

Holiday Greetings from ECE Department at Illinois Tech!

Although most of 2020 were shrouded by fear and overrun with challenges, it leaves us now filled with hope and promise. So, it is with good cheer that we share tidings of the ECE Department.

We continued offering in-person and online course options for our students through summer and fall and will do so moving forward. The university has invested in technology resources to provide quality online education which has increased our access to more students.

I am happy to report that our ECE Department fall 2020 intake numbers **increased in both undergraduates and graduates**. New and updated programs and courses, recruiting domestically and internationally, and academic and corporate partnerships have helped with this endeavor. One particular partnership with Beacon, an online education platform in China, has attracted **40 students** to our **new Master of Engineering in Artificial Intelligence, Computer Vision, and Control**. The new Bachelor of Science in Computer and Cyber Security Engineering established in 2019 currently has **37 students**.



We are excited to be under the leadership of the **new Carol and Ed Kaplan Dean of Armour College of Engineering, Dr. Kenneth T. Christensen**, former Chair of the Department of Aerospace and Mechanical Engineering at the University of Notre Dame. Dr. Christensen has been with us since November 1st and has quickly established his commitment and goals toward the growth of Armour College and the ECE Department. We look forward to working with him in this pursuit. **Dr. Natacha DePaola** has moved on from her position as Dean of the Armour College of Engineering, a role she held for more than 11 years. Throughout her time Natacha was a tremendous advocate and support for the ECE Department. We congratulate her on her next venture as Director of the recently founded, Illinois Tech Digital Medical Engineering and Technology (IDMET) Center and wish her all the best.

ABET accreditation is a significant undertaking that we go through to assess our curricula and the results of our student learning, to assure that our engineering programs meet education standards. We want to thank you for your aid in that process. Our profound thanks to **Dr. Erdal Oruklu**, who spearheaded the ECE Department's ABET recertification. His leadership was exemplary.



Since our last update in May, we have had more celebratory accomplishments from our brilliant faculty and students. Here are the most recent and a recap of the **2020 school year awards**:



Dr. Yongyi Yang has been **elected to IEEE Fellow**, the highest level of membership in the IEEE, for contributions to medical image recovery and analysis.



Dr. Mohammad Shahidehpour has been listed as a **Highly Cited Researcher on the Web of Science** (ranked in the top 1% by citations demonstrating significant influence among his peers).



Dr. Qing-Chang Zhong has published a new book, "**Power Electronics-Enabled Autonomous Power Systems: Next Generation Smart Grids**".



Dr. John Shen has received the prestigious **2020 Sigma Xi/IIT Award for Senior Faculty Excellence in University Research**.



Dr. Mahesh Krishnamurthy has been promoted to the rank of Full Professor effective Fall 2020.



Dr. Erdal Oruklu has received the prestigious **2020 Board of Trustees Outstanding Undergraduate Teaching Award**.



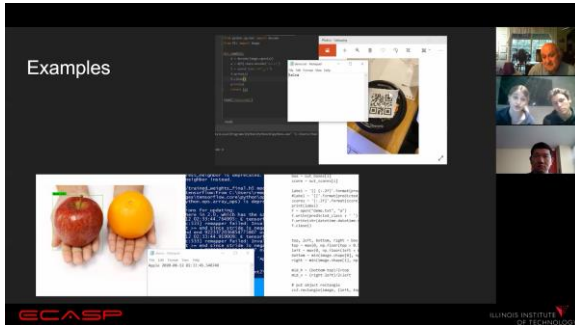
David Arnold (Ph.D. Candidate, CPE) has been awarded the **Department of Energy - Nuclear Energy (DOE-NE) - Integrated University Program Graduate Fellowship** for \$161, 000 to support him throughout his Ph.D. program.



Boyang Wang (Ph.D. Candidate, EE) has received the prestigious **2020 Sigma XI/IIT Student Research Award**.

Congratulations to the professional and academic attainments of ECE Faculty and Students, we are grateful for their contributions to the engineering profession.

