

Current Trends in the Digital Transformation of Rail

Philipp Leibner and Patrick Schneider

RWTH Aachen University, Germany

Abstract

Ever increasing demand of mobility has led to a strong push towards digitalized transport solutions in recent years. Besides novel road and air traffic solutions, also rail based transport systems are undergoing a significant transformation to meet rising demand for freight and passenger traffic both now and in the future. This talk gives an overview of how railways already benefit from digitalization efforts and what can be expected in the future. The speakers give examples of how digitalization affects vehicle engineering, maintenance, operation and passenger experience.

Biographies



Philipp Leibner received his M.Sc. degree in Automation Engineering in 2021 from RWTH Aachen University. He now works as a research assistant at the Institute of Rail Vehicles and Transport Systems. His research focuses developing novel infrastructure monitoring solutions using vehicle-based sensors.



Patrick Schneider received his M.Sc. degree in Mechanical Engineering with a focus on rail vehicle technology in 2018 from RWTH Aachen University. He now works as a research assistant at the Institute of Rail Vehicles and Transport Systems in the field of vehicle dynamics and rail-wheel wear.