

UNIVERSITY of WISCONSIN GREEN BAY

College of Science, Engineering and Technology Newsletter

Spring 2021

### Highlights

New Faculty "Discover Wisconsin" Feature Nutritional Sciences Award Student Engineering Chapter Award NERR Faculty Recognitions Scholarship Awards **Environmental Science** The Science of Addiction **Electrical Engineering** STEM Innovation Center New Mechanical Engineering Professor Cofrin Center for Biodiversity Environmental Management and **Business Institute** Meet our Staff

# The Dean's Message, John Katers

As we near the end of the 2020-21 academic year, it is certainly a year that will never be forgotten and included many national, state, and local discussions about science and technology. Through it all, students, faculty, and staff in CSET demonstrated a remarkable level of commitment, innovation, resilience, and compassion in working together to achieve their higher education goals. The results were remarkable, with the most important result being the ongoing success of our students, including the first ever graduates from the mechanical engineering program. Despite the impacts of COVID-19, CSET experienced continued enrollment growth, hired many talented new faculty and staff, and developed several new undergraduate and graduate programs. This summer will once again bring record levels of student enrollment, as well as the anticipation of a new electrical engineering program in the Resch School of Engineering starting in the fall. Our award-winning faculty in Nutrition Science will be launching a new MS in Nutrition and Integrated Health to meet the growing career opportunities in this area. As you review this newsletter, I believe you will see that much was accomplished in the last year and the future holds even greater promise, with the focus of the college continuing to be on People, Programs, and Partnerships.

Check out the College of Science, Engineering and Technology website! uwgb.edu/cset

#### Welcome New Faculty & Staff



Andrew LaPlant Arboretum Project Coordinator Cofrin Center for Biodiversity



Terri Deprez Lecturer Mathematics MS: University of Central Florida



Md Rasedul Islam Assistant Professor Mechanical Engineering PhD: UW— Milwaukee

### "Discover Wisconsin" Highlights the Aquatic Ecology and Fisheries Lab

On Monday, March 15, 2021, a Discover Wisconsin crew visited campus and followed UW-Green Bay students and staff in the field. Discover Wisconsin is highlighting the impacts of the University of Wisconsin System on people and regions throughout Wisconsin. The segment featuring UWGB is on the University's Aquatic Ecology and Fisheries Lab ideally situated on the world's largest freshwater estuary. Crews interviewed Interim UW System President Tommy Thompson, student researchers, and faculty members Christopher Houghton and Patrick Forsythe, They also gathered footage of student researchers and faculty in the field, as they worked on their Northern Pike research. You can learn more about the Aquatic Ecology and Fisheries Lab by visiting their blog at <u>blog.uwgb.edu/aefl/</u>



### Nutritional Sciences and Dietetics Team Awarded with Regents Top Teaching Award

The UW System Board of Regents today announced the recipients of its 29<sup>th</sup> annual Teaching Excellence Awards.. Receiving the honor at UW-Green Bay is the Nutrition Sciences/Dietetics program and its members: Associate Professors Deb Pearson and Leanne Zhu, Lecturer Sara Wagner, Program Internship Director Heather Masters, and Program Specialist Michelle Johnson.

Each award recipient demonstrates a strong commitment to teaching and learning, uses effective teaching strategies to enhance student learning, and makes a significant impact on students' intellectual development.

"This small, but mighty program has been recognized across the campus, state, and country for their teaching efforts," Interim Provost Burns said in her recommendation. "The program uses high-impact practices to engage students in deep learning, while simultaneously serving our communities, from 4K student to our campus-run farmer's market," Burns added.

The program's mission is to provide highquality interdisciplinary courses and learning opportunities that focus on biological, physiological, and behavioral aspects of humans with an emphasis on the role that food and nutrition have in maintaining and improving health. The program has an 85 percent placement rate of its students employed in food, nutrition, and dietetic-related professions within six months of graduation.

The program is launching a Master of Science in Nutrition and Integrative Health in fall 2021.



