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Field Trip Gives Wings to Career Options

Argonne National Laboratory inspires a powerful transformation for Michigan State University student

By Allan Brettman

[Jessica Watley](#) was already nurturing her passion for environmental science when she took a field trip that changed her life.

Watley and other Michigan State University students took a short bus ride from East Lansing, Michigan, to Lemont, Illinois, for an excursion focusing on science, technology, engineering, and mathematics careers.

Destination: [Argonne National Laboratory](#), where Watley and the group toured several Argonne buildings.

“We had the greatest tour guide in the world,” Watley said. “I fell in love with the place immediately. I thought, ‘I don’t know where I fit in this, but I must be here. I must have an internship here’.”

And that revelation was before the tour ended with a presentation by [Courtney Cutinello](#), an Argonne university student operations coordinator.

“She talked to us about all of the different internship opportunities,” Watley said. “And I was like, ‘okay, now I know exactly where I fit in this.’ I wanted to apply for the SULI internship.”

Watley introduced herself to Cutinello. While preparing her [Science Undergraduate Laboratory Internship \(SULI\)](#) application, stayed in contact with Cutinello. SULI is one of the key programs overseen by the [Department of Energy Office of Workforce Development for Teachers and Scientists](#).

Authentic approach makes impression

“She kept me abreast of everything that was going on and when deadlines were and other details,” Watley said. “I worked on my application from October to January. I had to make sure it was perfect.”

Watley received the good news in late January that she’d been accepted into the SULI program at Argonne.



Jessica Watley discovered new applications for her interest in environmental science at Argonne National Laboratory by spending summer 2024 in the Science Undergraduate Laboratory Internship program, offered by the Department of Energy’s Office of Workforce Development for Teachers and Scientists. (Photo courtesy of Jessica Watley)

"I was so excited to be going there," she said. "I knew that Argonne was a place that I needed to pursue an internship. It felt like coming home when I had my tour there."

Cutinello remembers well the Michigan State student who stayed in regular contact after learning about Argonne's SULI program.

"When I think of Jessica, the first word that comes to mind is authentic," Cutinello said. "Her genuine nature can be seen across the board in terms of her work ethic, professional relationships, and commitment to growth. During her internship I was continuously impressed with Jessica's ability to navigate challenges with strength, integrity, and resilience."

Choosing the project that was just right



After acceptance into Argonne's SULI program, she was offered a choice among several projects for the 10-week internship. She chose, "What Effects Do Solar Farms Have On Monarch Butterflies?"

Watley said she picked that topic because she supports renewable energy and hadn't before considered the environmental impact of solar farms and wind turbines.

"Widespread construction of solar farms has sparked concerns about their impact on biodiversity, specifically on species such as the monarch butterfly," Watley said. "My research focused on changes in monarch butterfly habitat, alterations in land use, and potential disruptions to their migratory patterns."

The research involved examining existing literature and case studies, she said, with a focus on how solar infrastructure affects the availability of milkweed—the primary host plant for monarchs—which are an endangered species.

"Our findings showed a complex relationship where solar farms can provide new habitats while also introducing risks, such as habitat fragmentation and changes in local climates," she explained.

The right work ethic

Watley said understanding these dynamics is "crucial for developing sustainable energy practices that minimize negative effects on monarch butterflies and promote their coexistence with renewable energy infrastructure."

Watley credited her mentor, Argonne landscape ecologist and environmental scientist [Leroy Walston Jr.](#), for offering her a range of study topics and helping guide the internship toward success.

Walston said the credit should go to Watley.

"Jessica's main strengths are her positive attitude, willingness to learn, and interpersonal and social skills," said Walston, who also teaches as an adjunct instructor at the University of Chicago. "Jessica never hesitated to take on new challenges and she wasn't afraid to ask questions. These qualities, combined with her strong work ethic allowed her—and our team—to accomplish a lot during her 10-week SULI internship."

A welcoming environment



Jessica Watley (right) presents a poster at Argonne National Laboratory in August 2024 to Courtney Cutinello (left), Argonne university student operations coordinator, and Joey Koenig, who assists with student programs. (Photo courtesy of Jessica Watley)

In addition to science, Watley said she was pleasantly surprised that she found a welcoming social environment. She had some trepidation about that.

“I was afraid that, as a minority, I would not be accepted the way I was,” she said. “I was completely wrong! Being a Black, queer woman in any space isn’t always easy. But surprisingly, I wasn’t the only one and was not only accepted by but embraced by those of entirely different backgrounds, races, ethnicities, and statuses. Argonne welcomes and loves all.

“I am so glad that I got to step into a space and be fully myself,” Watley said. “I’d say don’t stress about feeling like you won’t belong or are unworthy in the slightest. If those feelings creep in, which I get, trust me when I say that upon arrival, you will feel the weight lifted almost immediately!”

Now in her sophomore year at [Michigan State University](#)—majoring in environmental sciences and management with a double minor in arts and humanities—Watley is already looking forward to another potential SULI internship.

“The past summer convinced me that I love environmental research,” she said. “I’m going to explore environmental research opportunities at other national labs, maybe those that specialize in marine biology. I do see myself one day coming back to Argonne, possibly pursuing my lifelong career.”



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