

# ILSAMP Symposium showcases benefits for diverse students, STEM pipeline

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BY CHRIS HOWES | MAY 20, 2019

Argonne National Laboratory supports diverse STEM programs at the annual ILSAMP Symposium.



Participants preparing to engage in STEM-related events with fellow students and representatives from Argonne and others in the local science community, as part of this year's Illinois LSAMP Student Research Symposium. (Image courtesy of ILSAMP.)

Need a job? The fastest growing fields for employment in the future are in science, technology, engineering and math (STEM). The U.S. Bureau of Labor Statistics forecasts that between 2012 and 2022, career positions in STEM will grow at a rate of 13 percent — faster than all other occupations. Yet there is concern that college students with advanced degrees related to STEM are not entering the work force at the same rate. With this in mind, experts in education are working to ensure that everyone with an interest in a STEM career has the chance to succeed.

Through its Education and Outreach Programs division, the U.S. Department of Energy's (DOE) Argonne National Laboratory partners with a number of organizations to advance STEM-related programs, focusing many of its resources on women and minorities. Among these organizations is the Illinois Louis Stokes Alliance for Minority Participation (ILSAMP) program.

Funded by the National Science Foundation, ILSAMP is dedicated to helping underrepresented minority (URM) students working toward a degree in a STEM field through recruitment and retention strategies and meaningful educational experiences.

Each year, the organization hosts the Illinois LSAMP Student Research Symposium, which provides all LSAMP-funded students within Illinois institutions the opportunity to share their undergraduate and graduate research projects. In February, more than 150 students gathered in Lisle, Illinois, to present that research, network with key institutions within the Illinois science community, and learn more about their chosen field.

This year's theme was "Shaping the Future of STEM" and Argonne not only provided internship information and participated in discussions on potential career paths, but also shared the keynote speaker, Argonne Air Force Fellow Lieutenant Colonel Shamekia Toliver.



Lieutenant Colonel Shamekia Toliver, one of the participants in this year's Argonne Air Force Fellows program, giving the keynote address at the Illinois LSAMP Student Research Symposium, held in Lisle, Illinois, this past February. (Image courtesy of ILSAMP.)

Toliver was one of two individuals named to the [Argonne Air Force Fellows program](#), for 2018–2019. Each year, Argonne chooses two Air Force personnel to spend a year at the lab conducting research and maintaining a robust connection between the Air Force and Argonne's [National Security Programs](#), which oversees the program. As an African American civil engineer, she talked about her path to becoming a professional engineer and described how diversity helped improve her team.

"My theme stemmed from a quote by Louis Stokes: 'I too can do that.' I shared how there may be struggles along the way but also how to stay encouraged and aim toward achieving goals to bring diversity to the STEM community," she said. "I also wanted to highlight how, together, the Air Force and Argonne employ scientists and engineers to make the world a better place by focusing on national security interests."

In addition to Argonne's participation in ILSAMP, the laboratory provides varied programs dedicated to promoting careers in STEM, hosting more than 900 undergraduate and graduate students in internships in 2018. For example, interns in the lab's Minority Serving Institutions Partnership Program (MSIPP) — sponsored by the Department of Education's Office of Environmental Management — spend 10 weeks engaging in workshops, lectures, research and other activities centered around environmental management challenges.

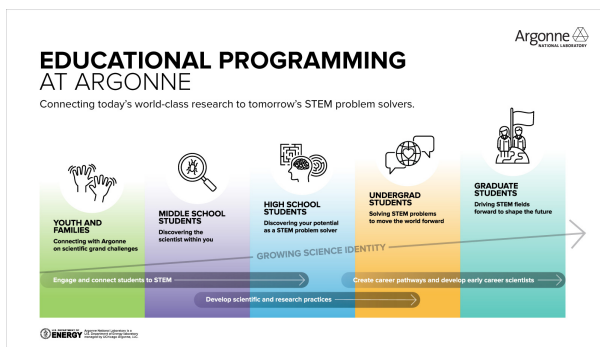


Image by Argonne National Laboratory.

“We like to refer to our students as the future STEM problem solvers. It’s part of our mission to get them involved in world-class research,” said Meridith Bruozas, Argonne’s Educational Programs and Outreach manager. “No matter what their background, and perhaps because of their background, each student imparts a unique perspective on some question or problem. We don’t want to miss out on that.”

One of 17 DOE national laboratories, Argonne recognizes the challenge of attracting the best talent to address game-changing science and technology. As director of its National Security Programs, Keith Bradley is focused on positioning Argonne to make the nation more safe and secure.

“We must proactively stimulate interest in national security at the earliest possible time in a young student’s academic career,” he said. “STEM programs are the solution. In addition, we heartily embrace the axiom that talent is blind to heritage and gender. As a nation, we must be more proactive in introducing and nurturing all young adults to STEM disciplines.”

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Chicago State University (CSU) is the lead organization for ILSAMP, which is made up of nine public and private universities, four regional community colleges and Argonne. The distribution of these institutions gives ILSAMP a wide base from which to make a positive impact on STEM students in the state.

“Argonne has been at the center of efforts to pay attention to transition points and provide intervention for URM students at junctures that are crucial to preventing withdrawal from the STEM pipeline,” said Dr. Chris Botanga, CSU associate professor of biology and ILSAMP project director. “This is particularly true as the lab offers internships and opportunities for cutting-edge research, not only to URM students, but also to their faculty mentors. The lab makes ILSAMP stand out from the other LSAMP alliances across the country.”

(Video courtesy of the Louis Stokes Midwest Center of Excellence.)

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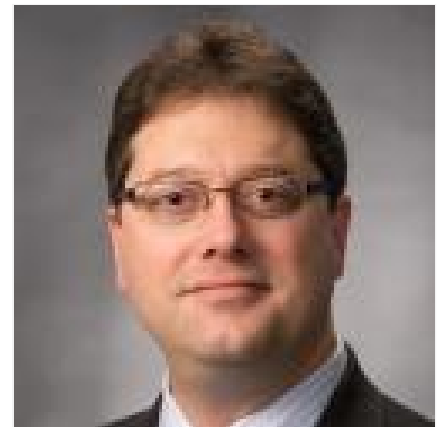
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