

# TECHNICAL ACOUSTICS & MECHANICAL VIBRATIONS

## INTRODUCTION

One-day Course  
6 Participants

## DATES AND TIMES

Flexible

## PREREQUISITIES

Engineers or PhD Assistances who work in  
Automotive or NVH Field

## LEARNING OBJECTIVES

- ✓ Understanding the basics of vibration theory and sound perception
- ✓ Learning the measurement & analysis techniques
- ✓ Criticize the vibration parameters

## TRAINING CONTENT

- **Introduction**
  - What is mechanical vibration?
  - Wave propagation
  - Application Areas
- **Fundamentals of Mechanical Vibrations**
  - Spring-Mass System
  - Vibration Parameters
  - Signal Types & Examples
- **Fundamentals of Technical Acoustics**
  - Sound propagation & perception
- **Vibration Measurement & Analysis Techniques**
  - Measurement Equipment
  - FFT, Overall and 1/3 Octave Level, Campbell Diagrams
  - Order Analysis