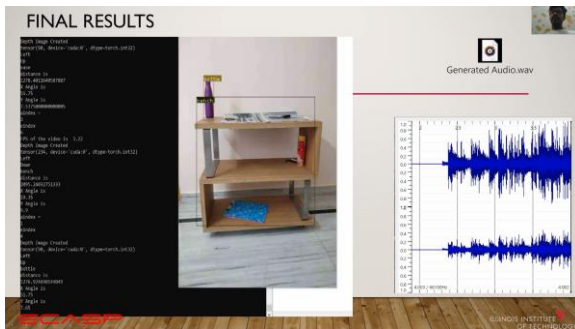
During the summer and fall of 2020, numerous ECE students have participated in the [virtual Armour R&D Summer and Fall Expo](#). This program gives students hands-on experience on various projects in our faculty research labs in the field of power electronics and motor drives, Internet of Things, computer vision, and machine learning.



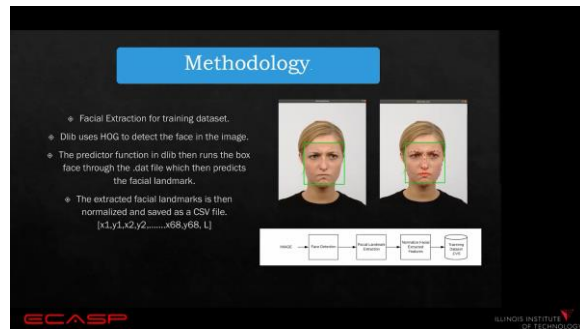
Maggie J. Barclay & Theo W. Guidroz (ENGR 498)
“Computer Vision for the Use of Smart Technologies”



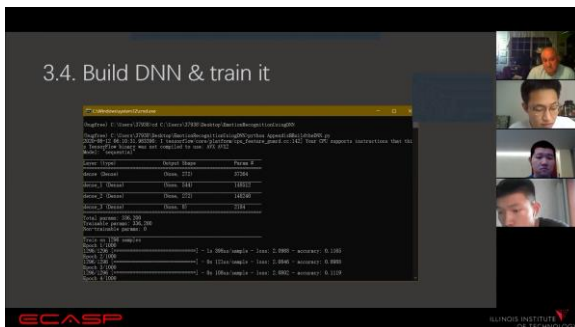
Jamison A. Kerney (ENGR 498)
“Image Upscaling with Deep Convolutional Generative Adversarial Network”



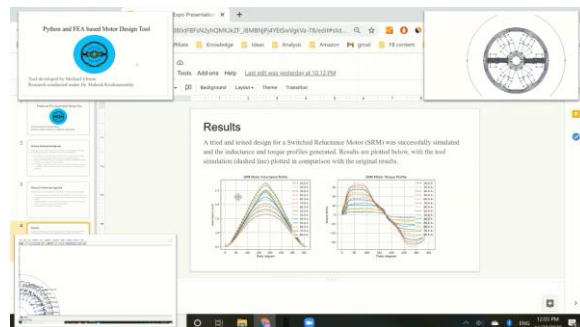
Sukesh Davanthapuram (ENGR 498)
“Real-Time Object Detection and Spatial Audio Generation using YOLO and Head-Related Transfer Function”



Oluwafemi Shobowale (ENGR 598)
“Emotion Recognition using Deep Neural Network with Vectorized Landmark Features”



Zhantao Bai and Anqi Cheng (ENGR 494)
“Emotion Recognition using Deep Neural Network”



Michael Efraim (ENGR 498)
“Python and FEA based Motor Design Tool”

Since this was a notable success, we will hold our **virtual ECE Day** in Spring 2021. Please save the date, **Friday, April 9th, 2021**. We will follow up early in the semester with more details.

This year, the pandemic created many difficulties both academically and administratively. I want to give a special thanks to our faculty and staff for their continued patience and persistence throughout, to give our students the care and attention they deserve and provide them with a wonderful educational experience.

We have experienced the biggest health crisis of the century. In the end, it is science and engineering that is eradicating the threat. Illinois Tech and the ECE Department are dedicated to educating the future society of scientists and engineers for the health and prosperity of all mankind. May you have both in the coming year.

Jafar Saniie, ECE Department Chair, and Filmer Endowed Professor