

## **Seminar Talk**

**David C. Conner, Ph.D.**

**Assistant Professor**

**Director**

**Capable Humanitarian Robotics and Intelligent Systems Lab (CHRISLab)**

**Christopher Newport University**

**Friday, October 19, 2018**

**3:00 p.m. KH 224**

**Title:** Implementing Robot Behaviors in ROS

**Abstract:**

This talk presents an overview of robotics research using open-source software tools provided by the Robot Operating System (ROS) suite of libraries. Dr. Conner will present an overview of his work performed as part of Team ViGIR in the 2015 DARPA Robotics Challenge (DRC), and more recent work developing open source tools for programming robot behaviors. A specific focus will be on open source tools developed for robot navigation and manipulation using the Flexible Behavior Engine (FlexBE) developed during the DRC. The talk will present research on the synthesis of behavioral automata using formal methods; recent work has integrated synthesis with execution in FlexBE.

**Bio:**

David C. Conner directs CHRISLab, the Capable Humanitarian Robotics and Intelligent Systems Lab, at Christopher Newport University, where they focus on the autonomous control of mechanical systems that are commonly called “robots”. Dr. Conner earned master’s (2004) and PhD (2007) degrees in Robotics from Carnegie Mellon University, as well as undergraduate (1991) and master’s (2000) degrees in Mechanical Engineering from Virginia Tech. Dr. Conner was formerly Senior Research Scientist at TORC Robotics, where he worked on planning, perception, and prediction systems for unmanned ground vehicles. From 2012 to 2015, he was Principal Investigator for Team ViGIR, which competed in the DARPA Robotics Challenge using a Boston Dynamics Atlas humanoid robot.

Dr. Conner joined the CNU faculty in 2015. He teaches programming, artificial intelligence, and robotics. Dr. Conner’s research interests include simplifying the deployment of robotic systems by automatically synthesizing high-level behavioral controllers by composing well defined system capabilities. He also conducts research in sensor data processing, 3D modeling, and machine learning for robot perception and visualization. Dr. Conner has advised numerous undergraduate and master’s students at CNU in the summer scholars program, capstone, and thesis research.