Announcing the Final Examination of Charles Davis for the degree of Doctor of Philosophy

Time & Location: June 26, 2020 at 10:00 AM in Virtual Defense https://ucf.zoom.us/j/92357495692?pwd=SkjXZHoxc2RD
Title: Investigation in Engineering Leadership Using Systems Engineering and Virtual Reality

System Engineering can help derive requirements and specifications to build virtual environments which are good to test behaviors and attitudes. Virtual simulations can have a strong impact because role-playing facilitates active learning, permits the acceptance of new concepts, and generates increased interest, enthusiasm, and motivation. Research over the last 50 years has shown that reasoning with and about context is an essential aspect of human cognition, permeating language, memory, and reasoning capabilities. This integral process is developed over a lifetime through experiential learning. In this research, we utilize systems engineering to capture guidelines from psychologists and concepts of technological leadership. These guidelines are converted in requirements and technical specifications (using SySML) of virtual simulation environments (built in OpenSim). Then, this virtual simulation environments are used to test subjects and see the potential changes in leadership skills. The research is a promising step in the test of attitudes and leadership in STEM environments.

Major: Industrial Engineering

Educational Career:
Bachelor's of Design Engineering Technology, BS, 1992, University of Central Florida
Master's of Industrial Engineering, MS, 1995, University of Central Florida

Committee in Charge:
Luis Rabelo, Chair, Industrial Engineering & Management Systems
Ahmad Elshennawy, Industrial Engineering & Management Systems
Pamela McCauley, Industrial Engineering & Management Systems
Falecia Williams, West Campus President - Valencia College

Approved for distribution by Luis Rabelo, Committee Chair, on May 14, 2020.

The public is welcome to attend.