#### American Society of Civil Engineers Student Chapter Receives Award

Congratulations to UW-Green Bay's American Society of Civil Engineers (ASCE) Student Chapter on being presented the 2021 Letter of Significant Improvement. Faculty advisor Mike Holly received the recognition dated March 26, 2021.

The letter stated "It is my pleasure to inform you the University of Wisconsin-Green Bay ASCE Student Chapter has been awarded this 2021 Letter of Significant Improvement. Your Chapter was recommended for this award by the Committee on Student Members based on activities recorded in the 2020 annual report. Your Chapter has shown considerable advancement in its activities from the previous year. The Chapter's accomplishments reflect the enthusiasm and hard work of your student officers and members, as well as your fine guidance as faculty advisor. You, the practitioner advisors, and every individual who had a part in this endeavor should be justifiably proud of his or her contribution to the development of the future of civil engineering."

### UW-Green Bay Leading Regional Efforts to Locate National Estuarine Research Reserve on Green Bay

The University of Wisconsin-Green Bay, in partnership with local and national agencies, is leading efforts to recognize local waters as a National Estuarine Research Reserve (NERR) - an important next step in the region's 30-plus-year effort to protect one of the largest surface freshwater systems on earth. The NERR system is a national network of 29 sites across the coastal U.S., designed to practice and promote stewardship of coasts and estuaries through innovative



research, education, and training using a place-based system of protected areas.

Upon site selection within the Green Bay estuary, the NERR designation (National Estuarine Research Reserve) will use locally relevant and nationally significant research to address local coastal management issues and help protect the world's largest freshwater estuary.

The importance of Great Lakes estuaries cannot be overstated. Estuaries are distinctly responsible for filtering sediments and pollutants from rivers and streams, providing cleaner water for humans and wildlife. Estuaries have tremendous economic and cultural impact on a region; providing transportation, recreation, commerce and food. The water issues surrounding Northeast Wisconsin in recent years make a project like the NERR even more significant for area waterways.

The NERR designation will help UW-Green Bay and its partners bring in funding—more than \$1 million per year—for water-focused scientific research, education, stewardship and training, and will include a visitor center for hands-on and place-based education, lab space, conference area, and a boat launch.

The goal of the Green Bay National Estuarine Research Reserve is to be the most technologically advanced NERR in a network of 29 reserves covering more than 1.3 million acres throughout the U.S. The reserve would be non-regulatory, state-owned and managed entity, with program guidance and technical assistance from NOAA.

#### Welcome New Faculty & Staff



Ali AlQahtani Assistant Professor Computer Science PhD: Louisiana Tech University



**Jian Zhang** Assistant Professor Mechanical Engineering PhD: Mississippi State University



Dhanamalee Bandara Assistant Professor Math and Statistics PhD: Texas Tech University

#### Welcome New Faculty & Staff



Kiel Nikolakakis Lecturer Biology PhD: UC—Santa Barbara



Nazim Choudhury Assistant Professor Computer Science PhD: University of Sydney (AUS)



Kelly Deuerling Assistant Professor Water Science PhD: University of Florida



Bee City USA recently announced that the University of Wisconsin— Green Bay has been certified as an official Bee Campus USA facility. Congratulations to **UWGB's** Sustainability

**Committee and Amy Wolf** for their work on this certification.

Congratulations to **Patrick Forsythe** on his publication in the Canadian Journal of Zoology titled "Adult and larval fish assemblages vary among small tributary



mouths of Green Bay, Lake Michigan.



Congratulations to **Maruf Hossain** on his several publications in the reputed Institute of Electrical and Electronics Engineers (IEEE) Journal of

Emerging and Selected Topics in Industrial Electronics, IEEE Journal

of Emerging and Selected Topics in Power Electronics, and IEEE Transaction on Instrumentation and Measurement.

Congratulations to **Douglas Brusich** and his lab students publication in Micropublication Biology titled "Repetitive mild traumatic brain

injury causes synergistic effects on mortality."



