

In Auvergne-Rhône-Alpes, Ingénierie@Lyon federates world renowned research teams dedicated to systems engineering and materials sciences, and innovative processes.

Our experts focus on innovation and competitiveness in enterprises working in energy, transport and mobility, health and luxury goods. A major hub of national partnerships in engineering, with more than 1,800 researchers, Ingénierie@Lyon contributes towards assisting industrial transformations by integrating the constraints of sustainable and environmentally friendly d evelopment.

www.ingenierie-at-lyon.org

# A UNIQUE "ENGINEERING RESEARCH" CONTINUUM FOR YOUR INNOVATION

- Innovative materials and processes
- > Smart machines, systems and structures

Ingénierie@Lyon contributes efficiently to meeting the future challenges faced by sober transport, greener energies, health engineering, and increasingly adaptive materials and systems regarding their uses and designs in terms of life cycle analysis.

### At the core of its strategy, enterprises have access to its leading edge technological platforms equipped with the most advanced facilities.

### Rotating machines

transmissions, motors, turbo-machines

### Tribology – surfaces and interfaces

friction and wear, contact, noise, lubrication, corrosion, surface modifications

#### Materials and processes

polymers, metals, ceramics, composites and architectured materials, innovative processes, surface treatments, characterisations, lifetime, CND

### **Acoustics and vibrations**

nuisances, treatments, dynamic characterisation, modelling

### Digital tools and intelligence

modelling of complex systems, design tools, decision-aid tools, calculation-test comparisons

#### **Energy-environment**

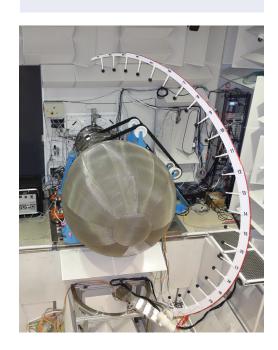
conversion/transport/production/energy recovery, sensors, thermal systems and converters, thermal comfort in buildings

#### Bio-engineering

cosmetology, pharmaceuticals, encapsulation, medical systems, sensorial characterisation, tissue engineering

### **Target markets**

- Aerospace
- Automobiles and mobility
- · Chemicals and materials
- · Factories of the future
- Energy systems
- Electronics industry, digital infrastructures
- Nuclear industry
- Railways
- Health technologies
- Cosmetics
- Luxury goods





### Our laboratories are your strength, our platforms change your future

To provide its expertise, Ingénierie@Lyon adopts a development strategy oriented towards small and medium sized enterprises, combined with close contacts with major industrial groups. A wealth of laboratories of excellence, the benefit of regional, national and international networks, circles of associate partners (spin-off laboratories, universities), and the demand for quality services and results, all go together to ensure long-term partnerships.



### Strategic research

for your technological challenges

Multi-component materials and meta-materials engineering / Fabrication of additives for functional polymer materials and plastronics / Functional surfaces, tribology, adaptive interfaces, etc.

+ than 60 projects funded ► <a href="https://bit.ly/2Ad3kEl">https://bit.ly/2Ad3kEl</a>



### **Innovation approaches**

for professional partnerships

- Listening to and analysing needs, strategic scientific advice, adapted R&D responses, short lead-times, respect for confidentiality, project management, legible and balanced management of intellectual property.
- Direct research contracts by valorisation services
- Research chairs, joint laboratories, OpenLab
- Technology transfers
- Tests and trials on leading-edge platforms
- Access to public funding

## **Key figures**

Permanent staff (full-time equivalent): 609 PhD Students: 703

Partnership incomes with industry: €24M Services : €5M Global budget: €110M

### Contacts

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### Industrial demands

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Tribologie et Dynamique des Systèmes LTDS • Mécanique des Contacts et Structures LaMCoS • Mécanique des Fluides et Acoustique LMFA • Ingénierie Matériaux Polymères IMP Matériaux, Ingénierie et Sciences MATEIS • Énergie électrique, Bio ingénierie, Systèmes AMPERE • Vibrations et Acoustique LVA • Énergétique et Thermique CETHIL Multimatériaux et Interfaces LMI • Génie Électrique et Ferroélectricité LGEF • Automatique, Génie des Procédés, Pharmaceutique LAGEPP • Catalyse Polymérisation Matériaux Procédés CP2M Mécanique, Matériaux et énergétique LabECAM • CTI Plasturgie et Composites IPC • Fonctionnalisation des surfaces par laser femtoseconde MANUTECH USD























