

LA-SIGMA

Louisiana Alliance for Simulation-Guided Materials Applications

Statewide Faculty Development

Jessica Patton

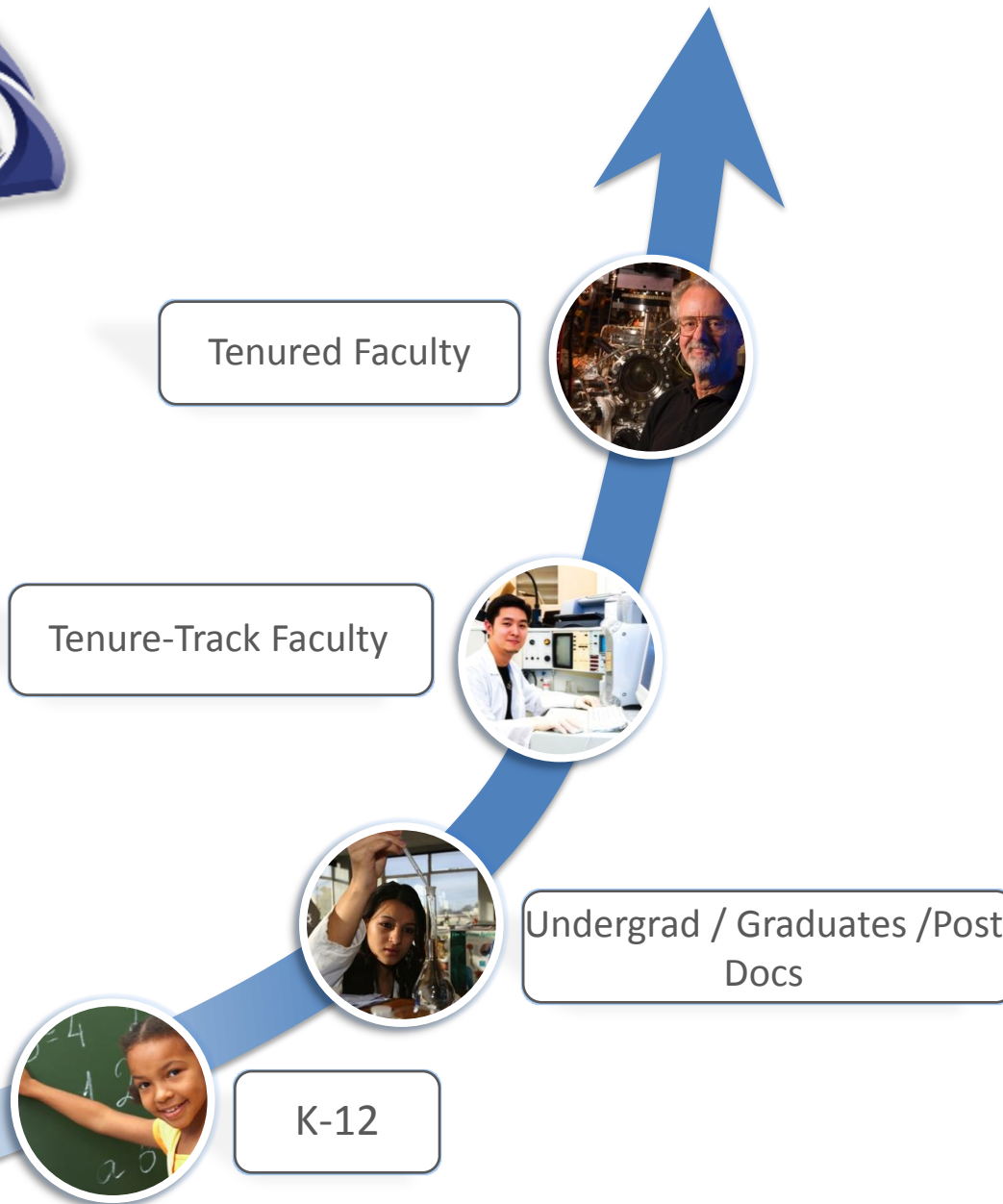
Statewide Faculty Development Coordinator

