



DEPARTMENT OF ENGINEERING (DoE)

The Department of Engineering (DoE) is an interdisciplinary group active in the classical domains of civil, electrical and mechanical engineering and geophysics. The main focus of research is on the development of technological solutions, the sustainable and economical use of all kind of resources, the offer of competences for the technological requirements of Luxembourg and the Greater Region industrial and public actors. Special emphasis is given to numerical simulation to reduce the required experimental effort, but the validation of the models will remain an essential asset.

CONTACT

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CAMPUS

Kirchberg
6, rue Coudenhove-Kalergi
L-1359 Luxembourg



doe.uni.lu

MEMBERS

- 20 professors and lecturers
- 29 post-docs and 70 doctoral candidates
- 16 technical and administrative staff

FUNDING AND COLLABORATIONS

- €5.5 million in 32 new project, 60% collaborative projects with industry and public institutions

PUBLICATIONS

- 205 peer-reviewed articles in scientific journals in 2020

Research areas

CIVIL AND ENVIRONMENTAL ENGINEERING

- Computational engineering and numerical simulations
- Efficient structural components
- Future oriented optimisation of structural composites, design methods and construction methods
- High-performance and functional construction materials
- Life cycle and circular economy oriented construction engineering
- Modelling transport
- Urban water management and resource recovery
- Up-scaling of innovative solutions

COMPUTATIONAL ENGINEERING

- Computational fluid dynamics and finite element method
- Computational mechanics
- Statics and structural analysis

ELECTRICAL COMMUNICATIONS ENGINEERING

- Dynamic modelling of ground antennas
- Dynamic modelling of mechatronic systems
- High frequency and microwaves

ENERGY AND ENVIRONMENT

- Eco-Driver assistance system for electric vehicles
- Efficiency of thermal power plants and renewable energy production
- Energy efficient buildings, infrastructures and energy systems

GEOPHYSICS

- Climate variability
- Geodynamics
- Regional processes
- Resource management

MECHANICAL ENGINEERING

- Applied thermodynamics
- High performance manufacturing Process engineering/chemical processes
- LuxCube
- Mechanical construction including biomechanics
- Process engineering/chemical processes

