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**Associate Dean John Verboncoeur comments on MSU's leading role in "superhuman" autonomous sensing**

*Faculty Voice: Driving our future*

John Verboncoeur is the associate dean for research in the [College of Engineering](https://www.egr.msu.edu). He is a professor of electrical and computer engineering as well as computational mathematics, science and engineering.

MSU’s self-driving vehicle is again being featured for its cutting-edge sensor technologies during AutoMobili-D at the North American International Auto Show at Detroit’s Cobo Center from Jan. 14-21. AutoMobili-D is the mobility and technology exhibition of NAIAS.

2018 is the second consecutive year that faculty members and graduate students from the College of Engineering are showing visitors the “super-human” levels of perception and recognition technology under development at MSU.

Monitors surrounding MSU’s sporty green and white 2016 Lincoln MKZ hybrid research vehicle demonstrate how its advanced algorithms, cameras, laser radars and other sensors allow the vehicle to perceive and maneuver in its environment.

New this year – autonomous vehicles from MSU and the University of Michigan are side-by-side so visitors can review current autonomous developments at the state’s two largest universities.

A colorful display of football helmets from the respective universities provides a Michigan-centric photo-op and an
important symbol that MSU and the AutoMobili-D showcases the work happening in MSU’s Mobility Studio, an integrated system encompassing autonomous and connected vehicles, smart infrastructure and mobility management. CANVAS – Connected and Autonomous Networked Vehicles for Active Safety – is the vehicle component of that effort.

CANVAS has made significant progress over the past year. For example, MSU is advancing visual segmentation algorithms to classify diverse objects, like pedestrians, vehicles, trees, roads and buildings as observed by the vehicle. Data fusion technology can enable the vehicle to determine if a nearby pedestrian is a child or an adult, and whether the child is walking without adult supervision.

Enhanced safety capabilities of connected and automated vehicles are transforming the industry, resulting in the creation of new jobs around hardware and software innovation in our state and region.

Opportunities like AutoMobili-D reinforce that MSU is a recognized leader in sensing, data fusion and high-assurance, which are at the core of self-driving vehicles. MSU’s other technologies – like biometrics, multi-spectral computer vision, deep learning, data science, radar and antenna design, signal and image processing – are just a few of the ways for MSU’s uncommon good to enhance our future.

Read more about autonomous technology research at MSU in the MSUToday feature, A vision for smarter, safer autonomous vehicles.

Read more about MSU at the NAIAS.
Related Website: Communications contact: Patricia Mroczek

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