Ali AlQahtani on being selected as Institute of Electrical and Electronics Engineers (IEEE) Power and Energy Society (PES) DAY 2021 Ambassador in the IEEE Section Category from North

Congratulations to

Faculty Recognition/Achievements



Category from Northeastern Wisconsin Section.



**Erin Giese** on joining the National Audubon Society's National Board of Directors as the Regional Director.

to

Congratulations

Congratulations to Mandeep Singh Bakshi on his publications in ACS Publications titled "Avoiding hemolytic anemia by understanding the effects of the molecular architecture



of gemini surfactants on hemolysis" and "Distinguishing nanoparticle — nanoparticle interactions between gold and silver nanoparticles controlled by gemini surfactants: stability of nanocolloids."



Congratulations to Brian Merkel on receiving the National Residence Hall Honorary "Of the Year" Award for the category of Institution Faculty or Staff. NRHH is an organization that recognizes

individuals who go above and beyond the call of duty and show great leadership throughout the campus community.

#### 2020-21 Scholarship Awardees

James E. Casperson/Environmental Science Alumni Endowed Scholarship: Carly Flunker

Alfred O. and Phyllis E. Holz Endowed Scholarship: Alicia Krause

Carol R. DeGroot Endowed Scholarship in Environmental Science: Griffin Geib

Morgan/Macaluso Family Endowed Scholarship: Norah Swenson

Ganga and Elizabeth Nair Endowed Scholarship: Lauren Russell

Katie Hemauer Memorial Endowed Scholarship: Whitney Tank

Bradford Cook Memorial Endowed Scholarship: Caitlyn Pingel

Barbara and Benjamin Cruz-Uribe Family Endowed Scholarship for the Study of Environmental Issues: Whitney Tank

Chad Moritz and Beth Meyerand Annual Scholarship: Grant Meeks

Herbert Fisk Johnson Endowed Scholarship for Excellence: **Alexis Paye and Whitney Wasmuth** 

Brown County Waste Transformation Team Annual Scholarship: Carly Flunker

Science and Mathematics Endowed Scholarship: Ashlyn Schnell

Nancy J. Sell Memorial Endowed Scholarship: Anna Liu

Gary L. Miller and Georgia Nix Miller Endowed Scholarship in Biology: **Haley Herwald** 

NEW Engineering Endowed Scholarship-First Year: Cade Koschnik

NEW Engineering Endowed Scholarship-Second Year: Allyssa Rueth

Susan Finco and Ed Kralovec Endowed Scholarship: Nicholas Wenninger

Superior Diesel Endowed Scholarship for Engineering Technology: Kyle Stoll

Dykema Family Endowed Scholarship: Benjamin Denk

Lee and Kathy Anderson Endowed Scholarship for Engineering Technology: **Wade Druar** 

Beth and Richard Gochnauer Endowed Scholarship for Engineering Technology: **Emma Loucks and Richard Perschon** 

Northeast Wisconsin Manufacturing Alliance Future All-Stars Annual Scholarship (Engineering Technology): **Richard Perschon and Kyle Stoll** 

Northeast Wisconsin Manufacturing Alliance Future All-Stars Annual Scholarship (Mechanical Engineering): **Daniel Leonard and Paul VanderKelen** 

BPM, Inc., A Specialty Paper Mill, Annual Scholarship for Engineering Technology: **Wade Druar** 

FEECO International Engineering Technology Annual Scholarship: Wade Druar

Continued on last page

#### Welcome New Faculty & Staff



**Taylor Hilgart** University Services Associate Natural and Applied Sciences



Nabila Rubaiya Lecturer Engineering MS: UW Milwaukee



Jacob Depas Director of Development College of Science, Engineering and Technology

#### Welcome New Faculty & Staff



Samantha Betancur Camps and Outreach Coordinator College of Science, Engineering, and Technology



