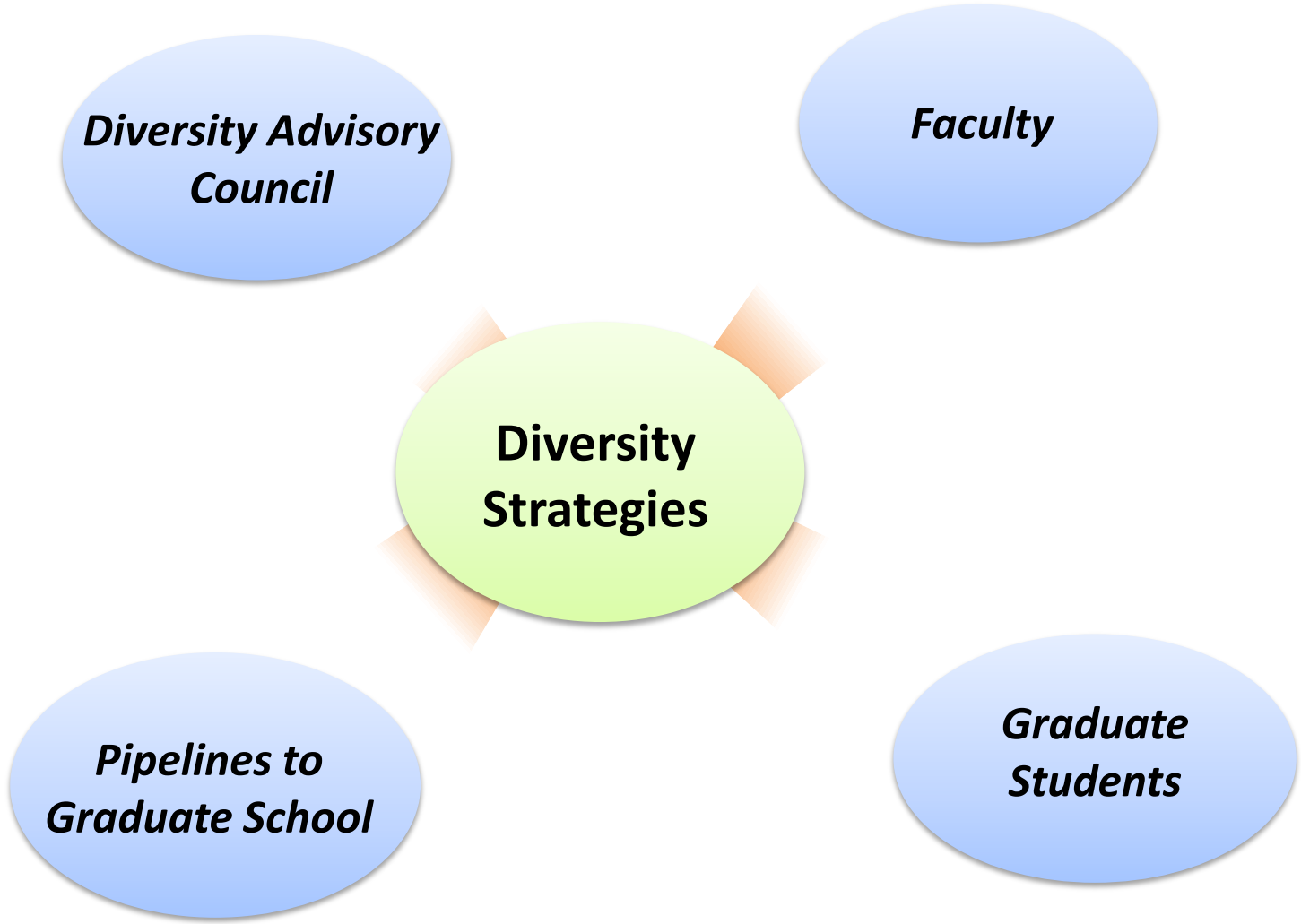




Diversity
Year 2 Symposium
Randall Hall

Increase the number of URM and women in the Alliance.

