



<b>TOPIC</b>	<b>3D-PRINTED MOBILE ASSISTANCE PLATFORM (MAP) FOR REHABILITATIVE ROBOTICS</b>
<b>ORGANIZERS</b>	Student Leadership Council and Faculty of the TECHLAV
<b>AREA</b>	Robotics, control systems, multi-agent systems, Robot Operating System (ROS)
<b>SPEAKER</b>	Dr. Patrick Benavidez
<b>DATE</b>	December 4 <sup>th</sup> , 2015
<b>TIME</b>	3-4PM (EST)
<b>VENUE</b>	Room 410, Fort IRC Bldg, North Carolina A&T State University, UTSA Room - TBD
<b>FEES</b>	No Charge

### SYNOPSIS

This talk will be a continuation of the Autonomous Controls Engineering Lab's research into a home-based heterogeneous robotic assistive care system for the disabled which was previously presented on May 5<sup>th</sup> for the TECHLAV seminar series. In this installment of the research, the robotic mobile assistance platform developed by Eric Wineman is introduced. The robotic platform is based on a commercially available Nova GetGo walker with modifications to add RGB-D vision capabilities and motorized mobility assistance. Also, issues in designing, prototyping and programming custom-made 3D printed robots will be presented.

### ABOUT THE SPEAKER



Dr. Patrick Benavidez received the B.S. degree in electrical engineering from the University of Texas at San Antonio in 2007. In 2007, Patrick began working on his masters degree while working for Southwest Research Institute. He received a M.S. degree in electrical engineering at the University of Texas at San Antonio and concluded his internship in 2010. He obtained his Ph.D. in August 2015 in electrical engineering at the University of Texas at San Antonio with initial funding provided by a Valero Graduate Research Fellowship and Scholarship. Mr. Benavidez recently received the following two awards for volunteering and outreach: "Most Exceptional Graduate Student" by the UTSA College of Engineering and a University Life Award for "Most Outstanding Graduate Student in the College of Engineering" by the UTSA Student Government. His doctoral research was supported in part by a Valero Research Excellence Award and through the UTSA

Graduate School with Graduate Student Research Scholarship.

Dr. Benavidez has supported professors in several grant writing efforts. He has also mentored numerous students for Masters thesis, projects and undergraduate capstone projects. His areas of interest include communication systems, control systems, robotics, cyber-physical systems, and systems of systems. He is currently a post-doctoral fellow and an adjunct professor at The University of Texas at San Antonio.