Proceedings of the 2018 Winter Simulation Conference
M. Rabe, A.A. Juan, N. Mustafee, A. Skoogh, S. Jain, and B. Johansson, eds.

USING POINT CLOUD DATA IN SIMULATION MODELS

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ABSTRACT

Simulation models can benefit from the latest 3D laser scanning technology, as showed in the current projects SUMMIT and ECOPRODIGI. Using point cloud data of the physical environment generated from 3D laser scanning, we can emulate a spot welding process as-is in an immersive virtual reality environment that looks like the real facility. Point cloud data can also be used to evaluate volumetric filling of cargo space, as visualized in this demo using a 3D laser scanned RoRo ferry. The point cloud data can also help generate accurate models of the hulls for larger ships that can be used to simulate the flow of water, allowing engineers to predict the effect of changes to the hull and traveling conditions to reduce emissions and fuel consumption.