

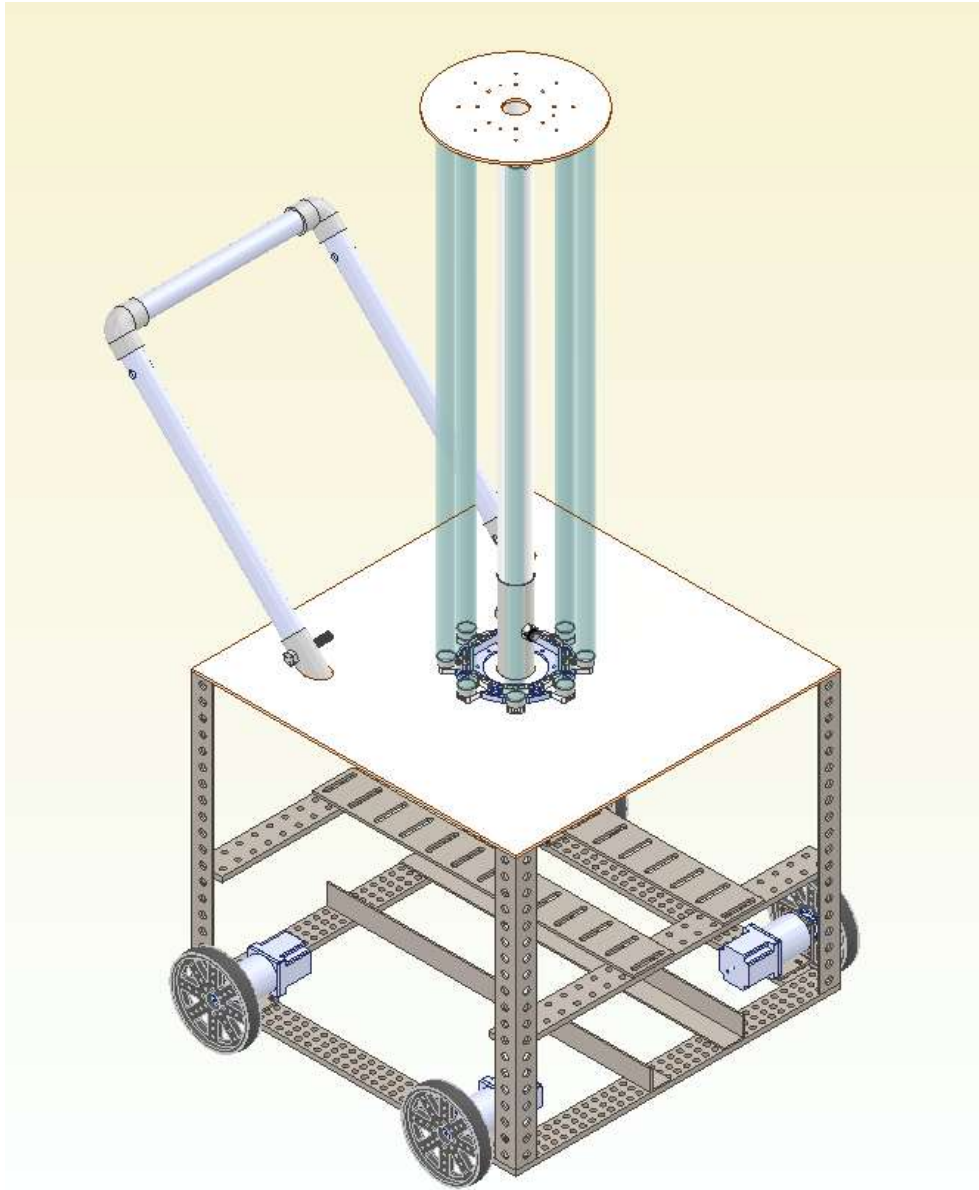
In 2020, IEEE Region 3 responded to the world-shaking COVID-19 pandemic by establishing a sponsorship program for IEEE sections that are working on projects to aid in the fight against the health crisis. Up to \$1000 in grant funding was available per section that was engaged in a project related to the pandemic. Such projects have included body temperature sensors, desk shields for schools, and in IEEE Orlando's case, robotic cleaning systems.

Since November 2020, the Orlando Section has been working in partnership with IEEE UCF on a robot built for the purpose of disinfecting surfaces automatically. The robot works using UVC technology, a band of ultraviolet radiation which has been shown to inactivate viruses such as the one that causes COVID-19. When the robot enters a room, it maneuvers autonomously until it has found all of the surfaces available, and then it emits UVC radiation for the specified time required to completely disinfect the area. This way, complete sanitization can be achieved without wasting dozens of disinfectant wipes, and without needing a human in close proximity to the infected surfaces.

Currently, the team of UCF engineers is working on assembling the mechanical frame of the robot, after which it will be fitted with the UVC lamps and sensing equipment needed for operation. Upon completion of the project (scheduled for November of this year), the robot will be donated to UCF Health Services for use in a clinic setting.

In addition to fighting the pandemic, this venture has precipitated the benefit of multiple levels of IEEE becoming involved with the collaboration. UCF students, including those who had never previously worked with IEEE, are now participating in a project produced by IEEE Orlando, which allows the UCF community and the Orlando community at large to be more involved with each other, all under the banner of IEEE Region 3.

For more information about the Disinfection Robot project, contact Taylor Barnes by email at taylordanielbarnes@ieee.org. Additional funding for the project is provided by the UCF Office of Undergraduate Research.



CAD design for the robot – to be implemented in the real world soon!