Keir Wefferling Assistant Professor and Herbarium Curator Biology PhD: UW Milwaukee

> Katie Burke Lecturer Mathematics PhD: Brown University

> Shawn Malone Assistant Professor Geoscience PhD: University of Iowa

Jenny Zietler Academic Department Associate Human Biology

> Mia Moua Lecturer Computer Science

Kpoti (Stephan) Gunn Assistant Professor Environmental Engineering PhD: UW-Madison

### Bachelor of Science in Environmental Science Coming to Manitowoc

On July 1, 2018, UWGB's footprint expanded with the addition of three branch campuses located in Lake Michigan coastal communities (Marinette, Manitowoc, and Sheboygan). With these additions, UWGB's footprint now includes 16 counties and a more significant portion of the agriculture and dairy operations of the state. Based on the recently



updated vision of UWGB, the future will include a greater emphasis on student access and research that is locally relevant, so efforts to work even more closely with the agriculture and dairy industries are both logical and necessary given the impact on the local economy and environment.

Starting in the fall of 2021, UWGB will offer a 4-year environmental science degree at the Manitowoc campus with a curriculum that is more focused on the agricultural industry. Faculty will provide instruction and conduct research that is beneficial to the agricultural industry, while also collaborating with other regional partners on educating the next generation of agriculture and dairy professionals. This program will benefit from the expertise of existing faculty in several disciplines, including biology, chemistry, environmental engineering technology, geoscience, and water science. Efforts are also underway to add additional faculty and staff at the Manitowoc campus to support this program and meet the needs of the region for this important industry.

#### Marinette Campus—The Science of Addiction

Written by Dr. Renee Richer

Biology of the Brain: The Science of Addiction students are reaching out to the community in multiple ways to save lives. Students educate and advocate for policies that reduce lives lost from opioid overdose and improve lives of those struggling with substance abuse. This is the Brandon Project.



The students have designed a three-pronged approach to education and advocacy. Student teams are reaching out and convincing powerful speakers and scientists to meet with us and the community virtually. Thus far we have welcomed Dr. Zachary Mannes, Dr. Eric Morse, Johann Hari New York Times bestselling author and Dr. Bruce Alexander will speak April 28. They hope to have a speaker from the ACLU present in May. Their outreach includes a significant social media presence where people can access resources and learn of programs available to support recovery. Students are supporting local programs to support young people at risk and also support those in recovery residences by volunteering and providing supplies and other important resources. Lastly, (some) students have been trained in overdose recognition and Narcan administration.

The biological and social sciences of addiction are advancing as we learn more about risk factors and what makes people most vulnerable to addiction. However, there is also a growing body of biological and social evidence which allows us to shape how we design recovery programs and institute social policy to dramatically reduce deaths and substance use and abuse in our communities.

The Brandon Project (Comm. Sci. 146) is done in memory of our classmate Brandon McFadden who was committed to improving policy to improve lives. Brandon said that we could change how we treat substance abuse by addressing commonly held misconceptions about addiction and those people struggling with addiction. He advocated for education and policy changes that support successful recovery. This work is done in his name.

## Bachelor of Science in Electrical Engineering Coming Fall 2021

Our Bachelor's of Science in Electrical Engineering degree is the only program of its kind in this region. This program will be housed in the Richard J. Resch School of Engineering in the College of Science, Engineering and Technology (CSET) and will be offered in addition to the existing electrical engineering technology program. Given that there are different accreditation requirements for electrical engineering technology and electrical engineering, there will be distinct curriculum for each program at the upper level, thus students will be expected to select their program during the sophomore year. Doing so will enable them to fulfill graduation requirements in a timely fashion.

The curriculum for this program will include multiple high impact practices, including seven required laboratories, a senior design project, and opportunities for internships with local business and industry.

Students completing the program will be eligible to sit for the Principles and



Practices Engineering of Examination required one to become Professional а Engineer (PE) in the United States. Graduates will be able to think critically to solve complex engineering problems identify and innovative solutions, while applying these skills to a range of businesses in industries such as manufacturing, utilities, and communication technologies.

