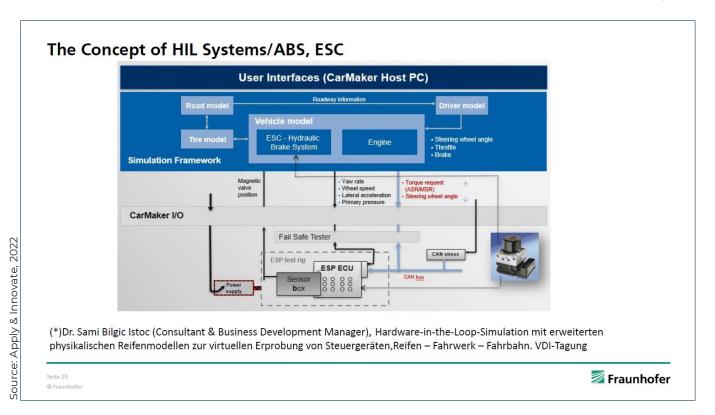# Extended Physical Tire Models for HIL

Real-time simulation of physical tire models

Challenge:

- Developing a real-time capable physical tire model for HIL simulation to enable high fidelity brake controller testing

Solution:

- The CDTire/Realtime tire model combined with the open integration and test platform CarMaker was used on a HIL system to test a brake controller

Several use cases modeling specific vehicle dynamics situations on the HIL test bench are possible, e.g. the sudden loss of tire pressure and the resulting ESC intervention