Louisiana Board of Regents



Louisiana
EPSCoR

Traveling the STEM Pipeline



Programs

LINK
Planning
Grants
Pfund
SBIR/STTR
TGEF
OPT-IN

SURE
REU
LINK

SoS

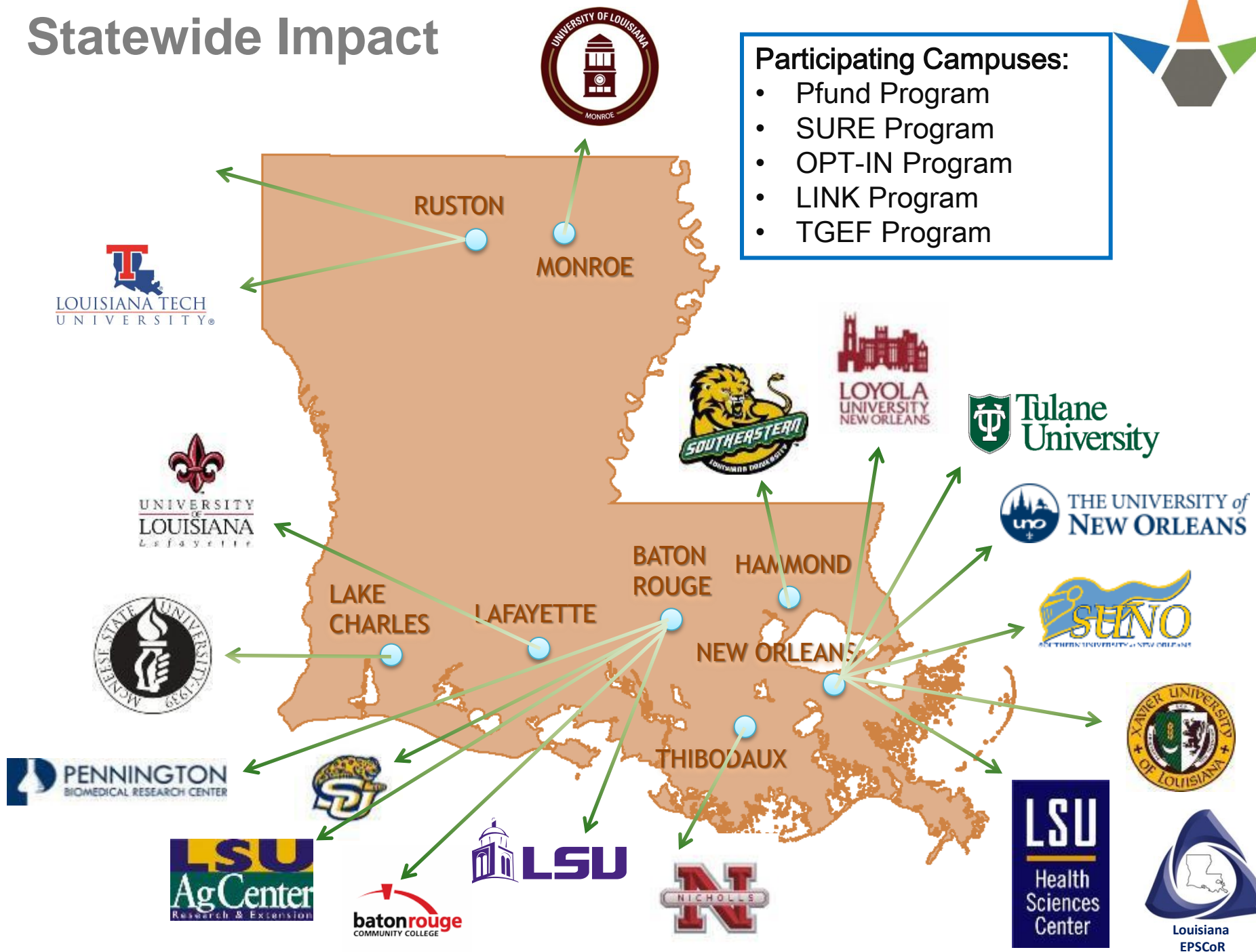


Statewide Impact



Participating Campuses:

- Pfund Program
- SURE Program
- OPT-IN Program
- LINK Program
- TGEF Program



RUSTON

MONROE

LAKE CHARLES

LAFAYETTE

BATON ROUGE

HAMMOND

NEW ORLEANS

THIBODAUX



Speaking of Science (SoS)



Provides students exposure to the best researchers in the State.

51 SoS presentations in Year 3

2,124+

Students reached in Year 3

15,725+

Students reached in the last 6 years



K-12



And Speaking of Science...

Slime and Science A Winning Combo

Slime is the scientific tool of choice of a Tulane professor when she addresses elementary students.

Why Slime? "Slime makes for a really nice demonstration and shows children that science can be fun. It allows them to think like a scientist—to develop a hypothesis and test it experimentally—and they can pick it up and play with it too," says Dr. Diane Blake.

"If you want to interest kids in science I really think you have to reach them at an early age. I like to do presentations for elementary school students while they are still excited about learning and haven't reached the jaded teenage years.

"I have had audiences as young as six and as old as 10-12," continues the Tulane University Health Sciences Center Professor of Biochemistry, who plays a major role in the Biosensor Development team of LA EPSCoR's current Research Infrastructure Improvement Grant, CyberTools, from the National Science Foundation EPSCoR program.