Diversity Strategies



Diversity Advisory Council

Faculty

Diversity Strategies

Pipelines to Graduate School

Graduate Students

Diversity Advisory Council



Sheila Edwards Lange

Vice President for Minority Affairs
and Vice Provost for Diversity

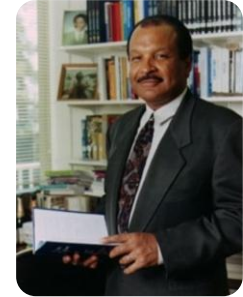
University of Washington



DiOnetta Jones

Associate Dean and Director,
Office of Minority Education,
Office of the Dean for
Undergraduate Education

Massachusetts Institute of Technology



William Lester

Department of Chemistry
University of California, Berkeley



Betsy Willis

Director, Advising and Student Records
Director, Gender Parity Initiative
Bobby B. Lyle School of Engineering

Southern Methodist University



Jenna Carpenter

Associate Dean for Admin. &
Strategic Initiatives
Wayne and Juanita Spinks Prof.
of Mathematics and Statistics

Louisiana Tech University



Stephanie Adams

Associate Dean for Undergraduate Studies
School of Engineering

Virginia Commonwealth University

2011 DAC recommendations:

- Work with existing national efforts, i.e. GEM, Institute for Broadening Participation. **Graduate, REU/RET opportunities listed at IBP. A recruitment letter sent to GEM scholars.**
- Enhance researcher's ability to communicate with broader audiences: **NSF/LA EPSCoR sponsored workshop: Science: Becoming the Messenger, November 17, 2011.**
- Leveraging Louis Stokes Alliance programs. **REU/Training**
- Industrial Liaison Team missing an HBCU partner: **Rachel Cruthirds (from Xavier) joined.**

DAC present at today's Symposium.



Strategies

Graduate Students - Assistantship Supplements

Announced on Fall 2011:

Two graduate students have been awarded supplemental research assistantships.

Faculty - Supplements to Startup Packages

Contributing to the startup package of Anne Robinson, Tulane, and Erica Murray at LA Tech.

Pipelines

Targeting recruiting efforts in all state bridge programs:

4+1 Grambling/LA Tech, 3+2 Xavier/Tulane/UNO/SUBR, 2+2 LSU/BRCC and 2+2 Southern/BRCC beginning Fall 2011.

Three students recruited: one LA-SiGMA Xavier student transfers to Tulane, one BRCC REU student will transfer to LSU, and one BRCC REU student will transfer to SUBR.

LA-SiGMA statistics:

| | Year Two | | | | Year One | | | |
|------------|----------|--------|-------|----------|----------|--------|-------|----------|
| | Male | Female | Black | Hispanic | Male | Female | Black | Hispanic |
| Faculty | 83% | 17% | 9% | 6% | 86% | 10% | 6% | 6% |
| Post docs | 80% | 10% | 10% | 0% | 86% | 14% | 0% | 0% |
| Graduates | 73% | 24% | 11% | 3% | 77% | 21% | 11% | 2% |
| Undergrad. | 44% | 56% | 68% | 4% | 56% | 44% | 56% | 0% |
| REU | 69% | 31% | 15% | 4% | 67% | 33% | 23% | 0% |
| RET | 65% | 35% | 12% | 0% | 73% | 27% | 0% | 0% |

Targets: 30% female and 15% URM by Year 3

| Diversity Strategies | Milestones Y1 | Milestones Y2-Y3 |
|--|---|--|
| Establish a Diversity Advisory Council | DAC established in Y1. Status: On target. | Annual DAC meetings. Status: On target. |
| Provide financial incentives to women and URM students for pursuing adv. education | Establish program. Status: On target. | Reach 30% women and 15% URM graduate students within the Alliance by Y3. Status: On target. |
| Development of role models. Supplement Startup Packages. | Establish program. Status: On target. | Reach 30% women and 15% URM graduate students within the Alliance by Y3. Status: On target. |
| Create/expand pipelines to graduate school for women and URM students | Establish program. Status: On target. | At least five students recruited through the pipelines described in the proposal by end of Y2. Status: Behind* |

* Three students recruited. Personal contacts have proven to be successful in Y2. We are planning to strength these efforts.

A state-wide articulation agreement on transferring course credits between two-year and four-year colleges is being finalized. This will facilitate future recruiting.