#### STEM Innovation Center



As campus starts to reopen, the Brown County STEM Innovation Center looks forward to welcoming students and the public.

The STEM Innovation Center is home to the Resch School of Engineering, University of Wisconsin-Extension Brown County program, and the Brown County's Land and

Water Conservation department. Having these agencies within the same building allows them to interact with the public more. The Einstein Project, another organization that calls this building home, provides students and teachers with hands-on materials and curriculum. This area also includes a "makerspace" where the public, through membership, can share tools such as laser cutters, table saws, and 3D printers to create their vision.

Both floors of the two-story building have dedicated classroom and laboratory space for the Resch School of Engineering and include \$1.5 million in equipment that was installed by LAB Midwest. The second story of the building has an instructional kitchen that is shared by UW-Extension to prepare food samples for public schools and the University's Nutritional Science and Dietetics program faculty to conduct classes.

"We see this facility as a catalyst for STEM education and business partnerships in Northeast Wisconsin," said Dean John Katers, "We want to make this region competitive with other parts of the state and the nation in terms of innovation and sustainability. This facility has the potential to attract the faculty, students and business partners to support that vision."

Interested in seeing this new building but can't visit? Take a virtual tour of the facility by searching for "Brown County STEM Center Virtual Tour."





The College of Science, Engineering and Technology welcomes **Kazi Md Masum Billah** as the newly hired Mechanical Engineering Assistant Professor at the Sheboygan Campus!

He comes from The University of Texas - El Paso where he recently defended his dissertation titled "Multiscale 3D printing: Process-structureproperty relationship of fiberreinforced composites."

He has his Masters of Science in Mechanical Engineering from the University of Texas – El Paso. During his masters research, he focused on 3D printing in a simulated space environment. His areas of interest include additive manufacturing and 3D printing, design for manufacturing and generative design, composite materials development and manufacturing, and FEA and CFD for manufacturing tools and systems.

Kazi's anticipated start date at the Sheboygan Campus is August 23, 2021.



### The Cofrin Center for Biodiversity Welcomes 2021 Student Summer Staff

The Cofrin Center for Biodiversity (CCB) welcomes the following students as part of the their 2021 summer staff. A description of each project they will be working on can be found below.

Marc Aguirre '23, BS-Biology. Project: Natural Areas Management Beth Bontrager '20, Project: Richter Museum Andrew Bowker '21, MS—Environmental Science and Policy. Project: Natural Areas Management Patrick Brodhagen '22, MS—Environmental Science and Policy. Project: Natural Areas Management Brandon Byrne '22, MS—Environmental Science and Policy. Project: Fish-eating Bird Project, Piping Plover Monitoring, and Great Lakes Coastal Wetland Monitoring Tamara Kancoglu '22, BS—Biology. Project: Natural Areas Management Chris Koch '22, BS—Biology Project: Richter Museum Breanne Klockzien '21, BS—Biology. Project: Fish-eating Bird Project and Piping Plover Monitoring Demetri Lafkas '21, MS—Environmental Science and Policy . Project: Fish-eating Bird Project, Piping Plover Monitoring, and Great Lakes Coastal Wetland Monitoring Brenna Nicholson '21, BS—Biology and Spanish. Project: Natural Areas Management and Great Lakes Coastal Wetland Monitoring Hunter Paplham '22, MS—Environmental Science and Policy. Project: Fish-eating Bird Project and Piping Plover Monitoring Dustin Sablich '22, BS—Zoology, Conservation and Ecology, Project: Natural Areas Management Olivia Salm '22, BS—Studio Art. Project: Natural Areas Management Nate Schwartz '22, UW-Milwaukee, MS—Freshwater Sciences. Project: Natural Areas Management and Great Lakes Coastal Wetland Monitoring Program Jarod Siekman-VerBoort '21, BS—Biology. Project: Fish-eating Bird Project, Piping Plover Monitoring, Great Lakes Coastal Wetland Monitoring, and Herbarium Max Stafford '23, BS—Biology. Project: Fish-eating Bird Project and Piping Plover Monitoring Jacob Woulf '21, MS—Environmental Science and Policy. Project: Fish-eating bird project, Piping Plover Monitoring, Great Lakes Coastal Wetland Monitoring, and Richter Museum Great Lakes Coastal Wetland Monitoring Program: Crews across the U.S. and Canada collect data on birds, anurans, plants, invertebrates, and fish in the Great Lakes coastal wetlands in order to monitor and assess Great Lakes coastal wetland health using biotic indicators. This project also provides a baseline and method for tracking future changes in plants, animals, and environmental quality. The CCB staff surveys birds and anurans along coastal wetlands between northern Chicago, along Wisconsin's Lake Michi-