Prior to her SoS presentations, parents are given a permission slip indicating that their children may or may not take their slime home with them. "I am really impressed by Louisiana parents, not a single one has refused. That wasn't true when I was in Tennessee, some parents were more timid and withheld their permission," adds Dr. Blake, who was on the faculty of Mehary Medical College in Nashville before joining Tulane in 1993.



Dr. Diane Blake, Tulane University Health Sciences Center Professor of Biochemistry and an SoS speaker.

Although very busy with her research, Dr. Blake says she enjoys making SoS presentations so much that she makes time for them. This academic year she has given presentations at elementary schools in Belle Chase, Franklinton, Chalmette and LaPlace.

"One of my graduate students, Marcia Henry, volunteered to assist me with the presentations. She impresses the students that girls and African Americans can have a major science career.

"The numbers of scientists and engineers graduating from U.S. institutions has been declining for years, and the nation has had to turn to foreign scientists to fill the gap, she adds.

"There are a lot of reasons for this decline,

Touting Science

LA EPSCoR's Speaking of Science (SoS) program for K-16 provides students in every type of school exposure to the State's best researchers.

Its purpose is to increase public awareness of exciting Research and Development in Louisiana, spark the interest of students in science and engineering (S&E) professions and showcase the excellence of Louisiana's leading S&E faculty and professionals.

SoS speakers are available free of charge to speak to students, educators, parents, and general audiences throughout Louisiana on a variety of topics.

Since 2001, 614 presentations to over 24,000 students have been made by SoS speakers. For information on SoS speakers and their topics and/or to make arrangements for a speaker, contact Ms. Susan Jernigan at 225-342-4253, ext. 673, or susan.jernigan@la.gov.

The accompanying articles focus on SoS presenter Dr. Diane Blake, Tulane University Health Sciences Center, and letters she received from a 4th grade class.

but I think a lack of interest in science and the limited numbers of scientists who can serve as role models have contributed to the problem.

"I am hoping that my contributions to the SoS program can play a small role in increasing the interest of Louisiana students in science as a profession."

Letters, She Gets Lots & Lots of Letters

Excerpts from 21 letters thanking Dr. Blake for her presentation to a fourth grade class at LaPlace's John L. Ory Elementary School.

"Making slime was not just fun it was educationally fun! When I got home I did a trick with it...thank you for letting us bring it home. I hope you can come back next year."

"It was neat when you talked about

atoms. You taught me a lot of science... The experiment was a success...The hypothesis was brilliant. You are the best scientist ever. My mom was freaked out by the slime."

"I still love my slime...Also, how is Tulane? Did you know I really like Tulane? How is the project of yours coming?...I hope to go to Tulane some day."

"I loved playing with the slime. I think you are a great scientist...It was a great experiment...I enjoyed having fun with you."

"Thank you for teaching us about atoms and matter. I was really interested...I scared my brother with the slime...Did food dye make the slime green?"

"It's a good thing you talked about atoms

Letters, Continued page 2

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Louisiana
EPSCoR

Supervised Undergraduate Research Experiences (SURE)



Increases the participation of women and other underrepresented minorities in STEM fields.



Year 3: Out of **65** SURE applications received, **33** were funded

Undertaking this research has given me the opportunity to glimpse the dedication, motivation, and responsibilities required to achieve a master's degree in science.

- *SURE Student*



Undergraduate /
Graduate

106 SURE awards given since inception of LA-SiGMA

Links with Industry and National Laboratories (LINK)



Funding to visit and train at an industrial facility, research center, or national laboratory for a period of two to twelve weeks.

9 LINK Awards
in Year 3:

8 Faculty
3 Postdoctoral students
3 Graduate students
1 Undergraduate student



30 LINK awards given since inception of
LA-SIGMA



Undergraduate /
Graduate



Tenure-Track
Faculty



Tenured
Faculty



Louisiana
EPSCoR

Travel Grants for Emerging Faculty (TGEF)



Assists emerging faculty (tenure-track but untenured) by providing travel funds needed to further their research and build strong collaborations.

9 TGEF awards were given in Year 3

6 TGEF I

TGEF I provides up to \$1,200 to visit a federal funding agency program officer and discuss their research proposals.

3 TGEF II

TGEF II provides up to \$1,200 to present plenary or major invited talks at national or international meetings.