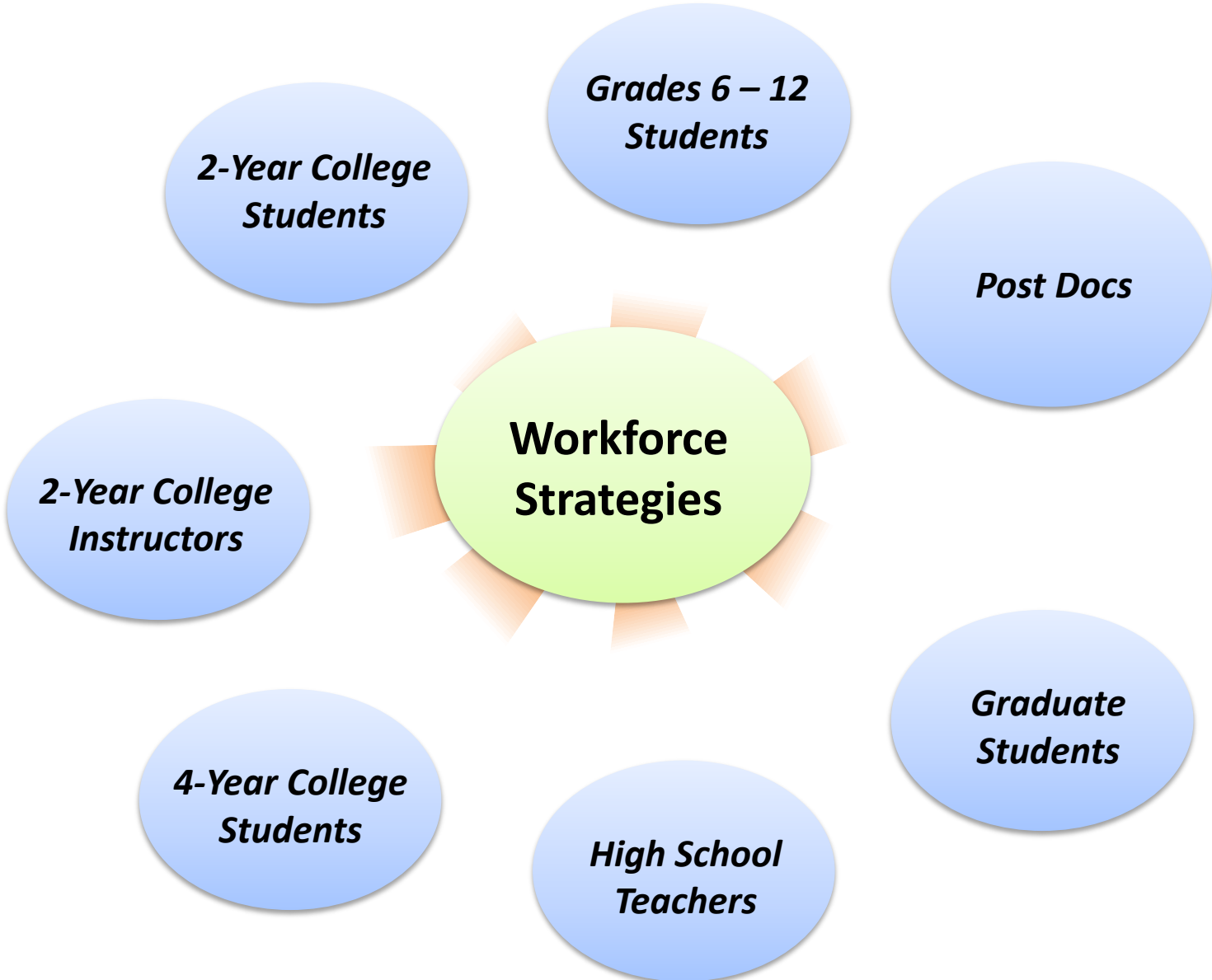
Workforce Development

Year 2 Symposium

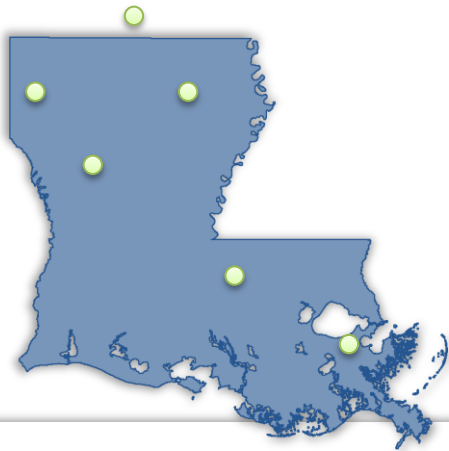
Juana Moreno

LA-SiGMA will address all levels of the educational ladder, contributing to a well-trained and diverse professional workforce.

