

## Learning Module

# Tire Analysis with Abaqus: Advanced Topics

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Modern tires are among the most complex structures in production and their complexities span a broad range of the capabilities available in Abaqus. This seminar covers topics addressing advanced tire modeling techniques and serves as a follow-up to the Tire Analysis with Abaqus: Fundamentals course.

### Objectives

Upon Completion Of This Course You Will Be Able To:

- Steady-state rolling using Eulerian techniques in Abaqus/Standard.
- Hydroplaning simulation using Coupled Eulerian-Lagrangian technique.
- Efficient steady-state dynamics analysis.
- Transient analysis using Abaqus/Explicit.
- Substructuring and submodeling.

### Knowledge Prerequisites

Tire Analysis with Abaqus: Fundamentals.

### Language(s) for selected release

English

### Brands

Simulia

### Available Releases

SIMULIA 2021, SIMULIA 2020, SIMULIA 2019, SIMULIA 2018, SIMULIA 2017, SIMULIA 2016, SIMULIA V6.14, SIMULIA V6.13, SIMULIA V6.12

### Duration

8 hours

### Discipline

Advanced Abaqus

## Contents

Overview - Tire Analysis with Abaqus - Advanced Topics

- 1 - Steady-State Rolling Analysis
- 2 - Transient Dynamic Analysis
- 3 - Linear Dynamics, Acoustics and Substructures
- 4 - Submodeling
- A1 - Co-simulation