

MEASUREMENT TECHNIQUES ASSOCIATED WITH IMPACT CONFIGURATIONS FOR04

Total length of training: 16 hours
Start: Day 1 at 11:00 | End: Day 3 at 12:00

PREREQUISITES

Basic knowledge in metrology



TRAINING OBJECTIVES

- Define a measurement adapted to the phenomenon to be analyzed
- Set up a measurement chain and know how to calculate uncertainties
- Get to grips with the most appropriate measurement techniques for impact configurations



TARGET POPULATION

Technicians and engineers working in impact or characterization laboratories



COURSE CONTENT

- Presentation of the benefits of measurement in impact configurations
- Theoretical courses on the main techniques/sensors: projectile velocity measurement, strain gauges, high-speed cameras, accelerometers, interferometry...
- Handling digital oscilloscopes and acquisition systems
- Definition and wiring of a measurement chain with associated uncertainty calculations
- Practical work in the laboratory:
 - Velocity measurement on a ballistic experiment
 - Setting up a high-speed camera
 - Measurement of plate deformation: comparison between local measurement (strain gauges) and field measurement (digital image correlation)
 - High-G acceleration measurement
- Presentation of highly instrumented experiments



KNOWLEDGE TESTING METHOD

Final MCQ to validate knowledge, leading to a certificate at the end of the course



FORTHCOMING SESSION

From March, 12 to 14, 2024