Workforce Development Strategies



Partnerships



Baton Rouge Community College
Bossier Parish Community College
Louisiana Delta Community College
Louisiana School for Math, Science & the Arts
South Arkansas Community College

Brookhaven National Lab
Eidgenössische Technische Hochschule Zürich, Switzerland
Göttingen University, Germany
Jawahar Lal Nehru Centre for Advanced Scientific Research, Bangalore, India
Karlsruhe Institute, Germany
Neel Institut, Grenoble, France
Max Planck Institute for Colloids and Interfaces, Potsdam, Germany
National Institute for Materials Science, Tsukuba, Japan
Argonne Nat. Lab, Illinois
SciDAC Institutes
Sandia National Lab
Shodor Education Foundation
S.N. Bose National Centre for Basic Sciences, Kolkata, India
Technischen Universität Dortmund, Germany
Texas A&M University
University of Hertfordshire, Great Britain
Universität Würzburg, Germany

Grades 6-12



Two Louisiana School for Math, Science, and the Arts high school students participate in the 2012 LSU REU program.



LSU LA-SiGMA participated in Super Science Saturday on Oct 15, 2011. Over 1000 people attended.



Grades 6-12

LA Tech/Grambling LA-SiGMA hosted an Open House as a part of Sci-Port's High School Engineering Olympics on February 21, 2012. It also participated in Engineering & Science Day April 25, 2012 and hosted high school students visits.



Tulane is working with a Title I school in New Orleans to develop a Chemistry AP program.

More than ten lectures at K-12 schools by LA-SiGMA researchers.

Beowulf Boot Camp:

July 9-13, 2012

37 high school students, 4 high school teachers, one community college faculty



High School Teachers



2011 RET participant Chris Campbell chosen as 2012-2013 Einstein Fellow to serve in the Industrial and Innovative Partnership Division of NSF Engineering Directorate

- RET @ Ruston feature at NSF website
- Leveraged LSU's LaMSTI teacher program
- SU RET teachers participated in the GPU team
- 16 LA-SiGMA RET teachers statewide, 38% women, 13% URM

...at LSU, which just announced a \$5 million funding award. The money will provide \$20,000 fellowships for 96 master's degree candidates in the region to take summer and evening classes at LSU over three years starting in 2010.

Tuition is waived for teachers who participate in the opportunity, underwritten by the National Science Foundation.

A successful pilot program for seven teachers who received degrees in 2007 and 20 teachers who are currently enrolled led to the funding to expand the program, says James Madden, an LSU math professor who acted as primary contact for the grant application. The instruction will be offered using existing course numbers, but Madden says the program is a custom-designed, flexible track for teachers of grades 7 through 12.

Two-year college students & instructors:

Short courses:

- LA Tech held a one day course in Microscopy, October 14, 2011: 20 teachers attended.

REU/RET participation:

- Two CC students participating into 2012 REU (LSU & SUBR).
- Two CC faculty participating in the RET program.

Beowulf Bootcamp:

- BRCC instructor attended 2012 Beowulf Bootcamp. She provided feedback on the camp, and how we can best include CC students in the future.


Modules for STEM CC classes:

- BRCC instructor working with LSU LA-SiGMA faculty to develop course modules for STEM CC classes.



Undergraduates

2012: 24 LA-SiGMA REU students statewide.
They will be tracked to measure retention.
33% women, 17% URM



“This summer REU has truly impacted my life. I am reconsidering my career goals. I am thinking of focusing my undergraduate degree towards computational physics, and going to grad school for computational physics as well. I couldn’t have had a better summer”

- Sharae Williams, 2011 REU participant



Graduate Students



9 Graduate level courses offered:

1 course Fall 2010, 3 courses Spring 2011,
2 courses Fall 2011, 3 courses Spring 2012

(6 of the courses in partnership with German & Swiss Universities leveraging
PIRE award, 2 of the courses include students at Bangalore, India)

Multidisciplinary & multi-institutional mentoring committees for each
graduate student



Student/postdoc retreats:

October 15, 2011: 30 participants at LSU.

July 2, 2012: 43 participants at Tulane;

Peter Feibelman as invited speaker.



Graduate Students and Postdocs

LA-SIGMA Effective Teaching Workshop for postdocs and senior level graduate students based on Michigan State's FIRST program (Faculty Institute for Reforming Science Teaching) developed and taught by Cynthia Sisson and Stephanie Aamodt (LSU-Shreveport).