gan shoreline, and the eastern U.P. Funded by: great Lakes Restoration Initiative. UWGB project leads: Bob Howe and Erin Giese **Piping Plover Monitoring:** In collaboration with the U.S. Fish and Wildlife Service and WI Dept. of Natural Resources, the CCB staff monitor the endangered Piping Plover, a small white shorebird that nests exclusively on remote beaches dominated by sand, cobble, and sparse vegetation. CCB staff monitor nest locations, egg laying, incubation, behaviors, fledglings, etc. and place cages over top the nests to protect the eggs/adults from predators. UWGB project leads: Amy Wolf and Bob Howe.

**Fish-eating Bird Project:** This project helps the CCB better understand spatial and temporal movements of fish-eating birds, such as the Double-crested Cormorant, American White Pelican, terns, and herons/egrets in lower Green Bay. CCB staff will conduct population counts of these birds (including drone use) and will attach transmitters to cormorants (this summer) and terns (next summer) to determine where they spend their time foraging, etc. This will also determine where they are in relation to fish populations, which are closely monitored/mapped by fish biologists. This project will also include a diet analysis of cormorants by students dissecting pellets for fish parts. *Funded by UW Sea Grant. UWGB project leads: Amy Wolf, Bob Howe, and Erin Giese.* 

**Natural Areas Management:** CCB staff will manage the five natural areas that are owned by UWGB. Management includes trail maintenance, mapping, GIS, invasive species management, plant surveys, signage, plantings, and more. *Project leads: Bobbie Webster and Andrew LaPlant.* 

**Herbarium:** The A. Fewless Herbarium houses thousands of dried/pressed plant, lichen, and fungi specimens. Students working in the Herbarium assist with data management and plant specimen prep. *Project lead: Keir Wefferling.* 

**Richter Museum:** The Carl Richter Museum houses specimens of all types, including eggs, birds, mammals, reptiles, fish, invertebrates, and fossils. Students working in the museum assist with specimen prep and database upkeep. *Project lead: Dan Meinhardt.* 

Check out the Cofrin Center for Biodiversity's website! <u>uwgb.edu/biodiversity</u>



### Earth Caretaker Award 2021



The University of Wisconsin-Green Bay's Environmental Management and Business Institute (EMBI) and Alumni Relations, in conjunction with the Cofrin Center for Biodiversity, honored the 11th Earth Caretaker Award recipient, Linda Parker '85 on April 22, 2021.

The Earth Caretaker Award recognizes UW-Green Bay graduates who have distinguished themselves in their professional field and are widely recognized for their career accomplishments in the areas of sustainability, environmental management, environmental policy or other closely related areas. Linda Parker received her bachelor's degree with a double major in Biological Resource Management and Biology from UW-Green Bay in 1985. Linda is the Forest Ecologist on the Chequamegon-Nicolet National Forest, where she is responsible for several large programs including ecology, botany and climate change.

Serving in this position since 1991, Parker provides leadership and expertise on rare plants, non-native invasive plants, fire ecology, landscape ecology, natural areas, ecological restoration, pollinator management and climate change adaptation.

