



**COMATEC**

**Institute of Mechanical Design, Materials Science  
and Packaging Technologies**

**Hes·SO**

Haute Ecole Spécialisée  
de Suisse occidentale

Fachhochschule Westschweiz

University of Applied Sciences and Arts  
Western Switzerland

## YOUR PROJECT: FROM STUDY TO REALISATION

The various actors working in the institute offer a wide variety of skills, ranging from mechanical design and microtechnology to dynamic analysis of complex mechanical structures, including modelling and numerical analysis, selection/characterisation of materials, assembly techniques, and destructive/non-destructive material testing. We also have an applied nanoscience laboratory and Packaging Laboratory.

[comatec.heig-vd.ch](http://comatec.heig-vd.ch)



With various laboratories working within one network, the COMATEC institute can meet all your needs, from study to implementation.

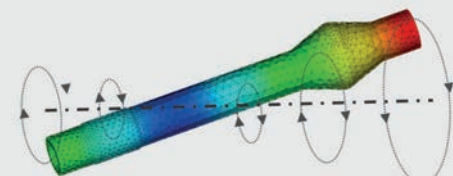
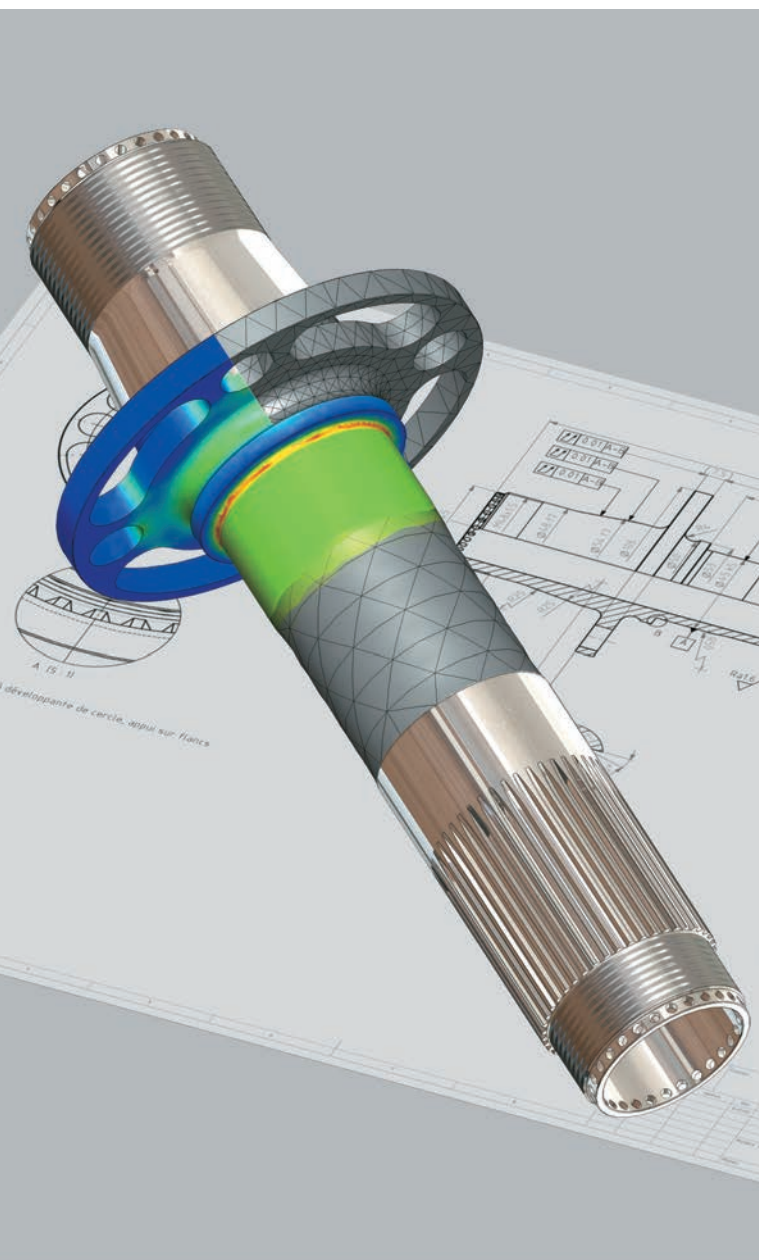
Our mission is to provide solutions in the following areas of expertise:

### MACHINERY AND DESIGN

- Mechanical design and microtechnology
- Additive manufacturing
- Analysis of mechanical structures
- Dynamics of structures and systems
- Thermomechanical calculations
- Damage analysis
- Assembly processes

### MATERIALS AND MANUFACTURING

- Materials
- Material testing
- Nondestructive testing



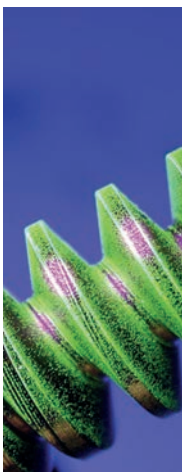
modal behavior

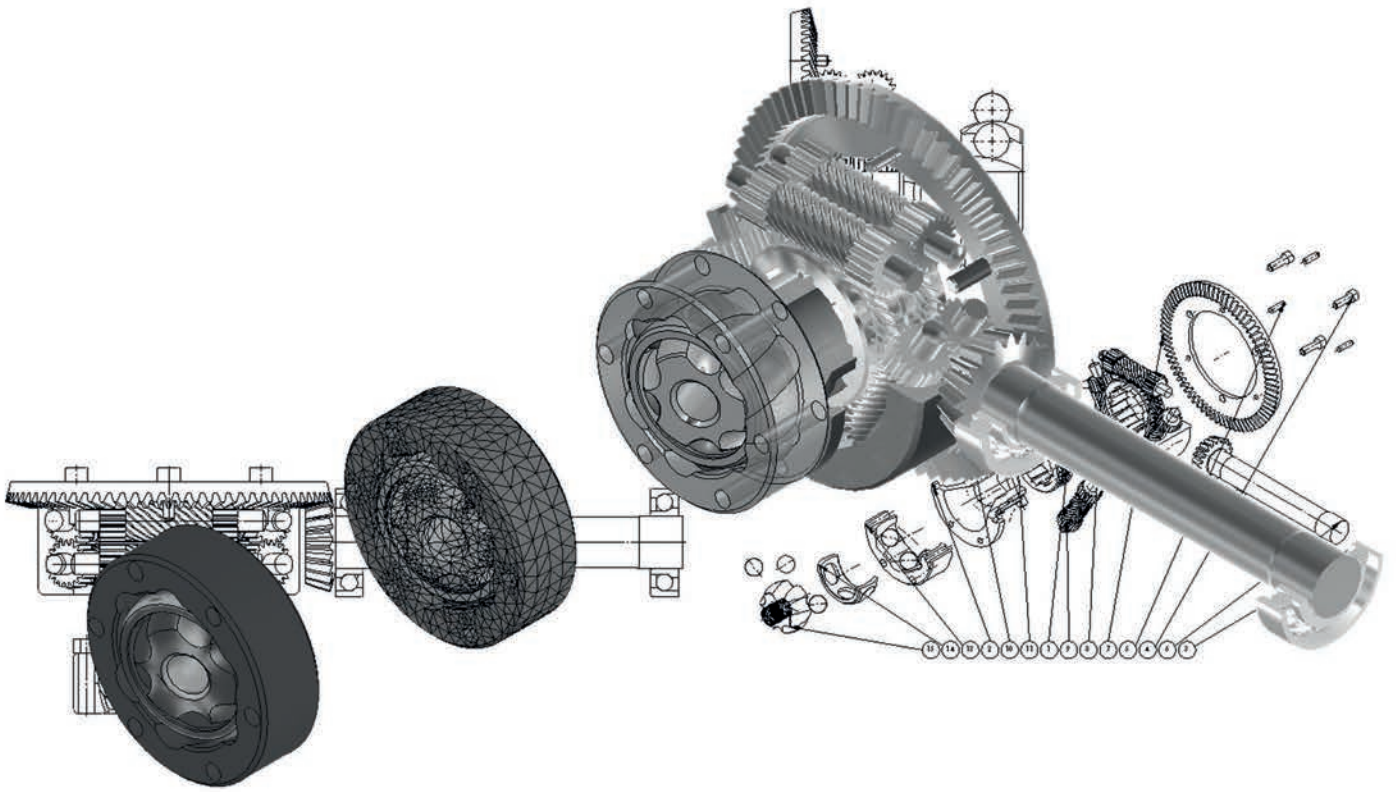


FEA

experimental

aerodynamic bearings





## MATERIALS MATERIAL TESTING

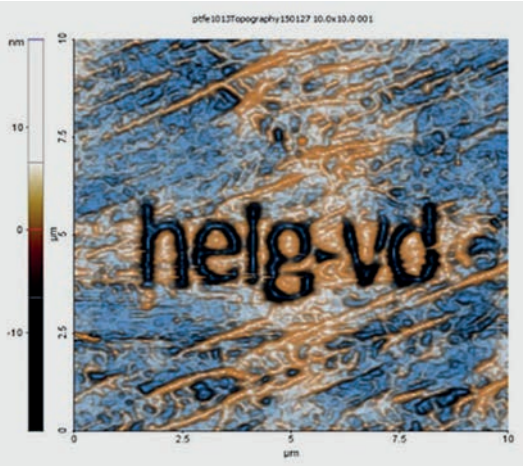
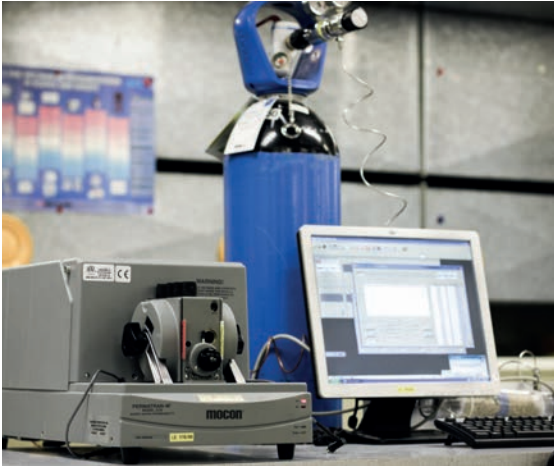
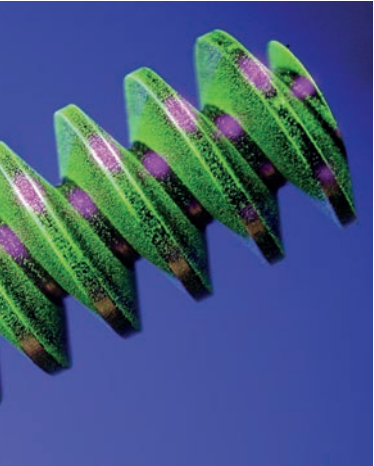
Science and Engineering  
Testing  
Active testing

## PACKAGING

- Design and characterisation of packaging
- Product-packaging interactions
- Determination of gas, water vapor and aroma permeation, migration
- Active and intelligent packaging

## APPLIED NANOSCIENCES

- Engineering and characterisation of materials and nano/micro structured surfaces
- Materials for inkjet printing
- Functional coatings
- Polymer nanocomposites
- Electrode materials and surfaces
- Development of test and measurement systems



# Institute of Mechanical Design, Materials Science and Packaging Technologies

## Types of services

The services we offer range from simple expertise to very substantial research and development projects.

Professors and engineers from the COMATEC Institute also work in collaboration with the Swiss Welding Institute (SWI) as well other institutes within the mecatronYx cross-functional groups, which are dedicated to mechatronics (including the dynamic behaviour of industrial production machinery), and with the Health, Engineering & Economics Group, which is dedicated to health services.

## Contact us

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## Types of financing

The R&D Innovation and Technology Transfer centre at HEIG-VD facilitates access to Swiss and European funding sources, depending on the needs and nature of your collaboration with the COMATEC Institute, and guides you through this process.

## HEIG-VD

Centre Ra&D Innovation  
et Transfert de Technologie

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**The 13 institutes and multidisciplinary AR&D groups at HEIG-VD are genuine innovation drivers. As of 31st December 2016, there were**

- 3325 projects with outside funding,
- 1714 man-years or 3,198,217 productive hours,
- Roughly 249MCHF of applied research and development contracts,
- 19 start-ups registered with the register of businesses..