



## INGENIERIE@LYON

*A global offer for the partnership research  
and the competitiveness of enterprises*



### ENGINEERING MATERIALS



### TRANSPORTS



### ENERGY

#### → Societal Impacts Technological Challenges

- Reduction of atmospheric and acoustic nuisance associated with air and ground transportation.
- Energy optimization of Transport means.
- Optimizing energy production systems and manufacturing processes.

*I@L consolidates the combined activities of 11 laboratories in Lyon, France. Their research skills are recognized nationally and internationally for their innovative modelling and cutting edge experiments.*

*Together these research units offer a truly integrated response to the complex problem of innovation, and open up certain prospects to today's and tomorrow's technological, environmental and societal challenges.*

*Covering a broad scientific field, I@L increases the synergy of strong and structuring poles:*

- AXELERA
- LYON URBAN TRUCKS & BUS 2015
- VIAMECA
- PLASTIPOLIS
- TECHTERA
- MACODEV
- AUTOMOTIVE
- AEROSPACE
- AGMAT

...

*institut Carnot*

### INGENIERIE@LYON

*A major project in Rhône-Alpes, a region of France with a high potential for research in **Sciences and Engineering**, the Institut Carnot I@L proposes the promotion and the organization of partnership research, through a multidisciplinary approach, deployed to fundamental research and business.*

#### → Combined Expertise

##### ■ Mechanics

Fluids, Solids, Structures, Tribology, Acoustics and Vibro acoustic, Advanced Design...

##### ■ Materials

Structural and functional nanostructured, characterization and behavior...

##### ■ Energy Engineering

Aerothermodynamic, Thermal, Electrical Engineering...

##### ■ Microsystems sensors, MEMS and MOEMS

##### ■ Nonlinear Physics



*Inventing the future*

*institut Carnot*

**INGENIERIE@LYON**

**Groups**

**Corporates**

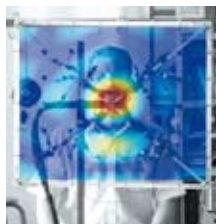
**INDUSTRY**

- **LGEF** *Electrical Engineering and Ferroelectricity Laboratory*  
ER INSA
- **INL** *Lyon Institute of Nanotechnology*  
UMR CNRS ECL INSA UCBL 5270
- **MATEIS** *Materials: Engineering and Science*  
UMR CNRS INSA 5510
- **LMFA** *Laboratory of Fluid Mechanics and Acoustics*  
UMR CNRS ECL INSA UCBL 5509
- **LMI** *Laboratory of Multimaterials and Interfaces*  
UMR CNRS UCBL 5615
- **LTDS** *Laboratory of Tribology and Systems Dynamics*  
UMR CNRS ECL ENISE 5513
- **AMPERE** *Ampere Laboratory*  
UMR CNRS ECL INSA UCBL 5005
- **IMP** *Polymer Materials Institute*  
UMR CNRS INSA UCBL UJM 5223
- **CETHIL** *CEnter for THERmal Sciences In Lyon*  
UMR CNRS INSA UCBL 5008
- **LVA** *Acoustics and vibration Laboratory*  
ER INSA
- **LaMCoS** *Contacts & Structural Mechanics Laboratory*  
UMR CNRS INSA 5259



AIRBUS  
ALSTOM  
ARCELOR  
AREVA  
BOSCH  
EADS  
EDF  
FRAMATOME  
L'OREAL  
MICHELIN  
PCA Peugeot Citroën

PLASTIC OMNIUM  
RENAULT  
SAFRAN  
SKF  
SNCF  
TOTAL  
VALEO  
VOLVO GLOBAL  
TRUCKS  
...



## → Key figures

### ■ Staff

Permanent staff (full time equivalent): **420**  
PhD students / Post-PhD: **552 / 36**

### ■ Budget

Consolidated budget: **45 620 k€**  
Partnership research incomes: **15 000 k€**

## → Contacts

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