### Sustainability Certificate Program

The University of Wisconsin-Green Bay has launched a new noncredit Sustainability Certificate Program in January 2021. The goal of the certificate program is to educate business professionals to implement sustainable decisions into their everyday roles to make a positive impact on both their organization as well as the world around them.

The certificate program consists of four flexible and 100% online courses, which can be completed in less than seven months. On completion, participants will receive an exclusive UW-Green Bay digital badge.

Each course is six weeks long and focuses on a facet of sustainability, including environmental, organizational behavior, and economics and society. The final requirement is a capstone course, which incorporates course concepts and requires participants to address a sustainability issue or idea in their business, nonprofit, government or community setting by creating an action plan.

Sustainability instructors include John Arendt, Director of Environmental Management and Business Institute at UW-Green Bay, Tara Reed, Associate Professor, Department of Natural and Applied Sciences at UW-Green Bay and Matthew Winden, Associate Professor of Economics and Assistant Director of the Fiscal & Economic Research Center at UW-Whitewater.

"Developing an understanding of the benefits and barriers is critical to advancing any sustainability project," says Professor Arendt. "The capstone course will guide the student-designed sustainability project from inception to consideration to Implementation over the six-week course length."

The certificate program is facilitated by UW-Green Bay's Division of Continuing Education and Community Engagement. For more information on the certificate program, please visit <u>www.uwgb.edu/sustainability-certificate/</u> or contact Melissa Betke, Program Specialist, at <u>betkem@uwgb.edu</u>.

### College of Science, Engineering and Technology Staff Contact Information

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UW-Green Bay College of Science, Engineering and Technology

### Meet Dr. Mandeep Singh Bakshi and Visiting Researcher Prabhjot Kaur



Dr Mandeep Singh Bakshi is Associate Professor in Chemistry. He joined UWGB in Fall 2016. Dr Bakshi specializes in "Sustainable Nanomaterials" and works on the applications of magnetic nanomaterials in water purification and human biological systems. In the last four years, he is credited with more than 12 research publications in high impact journals of American Chemical Society. His current research is focused on the preparation of "Regenerative Biodiesel

Microemulsions" for cleaning automobile engines. It is supported by WiSys and is carried out by Prabhjot Kaur,

a Visiting Scholar from India. Prabhjot Kaur is working on her Ph.D. with the National Institute of Technology in Jalandhar, India, and is and expert in microemulsion technology. Biodiesel microemulsion is cost effective, sustainable, and is an environmental friendly replacement of organic solvent based cleaners currently in use. The research is heading towards developing a meaningful technology that is environmentally sustainable and economically competitive.



#### 2020-2021 Scholarship Awards (continued)

HATCO Corporation's David G. Hatch Annual Scholarship in Engineering: **Denny Christoff and Joshua Mendez** 

Optima Machinery Corporation Annual Scholarship in Engineering: **Michael McGuire** 

Georgia-Pacific Annual Scholarship in Engineering: Colton Coss, Ryan Buergi, Noah Hanmann, and Gabriel Weiler

Foth Companies Endowed Scholarship in Engineering: James Kaat and Colton Koss

The Ken Metzler Engineering Scholarship: **Elizabeth Heinen and Angelique Wink** 

Jeremy Green Family Scholarship: Samantha Verhagen

Donel Sullivan Scholarship: Brooke Brietrick

Herbert and Crystal Sandmire Scholarship: **Talia Boyea, Adelle Capp, Elissa Gilbertson, Ben Gilles, Jenna Grandinetti, Abigail Heil, Logan Johnsen, Katharina Keller, Anna Liu, Arionna Loughlin, Kayley Nelson, Ashlyn Schnell, Garielle Tuma, Lauren Russell, and Jennifer Vandertie,** 

Herbert and Crystal Sandmire Freshman Scholarship: Alexa Kelly, Lyla Frailing, and Aubrey Rausch