

LMN

« Laboratoire de Mécanique
de Normandie »

www.insa-rouen.fr

#Mechanics
#Variability #Reliability
#Risks

RESEARCH
laboratory



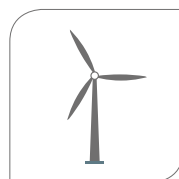
LMN lab is a research group accredited by the French Ministry of Research (EA 3828). It is a member of the doctoral school PSIME and of the normand research networks «Energy and Materials», «Digital Normandy» and «Earth and Sea».

Research fields

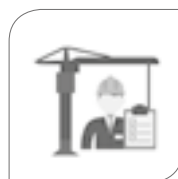
The 3 main research fields of the LMN set out below are based on a continuous process connecting: data collection - hierarchization and selection of the most significant aspects - modeling under uncertainty - optimization under uncertainty and reliability.

- ✓ Risks
- ✓ Probabilistic mechanics, reliability
- ✓ Uncertainties, variability

Application areas



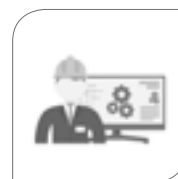
Renewable energies



Slender structures



Mechatronic systems



Design, modeling and optimization under uncertainty



Structural safety

Staff over
20

Founded in
1994

20
PhD students

Know-how and expertise

✓ Risks

Notion of random fatigue, analysis and hierarchization of risks: quantification, failure of mechanical and mechatronic systems.

✓ Probabilistic mechanics, reliability, vibratory fatigue

Modeling and optimization under uncertainties, design in uncertain environment, improvement of systems and processes taking into account variability and uncertainties.

✓ Uncertainties, variability

Analysis of uncertainties and variability in design, whatever the sectors (customs systems, wind turbines, electronic circuits ...)

🤝 A wide range of collaborations

There are many partners and countries that collaborate with the LMN: Volum-e, Ca Easylan, Aptar, Ceeva, Faurecia. The laboratory is also the leader of a national project (AMI) with the company Freyssinet and the University of Le Havre: Eolift. Germany, Brazil, Cuba, the Dominican Republic, the Maghreb are among its international partners.

Facilities

Advanced facilities

The LMN has high quality equipments: vibration fatigue test benches, non-contact measurement and impact test (in creation). The LMN is also associated with «CIEMME», center of innovation and expertise in mechanics, materials and energies, set up in partnership with the leader of additive manufacturing Volum-e. It is also a partner of the «CCU», a common machining center at INSA Rouen Normandie, in particular equipped with a 5-axis machine.

Keep in mind

INSA Rouen Normandie is the first public engineering technical university of Normandy. The 10 different engineer education tracks, the 7 masters in research and the 2 masters in applied sciences are deeply connected to its 8 research laboratories.

INSA Rouen Normandie provides four education tracks directly connected to the LMN lab: engineer in mechanics, engineer in civil engineering, engineer in innovation and industrial performance, research master in conception engineering.



Contact

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