

# Wisconsin Achievers

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## About Wisconsin Grants

*The twenty-three private, or independent, nonprofit colleges and universities of Wisconsin operate without direct taxpayer support, but provide an invaluable public service to the state, educating more than 52,000 students a year. Many of Wisconsin's best and brightest need financial help to attend the college of their choice.*

*The Wisconsin Tuition Grant, now known as Wisconsin Grants, was enacted in 1965 to help qualified Wisconsin citizens to succeed. Each month, Wisconsin Achievers brings you success stories of Wisconsinites at WAICU-member campuses for whom Wisconsin Grants have made a significant difference.*

**Wisconsin Achievers** is published by the Wisconsin Association of Independent Colleges and Universities (WAICU):

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## MSOE student serves as engineering mentor for youth

Peter Holtzen always wondered how and why things worked the way they did.

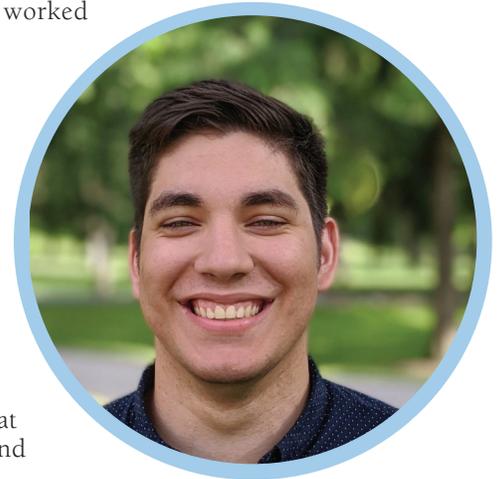
"I would try and deconstruct why the engineer made the decisions they did when making the product and why they didn't do it a simpler or more efficient way. This curiosity about mechanical things led me to the mechanical engineering field," said Holtzen.

Holtzen, a junior at Milwaukee School of Engineering originally from Saukville, Wisconsin, puts his passion and curiosity into practice through participating in groups across campus, including the Reconfigurable Mechanisms Research Group, a group working on developing a new type of robot that has applications in the manufacturing, health care, and space industries.

Through MSOE, Holtzen also is a FIRST mentor. "I go to schools around the area and help students learn about STEM fields through robotics. This shows students how engineering can be a career path for them even though they have never thought about it before."

Holtzen was originally drawn to MSOE because of its reputation as a top

continued on page 2



Peter Holtzen

## Northland College student presents research at conference

Adrian Bethel grew up in Eau Claire but spent every summer heading to northern Wisconsin to visit family. When he started looking at colleges and discovered Northland College, located near Lake Superior in Ashland, had a forestry program, "I knew it was my spot," he said, but once he discovered his spot, he had to find a way to get there.

"Personally, seeing the sticker price at any college - let alone a small private one - I was hesitant to commit to four years, but after receiving the Wisconsin Grant, along with a select few others I was able to commit," he said. "I don't know where I would be today without the opportunity to attend college and receive the experiences that I have had in my time here so far."

Now a senior, Bethel is majoring in forestry with a specific interest in botany and ecology. Last summer he and another student battled mobs of mosquitoes and black flies, scouring the Apostle Islands for a rare broad-leaved twayblade orchid named *Neottia convallaroidies*. The western orchid is listed as threatened in Wisconsin, the eastern edge of its range, and likely extinct in Minnesota.

Assistant Professor of Natural Resources Sarah Johnson and her teams of students have been  
continued on page 2



Adrian Bethel

**Peter Holtzen** continued from page 1

engineering school in the nation as well as its small class sizes that offer accessibility for one-to-one conversations with professors.

“The academics at MSOE are almost unrivaled in the state in terms of mechanical engineering and it has smaller class sizes. It’s not as easy to have one-to-one interactions with professors at larger schools, but at MSOE I am able to ask questions all the time,” said Holtzen.

Scholarships and grants helped make an MSOE education possible for Holtzen, who is grateful to be a Wisconsin Grant recipient.

“It means a lot that I am a Wisconsin Grant recipient. It means I don’t have to work an extra job while I’m in school to afford to go there. It means I don’t have to worry about how I will pay back large loans that I might have to take out to pay for school. It also means that I have people that believe in me, and believe that I can make something of myself and benefit society, so much so that they will put money on the line to show me that support.”

Outside of school, Holtzen serves as an intern at Generac Power Systems, a company based in Waukesha, Wisconsin that manufactures backup power generation products for residential, light commercial, and industrial markets. Holtzen is helping to develop and test transfer switches. His future dreams are to work for a car manufacturer. In his free time, the former Boy Scout enjoys camping, fishing, hiking, swimming, and exploring the beautiful scenery Wisconsin has to offer.

**Adrian Bethel** continued from page 1

collecting data on thirty-two plants in the Apostle Islands—an update to a 1992 survey. The twayblade orchid has been a target species for three teams of students in recent years, and “lore of the orchid hunt keeps evolving among my students,” Johnson said.

After being dropped on Oak Island by the National Park Service, along with his camping and research gear, Bethel hiked for hours seeking the elusive orchids, mostly in wetlands. Like Johnson, Bethel has discovered he likes looking down at the forest floor thinking about how plants connect, adapt, disappear.

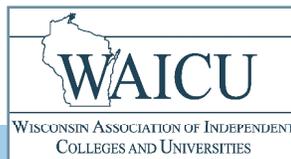
“It’s so interesting to think about how they got here and how they move,” Bethel said.

Shifting sediments from torrential storms may bury orchids in some places but create new habitat elsewhere. They counted thousands of plants, took size measurements, and assessed which ones were reproductive or sterile.

Bethel presented the findings of the research team to the Wisconsin Science Conference in Elkhart Lake in February and received honorable mention for his presentation of the poster, co-authored by another student.

Johnson’s orchid hunters have found fewer orchids in the sites where orchids existed in the 1992 survey but they found nine new sites with numerous orchids. What the data suggest, is that as northern Wisconsin experiences extreme drought and wet periods, orchids decline, rebound, and change locations.

Bethel says he plans to continue with his education and would like to someday return to Northland College as faculty.



*Wisconsin's Private, Nonprofit Colleges and Universities*

Alverno College - Milwaukee  
 Bellin College - Green Bay  
 Beloit College - Beloit  
 Cardinal Stritch University - Milwaukee  
 Carroll University - Waukesha  
 Carthage College - Kenosha  
 Concordia University Wisconsin - Mequon  
 Edgewood College - Madison

Herzing University - Milwaukee  
 Lakeland University - Plymouth  
 Lawrence University - Appleton  
 Marian University - Fond du Lac  
 Marquette University - Milwaukee  
 Medical College of Wisconsin - Milwaukee  
 Milwaukee Institute of Art & Design - Milwaukee

Milwaukee School of Engineering - Milwaukee  
 Mount Mary University - Milwaukee  
 Nashotah House - Nashotah  
 Northland College - Ashland  
 Ripon College - Ripon  
 St. Norbert College - De Pere  
 Viterbo University - La Crosse  
 Wisconsin Lutheran College - Milwaukee

## FACT OF THE MONTH

Twenty-eight percent of all WAICU students are first-generation students.

Source: WAICU Institutional Survey, 2018