Tenure-Track
Faculty

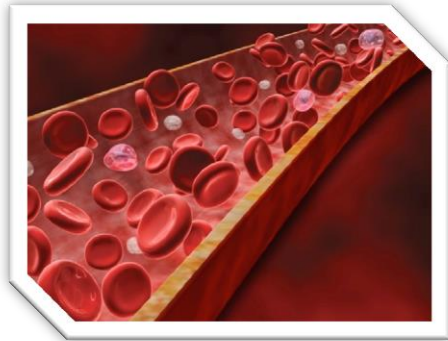
34 TGEF awards given since inception of LA-SiGMA

Pilot Funding for New Research (Pfund)



Awards of up to \$10,000 to:

Explore new ideas



Enhance research focus



Keep pace with cutting-edge techniques



41 Pfund awards given in Year 3



Tenure-Track
Faculty



Tenured
Faculty

120 PFund awards given since inception of LA-SiGMA



Louisiana
EPSCoR

SBIR/STTR Phaze Zero Grants



Supports the development of projects with economic potential by offering “Phase Zero” awards that assist small businesses to prepare and successfully compete for Small Business Innovative Research (SBIR) or Small Business Technology Transfer (STTR) proposals.

11 SBIR/STTR awards given in Year 3

41 SBIR/STTR awards given since inception of LA-SiGMA



Tenure-Track
Faculty



Tenured
Faculty



Opportunities for Partnership in Technology with Industry (OPT-IN)

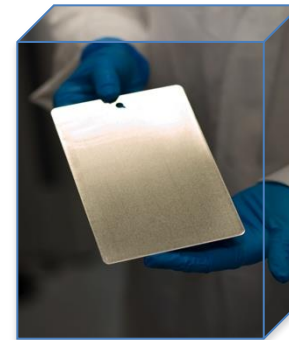


13 OPT-IN awards given in Year 3:

- Build sustainable relationships between academia and industry
- Facilitate the commercialization of research
- Enhance research competitiveness
- Promote the economic development of Louisiana



Category 1 (6)
Research Focus
Award



Category 2 (7)
Commercialization
Focus Award



Tenure-Track
Faculty



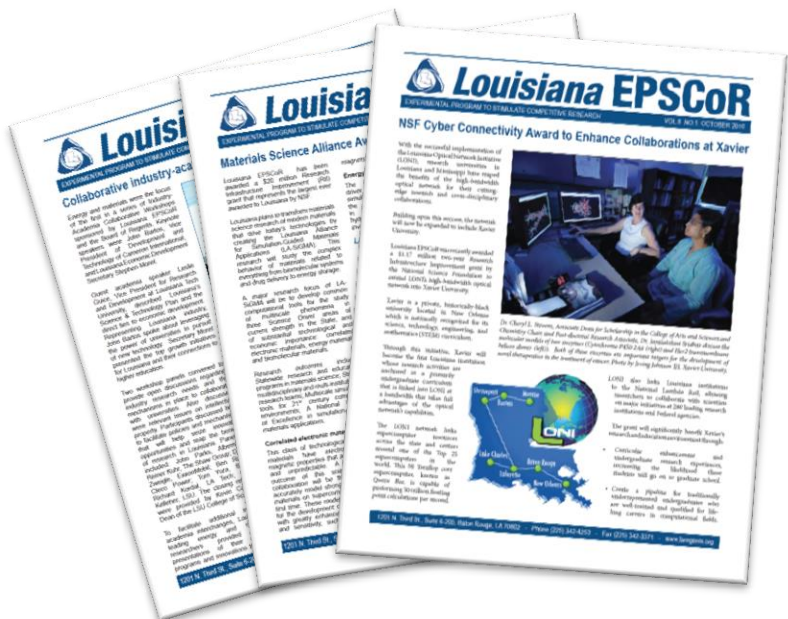
Tenured
Faculty

31 OPT-IN awards given since inception
of LA-SiGMA



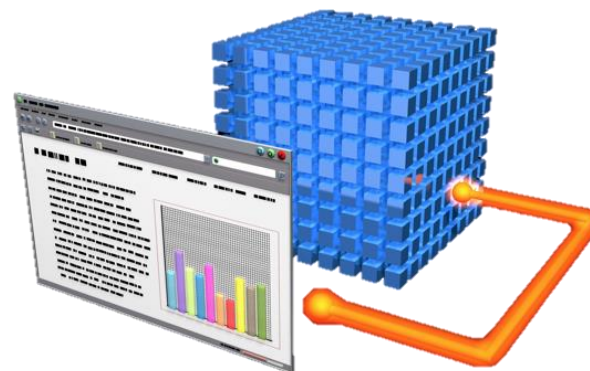
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Other LA EPSCoR Services

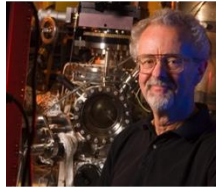


A monthly newsletter is distributed to members of the State legislature, business and industry leaders, university researchers, and Federal agencies.

Faculty Expertise Database and Funding Opportunities Search/Alert System (FED) identifies sources of extramural funding.



Total Impact of Programs since the Inception of LA-SIGMA



120

Pfund



31

OPT-IN



30

Link



106

SURE



34

TGEF



41

SBIR/STTR

