
7. Hybrid Multicore Productivity (GT OUT)
8. Identification Technology
9. Intelligent Maintenance
10. intelligent Storage (CRIS)
11. Research in Storage Systems (CRSS)
12. Net-Centrics Systems
13. Reconfigurable Computers
14. Search & Rescue Robots
15. Security and Software Engineering Research Center (Iowa State?)
16. Surveillance Theory
17. **Wireless Internet (OUT); being replaced by another CENTER**
18. Visual Decision Informatics
19. Unmanned Aircraft Systems
20. Configuration Analytics and Automation

**19 ACTIVE CISE CENTERS; 52 SITES**



## New Sites Seeking to Join Existing IUCRCs (FY 2013)

- **Safety, Security, Rescue Research Center: 1**
- **Integration of Composites into Infrastructure: 1**
- **Excellence in Logistics and Distribution: 2**
- **Laser and Plasma in Advanced Manufacturing: 1**
- **Health Organization and Transformation: 1**
- **Pharmaceutical Development: 1**
- **Tire Research: 1**
- **Intelligent Maintenance Systems: 1**
- **Security & Software Engineering Research Center: 1**
- **Advanced Forestry Systems: 1**
- **E-Design: 1**



# New & Renewal Proposals Under Consideration (FY 2013)

## ENGINEERING:

- **SIX (6) Full Center Proposals including 1 Phase III; no new evaluator (EV) needs**
- **FOUR (4) Planning Grant Proposals; need EV**
- **TWO (2) Center Proposals for Renewal**

## CISE:

- **TWO (2) Full Center Proposals including ONE (1) Renewal; no new evaluator (EV) needs**
- **ONE (1) Planning Grant Proposal (need EV)**



## Global Positioning of I/UCRC (2013)

- **Presentation to OSTP**
- **Discussion at the Lab-to-Summit Meeting**
- **Meeting with Canadian Minister Gary Goodyear**
- **Teleconference with John McDougall of NRC**
- **Presentation to UIDP (Cal Tech...)**
- **Presentation to APLU Summit (June 11)**
- **Discussion at the US-Japan S&T (State Department)**
- **Meetings with Foreign Delegates at NSF...**





## I-Corps Effect on I/UCRCs

- **Jay Lee (IMS): has a start-up**
- **Nikos (SSR-RC): “Pivoted,” and pivoted to the Agriculture Market Segment ; MCGA is now a member**



# Important Items

- Fundamental Research proposal – ongoing; ENG and CISE
- SBIR membership in IUCRCs – ongoing; awaiting Denis' findings
- CORBI – ongoing
- Center Fact Sheet (operational)
- MIPR – complete information on the IUCRC homepage
- Annual report
  - Research.gov
  - Evaluator's report with Denis' cover page
  - Membership certification for the reporting period
  - Discrepancy between Evaluator report and membership certification**
- REU, RET, VRS - ongoing
- LIFE forms
  - Role of NCSU (**password issues?**)



# Planning Grant Boot Camp (In Effect)

- ❑ **Boot camp for Planning Grantees**
- ❑ **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**



# What Evaluators need to Know!

- 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:
    - Evidence that research projects are guided by IAB, and not a collection of targeted research projects
    - Project across multiple sites (ideal)
    - Greater # of projects presented vs projects funded
    - Technology roadmap (strategic vision)

