Registration Form

TEAM INFORMATION

Team Name/Project Title: Project Stratus: State of the Art Robot Vision, Navigation and Control

Department: EE

Faculty Advisor(s): Dr. Dan Connors

Primary Team Contact, email: skyler@saleh.email

Team Members (first name, last name, and e-mail):

Skyler Saleh
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PROJECT INFORMATION

Description:

Project Stratus aims to make a state of the art robotic navigation system available to everyone.

Abstract:

The field of computer vision seeks to develop machines with the capabilities to perform tasks that currently can only be performed by humans. Important aspects of human vision such as the ability to identify obstacles, plan paths around them, learn from one’s surroundings, in real time, area crucial to many societal uses of technology. Each year, computer systems running complex vision software collectively step closer to emulating each stage of human vision. However, accurate and efficient computer systems have always been obstacles to integrating greater amounts of automated robotics
to help people. To enable next-generation robotics to perform field sensing in
dangerous and remote environments, Stratus will deploy a sophisticated
real-time Simultaneous Location and Mapping (SLAM) algorithm to provide
precise odometry, high-resolution 3D environmental maps, and awareness of
specific adverse environments. The Stratus team will investigate the use of
3D sensing and computer vision technology available for mobile platforms
and design custom algorithms that trade-off execution time, accuracy, and
power efficiency.

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