ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

Invitation to the Doctoral Seminar

Christina Petschnigg
Universität Klagenfurt

"Bayesian Regularization of 3D Point Cloud Segmentation Frameworks for Digital Factory Planning"

https://classroom.aau.at/w/adw-ezd-k9g

Wednesday, 9 December 2020

10:00 a.m.

Abstract

One of the major challenges on the road to the digital factory is the interpretation and understanding of complex indoor environments. In today's automotive assembly plants, which comprise thousands of square metres, it is difficult to determine the as-is state of the plant due to outdated layouts and numerous renovation works. The as-is state of the environment is especially important for brownfield planning scenarios, i.e. reorganizations or the construction of new production machinery. Further, the current state is crucial to generate actual simulation models of the assembly process. In recent years laser scanners have facilitated 3D digitalization efforts. However, the generation of simulation models is still a highly manual task. In order to automate this process the point cloud that is generated during digitalization, has to be segmented into single objects of interest. The aim of this talk is to present a methodic workflow to collect the necessary factory

data and to generate a static simulation scene automatically. The latter point will be covered using different neural network architectures.

Jürgen Pilz and the Department of Statistics look forward to seeing you at the talk!