August 22, 2016

Dear members of the Hajim School community:

Another school year is upon us! International students move in today; domestic and transfer students on Wednesday. I will officially greet the 435 members of our Hajim School Class of ’20 at 10 a.m. Thursday in Strong Auditorium. Let’s all do our very best to answer their questions, give them good advice, and help them feel at home!

Congratulations to three of our junior faculty members who have recently received federal funding for their cutting edge research.

Wyatt Tenhaeff, assistant professor of chemical engineering, is applying his expertise in polymer electrolytes to two projects -- playing two different roles at two very different scales of engineering. As a PI, he has received a $306,000 grant from the National Science Foundation to see if a chemical vapor deposition process he's developed can overcome the biggest challenge to 3-D microbatteries -- synthesizing workable solid electrolytes. And, as a collaborator with researchers from five other institutions and companies, he'll receive $270,000 of a $3.5 million ARPA-E grant. The goal of this project is develop scalable manufacturing processes for ceramic electrolytes to be used in solid-state lithium metal batteries for electric vehicle applications. A solid-state battery would overcome the fire hazards associated with liquid electrolytes in conventional lithium ion batteries now in use.

Thomas Howard, assistant professor of electrical and computer engineering, has been awarded $289,376 from the National Science Foundation for a research grant titled "Learning Adaptive Representations for Robust Mobile Robot Navigation from Multi-Modal Interactions." This grant will support research into developing new algorithms for robot perception, mobile robot navigation, and human-robot interaction in collaboration with Matthew Walter from Toyota Technological Institute at Chicago.

And Niaz Abdolrahim, assistant professor of mechanical engineering, secured a grant of $350,000 from NSF. The funding will enable her and two PhD students to use computer simulations to develop predictive models and deformation maps that will guide the creation of nanoporous metals with enhanced ductility (pliability) and strength. Nanoporous metals are excellent candidates for a variety of high-tech applications, for example as catalysts for fuel cells, as air and gas filters, and as biosensors and actuators.

Congratulations as well to Karan Vombatkere ’17 of electrical and computer engineering and physics, who has been awarded a $2,000 Tau Beta Pi Scholarship for the 2016-17 academic year.

Again, a warm welcome to the Class of ’20 and all our returning Hajim School students. Have a great week!

Your dean,
Wendi Heinzelman