# The ME Connection

## UE Mechanical Engineering Newsletter

December 2022

*"I am immensely grateful to the professors at UE for preparing me well to succeed in graduate school."*
*— Ishan Bhattarai, Class of 2019*

## See You Next Year!

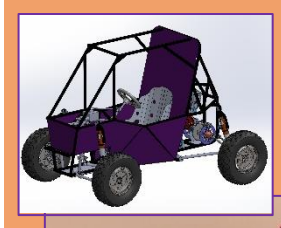
Project teams have been busy this semester! The senior-led projects are making progress on design, fabrication, and data collection, while the tennis ball launchers designed by the freshman class have been put to the test. Read on to hear more about what our students and alumni have been doing.

If you've been following UE news, you may already be aware that Hughes Hall, at the corner of Walnut Street and Weinbach Avenue, has been torn down. The site will be the home of UE's new wellness and recreation center in the coming years. The ME Connection will return in February, but stay tuned for more updates in the College of Business & Engineering newsletter.

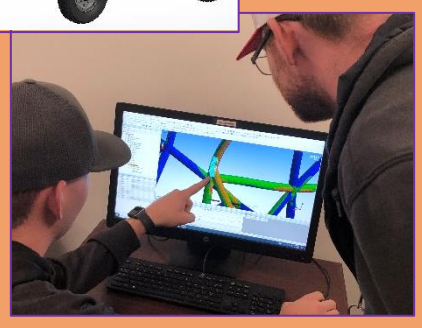
### Tennis Ball Launchers

The ME 101 student project teams are concluding the semester with design presentations over their tennis ball launcher project. The teams competed to hit a target accurately and efficiently while adhering to a series of design and budget constraints.

## Senior-led Design Project Updates



The SAE BAJA team has completed the designs for each section. The team is currently adding components to the full vehicle assembly in SolidWorks to ensure that all components interface correctly.



The Rocket Team completed the initial design review with officials from the NASA Student Launch Competition prior to constructing a subscale model of the rocket. The subscale model will be launched in the coming weeks to test the weight distribution and the aerodynamic design. The first iteration of the scientific payload that will be launched on the full-scale rocket has been constructed and will undergo extensive testing.

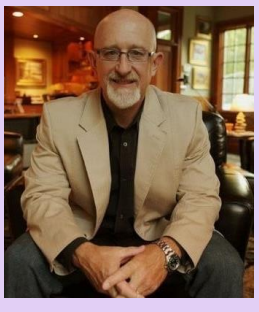
This semester, the Thermosiphon research team has successfully completed two test series exploring the effects of varying parameters on system efficiency. A new pumping system was installed to make the system more robust and easier to operate. This year's team is planning to present their results at the National Conference for Undergraduate Research in the spring.

We want to share what our alumni are doing!
Please submit a photo and short blurb to: mechanicalengineering@evansville.edu

## Alumni Spotlight: Sharing Knowledge

Whether it is a booth at an expo, a peer-reviewed publication, conference presentation, white paper, community talk, seminar, workshop, or another venue, we have alumni sharing their knowledge in many ways. Here are just a few examples of alumni reaching a wider audience this year.

Kent Parker *(Class of 1983)* recently gave a talk on UE's campus titled, "The Cross-Functional Fusion of Business & Engineering: Perspectives from an Engineer on Entrepreneurial Success." Kent is a business executive, entrepreneur, investor and engineer whose talent and passions have led to leadership positions in a wide range of industries.



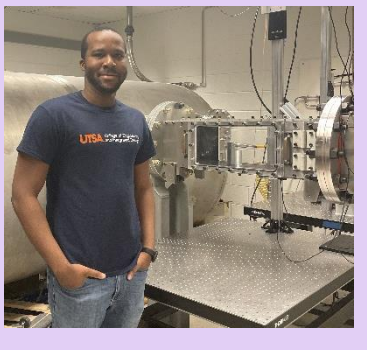
Kent Parker

Ahmed Othman

Ahmed Othman *(Class of 2020)* published his first research paper earlier this year. He presented his work titled, "*Numerical and Experimental Study of a Covert-Inspired Passively Deployable Flap for Aerodynamic Lift Enhancement*" at the AIAA Aviation conference in Chicago. Ahmed is pursuing his PhD at Princeton University.

Ishan Bhattarai *(Class of 2019)* represented LandGate and the UTSA NASA Center for Advanced Measurements in Extreme Environments at the 75th Annual Meeting of the APS Division of Fluid Dynamics, which focused on global impacts of fluid dynamics research. He presented his work on Large Eddy Simulations (LES) for turbulent flow.


Ishan Bhattarai



Dr. Chris Combs *(Class of 2010)* and Eugene Hoffman *(Class of 2016)* have published a number of their research findings this year, including the recent paper titled, "*Velocity measurements in a hypersonic flow using acetone molecular tagging velocimetry."* Eugene is a PhD student in Dr. Combs' hypersonics research group at the University of Texas at San Antonio. Several of their papers have been published in open-access journals if you are interested in learning more about their work.

Dr. Chris Combs (left) and Eugene Hoffman (right)

Happy Holidays!