

Diversity

Year 3 Symposium Pedro Derosa

Increase the number of URM and women in the Alliance.

Diversity Strategies



Diversity Advisory

Council

Role Models

Diversity Strategies

Pipelines to
Graduate School

Incentives

Updates in the Strategic Plan

| Diversity Strategies | Milestones Y2-Y3 |
|---|---|
| Establish a Diversity Advisory Council | Annual DAC meetings. |
| Provide financial incentives to women Milestones kept, undergraduate students included in the count | Reach 30% women and 15% URM students within the Alliance by Y3. Reach 30% women and 15% URM students |
| Supplement Startup Packages | within the Alliance by Y3. |
| More stress on Community Colleges, articulation agreement | At least five students recruited through the pipelines described in the proposal by end of Y2. |

Diversity Advisory Council

- ☐ During year 3, interactions with DAC have significantly increased, A-SIGMA
 - > Annual meetings
 - > 2 teleconferences
 - Numerous e-mail requesting advise
- ☐ Recommended by DAC, Prof O'Brien spoke during the April technical meeting on understanding the effect of stereotypes
- ☐ Two members were replaced,
 - > Dr. Warner resigned
 - > Dr. Moreno, now co-PI, stepped out

Diversity Advisory Council





William Lester Department of Chemistry

University of California, Berkeley



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



Sheila Edwards Lange



Zakiya Wilson

Vice President for Minority Affairs Executive Director of Research. and Vice Provost for Diversity Education, and Mentoring Programs **University of Washington** Office of Strategic Initiatives Massachusetts Institute of Technology **Louisiana State University**



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 Tech University**



Associate Dean for **Graduate Programs** School of Science and **Engineering Tulane University**

LA-SiGMA statistics:



Faculty



Post-Doc



Graduate



Undergraduate

| Year 3 | | | | |
|----------------|--------|-----|--|--|
| | Female | URM | | |
| Faculty | 17% | 11% | | |
| Post docs | 25% | 13% | | |
| Total Students | 32% | 31% | | |
| Graduates | 24% | 27% | | |
| Undergraduates | 41% | 44% | | |
| REU | 37% | 37% | | |
| RET | 44% | 28% | | |

Strategies



Graduate Students - Assistantship Supplements

Three graduate students have been awarded supplemental research assistantships: two female and an URM male.

Faculty - Supplements to Startup Packages

Contributing to the startup package of 2 Female Faculty (one an URM)

Strategies



pipelines

Targeting recruiting efforts in all state bridge programs:

4+1 Grambling/LA Tech

3+2 Xavier/Tulane/UNO/SUBR,

2+2 LSU/BRCC

2+2 Southern/BRCC

6 students recruited:

- 1 LA-SiGMA Xavier student transfers to Tulane,
- 1 BRCC REU student transferred to LSU, 2012
- 1 BRCC REU student transferred to SUBR 2012
- 2 BRCC REU students will transfer to LSU. 2013
- 1 REU student will transfer from SUS to Grambling maybe 2, 2013

Role Models

LSU's Center for Computation & Technology (CCT) and Innovation through Institutional Integration (I3) at the LSU Office of Strategic Initiatives

invite all summer research programs to attend

Minorities in STEM Panel

Moderated by: Joel Tohline, LSU CCT, Director

Tuesday, July 30, 2 p.m. - 4 p.m. 130 Nicholson Hall

Guest speakers

- John Harkless
 Associate Professor of Chemistry
 Howard University, DC
- Janet B. Ruscher
 Professor of Psychology and the Associate Dean for Graduate Programs in Science and Engineering
 Tulpop
- Zakiya Wilson
 Assistant Director of Graduate Studies in Chemistry and Executive Assistant of Strategic Initiatives
 Laurana State Livragity

On the agenda

- Why it is important to have a diverse pool of people in research groups
- How to recruit minorities and women to the sciences and how to mentor & retain them
- How to avoid unintentional and implicit biases

Refreshments at 3:30 p.m.

Guest Speakers



John Harkless Associate Professor of Chemistry Howard University, DC

He obtained his B.S. from Morehouse College, and his Ph.D. at the University of California at Berkeley. His research interests are Quantum Monte Carlo wavefunction development, Electronic structure of metallic systems, and Electronic excitations.



Janet B. Ruscher

Professor of Psychology and the Associate Dean for Graduate Programs in Science and Engineering Tulane

She joined the Tulane faculty in 1991 after earning the Ph.D. in experimental social psychology from the University of Massachusetts at Amherst, Prior to assuming her current administrative position, she served for 9 years as Department Chair. Her primary research lies at the interface of social cognition, prejudice, and language. These topics include subtle (as opposed to blatant) prejudiced language, cross-race performance feedback, and the persistence of stereotypes in conversation.