Graduate Students and Postdocs



Density Functional Workshop, July 23-27 2011
(40 registrants, 5 speakers, LA Tech, LSU, SUBR, Tulane, Xavier)



Kieron Burke
UC Irvine

Mel Levy
Tulane & N.C. A&T

Shobhana Narasimhan
Jawaharlal Nehru Centre

John Perdew
Tulane

Weitao Yang
Duke

Tanusri Saha-Dasgupta
S.N. Bose National Centre

Graduate Students and Postdocs

Mardi Gras conference: Computational Materials & Biosystems

February 16-18, 2012
16 invited speakers
70 participants



Graduate Students and Postdocs



Workshops on Computational Thinking with a Parallel Perspective
by Bob Panoff and the Shodor team: July 31-August 6, 2011 (LSU)
June 11-14, 2012 (SUBR)

NATIONAL COMPUTATIONAL SCIENCE INSTITUTE

Introduction to Computational Thinking (ICT)

Shodor > NCSI > 2011 Workshops > Introduction to Computational Thinking (ICT)

Registration Closed

Introduction to Computational Thinking (ICT)

First Look — 2011

The purpose of these workshops is to expose participants to and inspire them with new techniques, teaching materials, and applications to use computational models in the undergraduate curriculum. By bringing faculty and teachers from different disciplines together so that they can learn how to incorporate computational models into their classrooms and research projects, it will advance the use of computing in undergraduate science education. We desire to have participants from a broad range of disciplines, including computer science, mathematics, and the physical and life sciences. Each workshop below may be a "variation" on the theme of Computational Thinking.

| | |
|---------------------------|--|
| Institution | Louisiana State University Baton Rouge, LA |
| Dates | Jul 31 - Aug 6 |
| Local Coordinators | Leigh Townsend and Kathy Traxler |
| Lead Instructors | Jennifer Houchins, Erin McNeil, Clyde Metz, Bob Panoff and David Toth |
| Notify By | Jun 15 |
| Cancel By | Jul 8 |
| Details | ICT: Computational Thinking from a Parallel Perspective: Focus on parallel thinking and resources to prepare graduate students, college faculty, and high school teachers for modeling and simulation for new parallel computing environments. |

Website Feedback | Not Logged In. Login | NSDL





Graduate Students and Postdocs

**VSCSE Workshops on GPU Algorithms and Programming Tools:
2 workshops in summer 2011 (20 participants),
2 workshops in summer 2012 (30 participants)**

VSCSE VIRTUAL SCHOOL OF COMPUTATIONAL SCIENCE AND ENGINEERING

HOME | ABOUT | PAST SUMMER SCHOOLS | 2011 SUMMER SCHOOLS | NEWS | CONTACT

2011 summer school courses

Graduate students, post-docs and professionals from academia, government and industry can gain the skills they need to leverage the power of cutting-edge computational resources at three courses offered this summer by the Virtual School:

- › [Petascale Programming Environments and Tools](#), July 12–15, 2011
- › [Proven Algorithmic Techniques for Many-core Processors](#), August 15–19, 2011

To participate in summer courses prospective students must first be enrolled in the Virtual School. Enrollment is free and can be completed at <https://hub.vscse.org/>.

LONI HPC Parallel Programming workshop, June 4-6, 2012,
30 participants

Inaugural LONI HPC User Symposium, June 6-7, 2012, 53 participants

NWChem Workshop, June 8-9, 2012, 30 participants

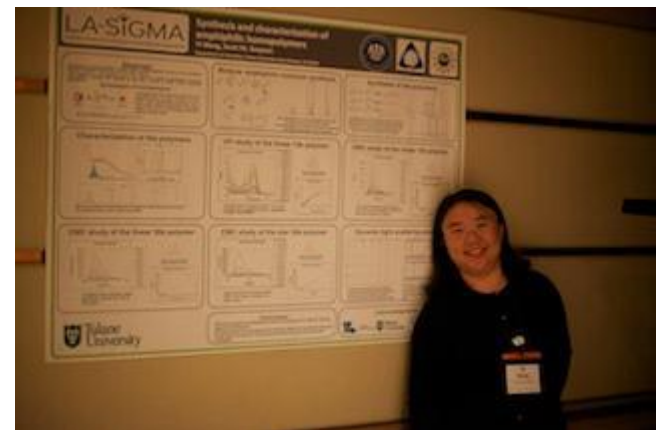
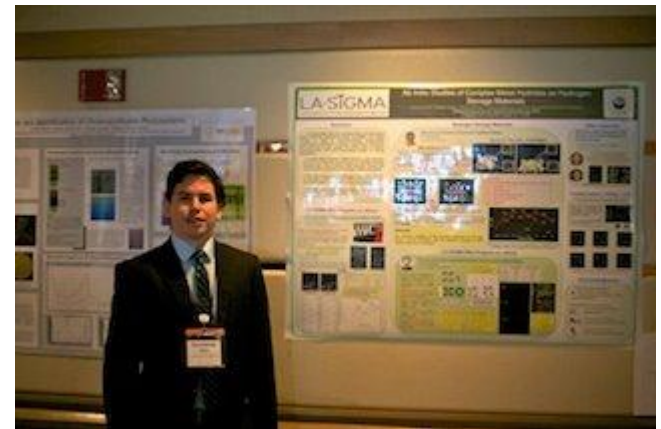


Graduate Students and Postdocs

22nd National NSF EPSCoR Conference, Coeur d'Alene, Idaho, October 24-27, 2011

Three LA-SiGMA graduate students attended and competed in the Energy section of the Student Poster Competition.

