Humanoid robots are currently being developed for hazard response in industrial facilities for the DARPA Robotic Challenge (DRC) and as a watch/inspector/first responder onboard U.S. Navy ships. In both applications, the exterior panels of the robot need to clearly identify the robot in its role while also providing protection from impact, heat and water damage. In this project, artists, designers and engineers are working together to create a contoured suit of interlocking protective panels for the ESCHER humanoid robot designed to promote familiarity and recognition of the robot as an emergency first responder. The team has completed color, form, and brand studies that inform changes to the visual appearance of ESCHER. Digitally sculpted 3D printed parts of Ultem high temperature plastic have been designed with these studies in mind to soften the hard angles of the existing robot frame and bring inline the overall proportions. Bridging negative spaces between hard panels is a custom manufactured water resistant flexible fabric that is extremely flame resistant and dimensionally stable at high temperatures.

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Type: Robotics, Visual Arts, Creative Technologies, 3D Printing

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