Zakiva Wilson

Assistant Director of Graduate Studies in Chemistry and Executive Assistant of Strategic Initiatives Louisiana State University

She received her B.S., cum laude, from Jackson State University and her Ph.D. in inorganic Chemistry, from LSU. Within the Office of Strategic Initiatives, she works collaboratively with the Vice Chancel for and program managers to increase and improve the educational experiences of students.









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Mentoring

Mentors

Mentees

Are you a graduate student in engineering or science? Join us twice a month for meetings that provide professional development training on topics such as leadership, communication, networking and more!

All meetings will be from 4:00-5:00 p.m. in the Biomedical Engineering Building, Room 157.

Schedule for the Spring Quarter 2013

Thursday, March 7, 2013- Advice from the Experts: Leadership and Success

Thursday, March 21, 2013- <u>Using Social Media to Promote Your Career</u>
Thursday, April 4, 2013- <u>Speaking with Confidence: How to Speak so</u>
that Others Will Really Listen

Thursday, April 18, 2013- Teaching Experience: Why All Graduate Students Need It and Innovative Ways to Get It

Thursday, May 2, 2013- <u>Using A Three-Point Communication Strategy</u> to Think on Your Feet

Schedule for the Winter Quarter 2012-13

Tuesday, December 18, 2012- Literature Review and Handout

Tuesday, January 15, 2013- Non-Verbal Communication

Tuesday, January 29, 2013- How to Give an Effective Presentation

Tuesday, February 5, 2013- Tips on Effective Time Management

Tuesday, February 19, 2013- Crash Course on Networking

Schedule for the Fall Quarter 2012-13

Leadership Styles

Networking 101

How to Write an Effective

Curriculum Vita

How to Write a Research Plan

Write an Effective Teaching

Statement

Tips on Effective Job Interviews

Write an Effective Cover Letter

How to Communicate Effectively

How to Write-Submit a

Conference Paper

Women Don't Ask

How to Submit-Present a Poster

Negotiation Basics

Stereotype Threat

Preparing for Your First Post-

Graduate Position

Diversity Milestones



| Milestones | Y1 | Y2 | Y3 | Y4 | Y5 | |
|---|----|----|----|----|----|----------|
| Diversity Advisory Council. | X | X | X | х | X | Ahead |
| Provide financial incentives to GS. | | | X | X | x | On Track |
| Supplement Startup Packages. | | | X | х | х | On Track |
| Create/expand pipelines to graduate school. | | X | X | х | x | On Track |



Workforce Development

Year 3 Symposium Pedro Derosa

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

Workforce Development Strategies



2-Year College Students Grades 6 – 12
Students

Post Docs

2-Year College Instructors

Workforce Strategies

4-Year College Students

High School Teachers **Graduate Students**

| Workforce Development | Milestones Y2-Y3 | | | |
|---|--|--|--|--|
| Open houses for middle and high school students and summer research workshops | Increased attendees in Y2-Y3 | | | |
| RET programs for teachers | Strategic plan changed from 20 RET per year | | | |
| Multiple programs for two-year college students | 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 | | | |
| REU programs on computational and experimental materials science | 30 REU participants (as budgeted) each year; 50% of participants will pursue higher education | | | |
| Distance Ed courses | Strategic changed to courses attended by at least 3 campuses by Y3 and 4 by Y4 | | | |
| Training programs for graduate students and postdocs | Participation in effective teaching workshops; five internships and extended visits each year | | | |
| | | | | |

LA-SiGMA participated in LA Tech/Grambling Eng. & Science Day and in Sci-Port's High School Engineering Olympics.



Grades 6-12







LA-SiGMA hosted Open Houses at Tulane and it is working with a Title I school in New Orleans mentoring the students in the Chemistry AP program.



Ten high school students participate in summer programs in parallel with UNO & LSU REU students.

Grades 6-12







Nanodays in Baton Rouge, March 30 & April 6, 2013 Over 500 visitors

Balloon Nanotube at the 2013 NanoDays hosted at the Louisiana Art & Science Museum, Baton Rouge



LA-SiGMA showcased nanoscience demos in LSU Super Science Saturday. Over 1,600 people attended.

Residential STEM Student Experience Grades 6-12

LA-SiGMA at LA Tech hosted 10 high school students for a week-long residential STEM Student Experience July 8-12, 2013.

These students were brought to campus by the RET teachers.





