Kevin McFall, Ph.D.

Assistant Professor of Mechatronics Engineering at Kennesaw State University
Kennesaw, GA, US

Kevin McFall's current research involves artificial intelligence and self-driving vehicles.

Biography

Prior to joining the University, McFall lived abroad for more than 10 years. His international experiences began with a study abroad for his entire undergraduate senior year at the Luleå University of Technology in Sweden, 50 miles south of the Arctic Circle. After graduating with his B.S. in Mechanical Engineering from Virginia Tech, his international travels continued during masters studies at MIT with an appointment at the Japan Atomic Energy Research Institute in Japan. His work there involved heat transfer in the superconducting magnet systems for the International Thermonuclear Experimental Reactor project.

Such positive international experiences led to a research fellow position at Dalarna University in Sweden after graduation from MIT with his M.S. in Mechanical Engineering. His research shifted to artificial intelligence and image/signal processing where he was involved in developing an automated winter road condition sensor using artificial neural networks to classify road condition using image and sound input data. The research fellow position at Dalarna University quickly led to a permanent faculty position in the Department of Computer Engineering and Informatics.

To help advance his career in academia, he left Dalarna University to pursue a Ph.D. in Mechanical Engineering at Georgia Tech's European campus in Metz, France. He continued working in artificial intelligence by developing an alternative method for solving boundary value problems using artificial neural networks.

His current research focuses on autonomous vehicles, directing numerous student teams to develop sensor systems and actuation control for self-driving cars.

Industry Expertise

Mechanical/Industrial Engineering, Computer Software

Areas of Expertise

Mechatronics, Autonomous Vehicles, Robotics, Automation & Robotics, MATLAB Simulation, Mobile Robotics, Robot Motion Planning, Robot Vision, Self-driving cars, Artificial Intelligence, Neural Networks

Event Appearances

A Mobile Telepresence Robot: A Case Study for Assessment of a Capstone Design Course
123rd ASEE Annual Conference

Artificial Intelligence and Autonomous Vehicles
6th International Congress of Innovation and Technology

Using Visual Lane Detection to Control Steering in a Self-Driving Vehicle
EAI International Conference on Social Innovation and Community Aspects of Smart Cities

Visual Lane Detection Algorithm Using the Perspective Transform
ASME Early Career Technical Conference

An Artificial Neural Network Approach for the Mass Balance of a Reactor in Steady State
SIAM Conference on Dynamical System

Comparison of the Length Factor Artificial Neural Network and Finite Element Methods for Solving Boundary Value Problems
ASME Early Career Technical Conference

Education

The Georgia Institute of Technology
Ph.D. Mechanical Engineering

The Massachusetts Institute of Technology
M.S. Mechanical Engineering

Virginia Polytechnic Institute and State University
B.S. Mechanical Engineering

Accomplishments

Modular Mechatronics Component Laboratory to Support Research and Education
Awarded by Kennesaw State University Office of the Vice President for Research Pilot/Seed Grant

VEX Robotics Kits for MTRE 1000
Awarded by Kennesaw State University Southern Polytechnic College of Engineering and Engineering Technology

KSU Strategic Internationalization Grant
Awarded by the Division of Global Affairs, Kennesaw State University

SPSU Technology Fee Grant
Awarded by University Information Technology Services

SPSU Area A Mini-Grant
Awarded by Academic Affairs
