VI-CarRealTime

TRAINING EXPERIENCE

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VI-CarRealTime

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TRAINING EXPERIENCE

VI-CarRealTime is a comprehensive and user-friendly environment for **modeling and simulating vehicles in real-time.** It operates with its own GUI or can be embedded into a control environment.

VI-CarRealTime provides a **real-time vehicle simulation environment** where the same vehicle model can be used by **vehicle dynamics** and **controls engineers** to optimize vehicle and control system performance.

During the VI-CarRealTime training, you will learn **how to quickly and easily implement your real-time vehicle model**, exporting it directly from either **Adams Car** or **K&C loadcases.** You will discover how to simulate your model in **different operating scenarios** and how to integrate it with **different types of controllers**. At the end of the training, the implemented models will be uploaded on a **compact driving simulator**, giving the trainee the possibility of performing a subjective evaluation on the vehicle performance.

COURSE CONTENTS

CREATING MODELS

- ...from VI-grade simulation environment
- ...Importing vehicle data from ADAMS/Car multibody models
- ...from K&C measurements

SIMULATING EVENTS

- Running full vehicle open and closed loop events
- Learning about driver models
- Creating user defined events
- Learning about road models
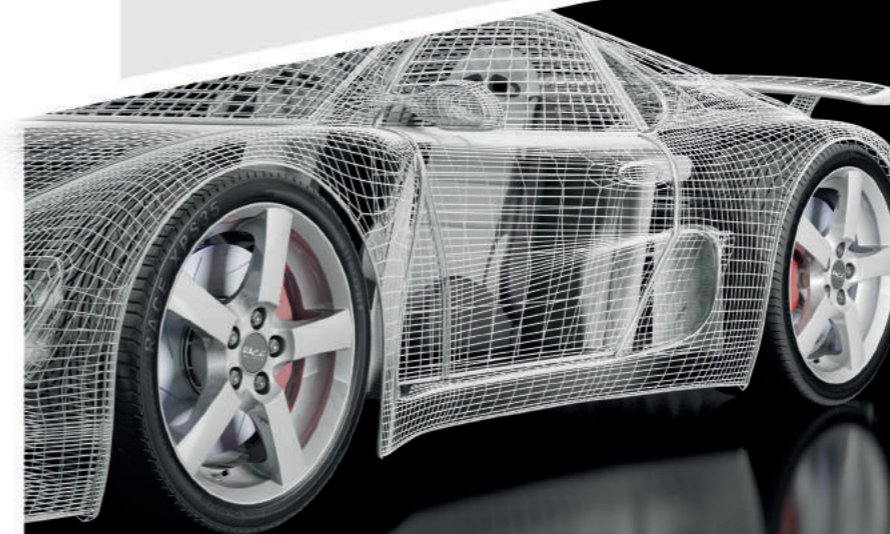
POSTPROCESSING RESULTS

- Creating dynamic simulation results plots
- Creating animation and reports

DRIVING SIMULATOR INTEGRATION

- Learning about driving simulator basics
- Testing vehicle models on a driving simulator

TOOLS AND SYSTEMS

- VI-CarRealTime
- VI-Road
- VI-EventBuilder
- VI-SuspensionGen
- VI-Animator
- VI-DriveSim
- Compact Simulator
- Adams Car
- Simulink®

GOALS

- Getting familiar with the VI-CarRealTime simulation environment
- Importing vehicle data from external environments
- Running full vehicle simulations in VI-CarRealTime
- Use real-time vehicle models on a driving simulator (if available)

WHO SHOULD ATTEND

- Vehicle dynamics simulation engineers
- Engineers in charge of vehicle dynamics and components testing
- Fundamentals in vehicle dynamics are recommended, basic Simulink® skills are welcome

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training@vi-grade.com

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