"The program helped me to get a college experience and learn new things I didn't know... When I grow up, I want to go to college and major in computer science."

> - Austin Hawkins, high school student



PyFUN Python Programming Camp:



June 17-21, 2013
34 Middle school age students in the Baton Rouge area -held at LSU



High School Teachers

RET teacher Burkman and his students present at 2012 Oklahoma supercomputing conference





LA-SiGMA RET participants presented at the 2012 Louisiana Science Teachers' Association and Louisiana Math Teachers' Association joint conference

- LSU, SU, and Tulane RET teachers participated in the GPU team
- > 2 RET Louisiana School for the Math Science and the Arts
- Leveraged LSU's LaMSTI teacher program
- UNO AMRI
- ➤ At TECH the LA-SiGMA and the Shell Collaborative cosponsored the RET



RET Teachers at the Ruston program

Two-year college students & instructors:



Short course:

➤ LA Tech held a one day course "Modern Practices in Chemical Education" on October 26, 2012:

5 teachers from LA Delta (Monroe), BPCC (Bossier City), and SouthArk (El Dorado, AR

REU/RET participation:

- > Two CC students participating in 2013 REU (LSU & LA Tech).
- ➤ Four CC faculty participating in the RET 2013 program.

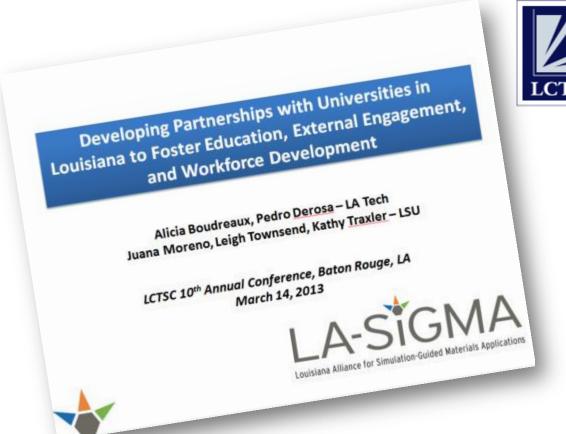
Modules for STEM CC classes:

BRCC instructors working with LSU LA-SiGMA faculty to develop course modules for STEM courses and a new curriculum for an HPC Associate degree.

Two-year college students & instructors:

LCTCS conference:

LA-SiGMA representatives presented at Louisiana Community & Technical College System Annual Conference on March 14, 2013.







Undergraduates

30 LA-SiGMA REU students statewide.





















Graduate Students



5 Graduate level courses offered:

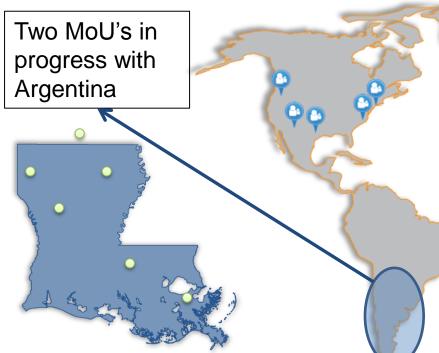
1 course Fall 2012, 4 courses Spring 2013,

(3 of the courses in partnership with German & Swiss Universities leveraging PIRE award, 1 of the courses included students at Bangalore, India)





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
- Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India
- Max Planck Institute for Colloids and Interfaces, Potsdam, Germany
- National Institute for Materials Science, Tsukuba, Japan
- Pacific Northwest National Lab
- 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
- Karlsruhe Institute, Germany
- Neel Institut, Grenoble, France
- Argonne Nat. Lab, Illinois
- SciDAC Institutes

LA-SIGMA Effective Teaching Workshop

based on Michigan State's
FIRST program
(Faculty Institute for Reforming
Science Teaching)
Developed and taught by
Cynthia Sisson and Stephanie
Aamodt (LSU-Shreveport).

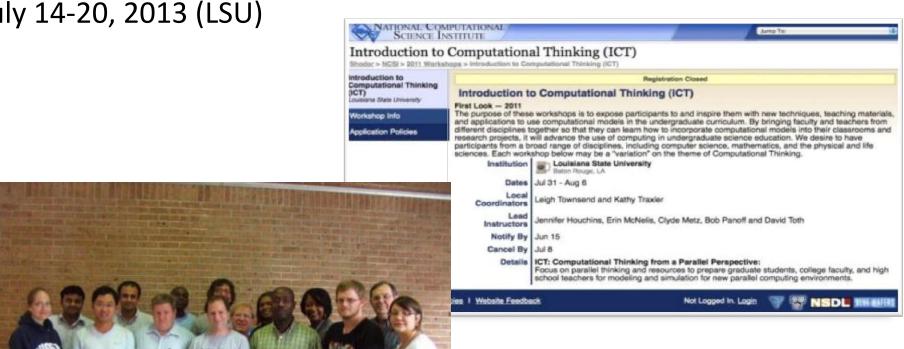






Workshops on Computational Thinking with a Parallel Perspective by Bob Panoff and the Shodor team:

July 14-20, 2013 (LSU)





Data Semantics Workshop, June 7-8, 2013

(35 registrants, 8 speakers,

LA Tech, LSU, SUBR, Tulane, Board of Regents)



William Shelton
PNNL

Dave Cowley PNNL

Bert de Jong PNNL

Marcus Hanwell Kitware, Inc.

Nico Adams CSRO

Christopher JordanTAC

Peter Murray-RustCambridge

Neil OstlundHypercube, Inc.





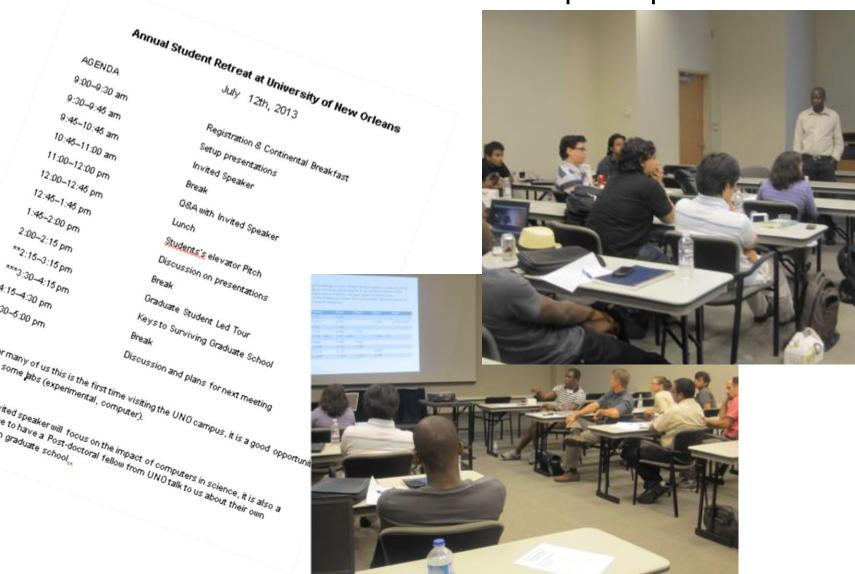
LONI HPC Parallel Programming
Workshop,
June 10-12, 2013

2nd High Performance Computing User
Symposium,
June 12-13, 2013

Virtual School of Computational Science and Enginering (VSCSE)
Workshops on GPU Algorithms and Programming Tools:

1 workshops in summer 2013 (15 participants)

Student/postdoc retreats: UNO July 12, 2013: 33 participants







Louisiana Alliance for Simulation-Guided Materials Applications

Postdoc Mentoring Links

http://www.physics.ohio-state.edu/~wikins/

http://www.physics.ohio-state.edu/~wikins/onepage/

Faculty Mentoring Links

The Awesomest 7-Year Postdoc or: How I Learned to Stop Worrying and Love the Tenure-Track Faculty Life by Radhika Nagpal

General Mentoring on Diversity

The http://www.understandingprejudice.org/ website is maintained by the Society for Personality and Social Psychology, which is the largest international organization of behavioral scientists in the field. The demonstrations are informative, are based on empirical work, and the site was funded by NSF.

Why diversity matters to all of us. We recommend a video of Scott Page from the University of Michigan and author of the book "The Difference": http://www.youtube.com/watch? v=t9UeknKwZw. In this 90-min video, he explains why diversity is the key to creativity and innovation (both of which are important in research). He gets the message across that

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Staying Connected

Workforce Development Milestones



| Milestones | Y1 | Y2 | Y3 | Y4 | Y5 | |
|---|----|----|----|----|----|----------|
| Open houses for middle and high school students and summer research workshops | Х | X | X | x | X | Ahead |
| 18 RET participants each year | X | X | X | X | X | On track |
| Multiple programs for two-year college students | X | X | X | x | X | On Track |
| 75 REU/SURE participants each year | X | X | X | X | X | Ahead |
| Graduate Courses via Synchronous Video | Х | X | X | X | X | On Track |
| Training programs for graduate students and postdocs | X | X | X | X | X | On Track |