Ekuma won the 2nd Price in the Energy section.



Graduate Students



Materials Science PhD Programs

LSU-SU-UNO joint PhD in Materials Science & Engineering has been postponed.

LA Tech PhD in Molecular Science & Nanotechnology has been approved.

Tulane is about to launch a Ph.D. program in Materials Science.

Collaborative Ph.D.
Program in
Materials Science and Engineering

Proposed to the Louisiana State Board of Regents

Louisiana State University and Agricultural and
Mechanical College
The University of New Orleans
Southern University, Baton Rouge



A LETTER OF INTENT
for a

DOCTOR OF PHILOSOPHY PROGRAM
in
MOLECULAR SCIENCES AND
NANOTECHNOLOGY

submitted by
LOUISIANA TECH UNIVERSITY

to the
UNIVERSITY OF LOUISIANA SYSTEM
BOARD OF SUPERVISORS

Graduate Students and Postdocs



Internships/Travel:

Supada Laosooksathit attended Supercomputing '11 in Oregon along with Tom Bishop.



Chinedu Ekuma from LSU visited Pacific Northwest National Laboratory in September, 2011

5 students travel to the Louisiana Academy of Science meeting.



Chinedu Ekuma and Ryky Nelson from LSU visited Brookhaven National Laboratory in October, 2011

Pavel Kucheryavy traveled to New York University in June 2011 to learn about NMR.



Conrad Moore attended PIRE workshop in Goettingen, Germany, January 2012.

| Workforce Development | Milestones Y1 | Milestones Y2-Y3 |
|---|---|--|
| Open houses for middle and high school students and summer research workshops | 100 open house attendees, and 40 students in summer workshops in Y1. Status: On target. | Increased attendees in Y2-Y3. Status: Partially achieved; see note 1 below. |
| RET programs for teachers | 20 RET participants (as budgeted) each year; use of modules in classroom (tracked through follow-up visits to classrooms). Status: On target. | 20 RET participants each year; expansion of pilot program. Status: Behind; see note 2 below. |

1. The Open House events had increased attendance to over 1,000 participants. High school students did not participate in summer workshops in Y1. We achieve Y1 milestones in Y2.
2. 16 RET participants this year. The recruiting strategies will be changed next year to attract a larger number of qualified applicants.

| Workforce Development | Milestones Y1 | Milestones Y2-Y3 |
|--|---|---|
| Multiple programs for two-year college students | Initiation of short-course pilot programs in Y1. Status: Behind; to be accomplished in Year 2. | Expansion of short courses in Y2 and beyond; five two-year college participants each year in Beowulf Boot Camp; expansion of 2+2 programs to other LA-SiGMA institutions by Y3. Status: Behind; see note below. |
| REU programs on computational and experimental materials science | 30 REU participants (as budgeted) each year; 50% of participants will pursue higher education. Status: On target. | 30 REU participants (as budgeted) each year; 50% of participants will pursue higher education. Status: On target. |

Short Courses: the first Short Course was held at LA Tech in Y2. LA-SiGMA plans to hold Short Courses in each region (Ruston, Baton Rouge, New Orleans) during the Fall of 2012.

Five two-year college participants in Beowulf Boot Camp: the decision was made to assess the course this summer to determine if modifications to the content were needed to better align it with the needs of community college students.

Expansion of 2+2 and other programs by Year 3. Results: three students recruited to date.

| Workforce Development | Milestones Y1 | Milestones Y2-Y3 |
|--|--|---|
| Distance Ed courses | Enrollments in new courses (at least 40 statewide). Status: On target. | Incorporation into graduate curricula on two campuses by Y2, others by Y3. Status: On target. |
| Training programs for graduate students and postdocs | Participation in effective teaching workshops; five internships and extended visits each year. Status: Behind; to be done in Year 2. | Participation in effective teaching workshops; five internships and extended visits each year. Status: On target. |