Prof. R. Wattenhofer

Reconstructing ODEs for railway vehicles using machine learning

Railway vehicles shake because of the rails' irregularities, which can be further influenced by problems with the springs or dampeners in the vehicle. This project aims to use the dynamics of in-service railway vehicles along with rail irregularities to build a neural ODE for the railway vehicle, thus allowing simulations on new tracks.

Requirements:

Prior experience and a strong interest in machine learing, simulation and HPC is recommended. Creativity, experience with programming and elementary physics are advantageous.

Interested? Please contact us for more details!

Contact

- Andreas Plesner: aplesner@ethz.ch, ETZ G95