



# LA-SIGMA

Louisiana Alliance for Simulation-Guided Materials Applications

## Workforce Development

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# Workforce Development



LA-SiGMA will address all levels of the educational ladder, including two-year colleges, through a range of training and educational activities, contributing to a well-trained and diverse professional workforce that can support advanced materials research and industries as well as education.



# Where we were...



In 2007,

- The State's workforce numbered 1.95 million
- 31% URMs.
- STEM disciplines account for less than 4% of the total workforce and, within this group, URMs make up only 16%





# What we are doing

## Strategy 1. Middle and High School Students

- Two graduating Louisiana School for Math, Science, and the Arts have been selected to participate in the LSU REU program
- Open House events have been held at LA Tech/Grambling University and Tulane University. LSU plans to participate in a campus-wide Science Day in October 2011.



# What we are doing



## Strategy 2. RET program

- 3 teachers have been selected for LSU's program, 3 for Southern University's program, 2 for UNO's program, and 5 for LA Tech/GSU's program.
- Of the 13 teachers, 8 are male, they teach at a mix of public and private schools, and three of the teachers are faculty members at the Louisiana School for the Math Science and the Arts.



# What we are doing



## Strategy 3. Two-year colleges

- LA Tech plans to offer a short course in the Fall of 2011 in Advanced Microscopy Techniques.
- The Beowulf Boot Camp for high school students and teachers will add one Baton Rouge Community College instructor and one Baton Rouge Community College student to study how to best reach out to community college students.



# What we are doing



## Strategy 4. REU

- This program is in its first year, and it will involve 31 students every summer (7 at LSU, 4 at LA Tech, 5 each at Southern, Tulane, UNO, and Xavier). For summer of 2011, 31 students have been selected.





# What we are doing

## Strategy 5. Graduate Education

- A workshop on “Introduction to Computational Thinking” led by Bob Panoff of the National Computational Science Institute (NCSI) has been scheduled at LSU for the first week of August 2011, and all LA-SiGMA graduate students
- 1 course offered in Fall 2010
- 3 courses offered in Spring 2011





# What we are doing



## Strategy 6. Professional Development and Internships

- The LA-SiGMA Outreach Coordinator has contacted several national labs
- David Singh at Oak Ridge National Lab and Wei Ku at Brookhaven has already agreed to host two LA-SiGMA students.
- A best-practice teaching methods workshop has been scheduled for the second year of the grant.



# Plans for future & sustainability



- Recruiting pipelines created
- Professional development
- Computational Science Courses



# A Major Accomplishment...



REU/RET programs in place

