



**LABORATOIRE D'INFORMATIQUE DE L'UNIVERSITÉ DU MANS (LIUM) -
Équipe d'Accueil 4023**
COMPUTER SCIENCE LABORATORY OF LE MANS UNIVERSITÉ (LIUM) - Research group 4023

The Computer Science Laboratory, which is located in both Le Mans and Laval, is structured around two topics: TEL (Technology Enhanced Learning) and language processing (speech recognition and synthesis, speaker characterization, semantic extraction and machine translation).

LIUM is one of the few European laboratories able to perform speech translation in near real time, and it offers innovative applications in the field of educational technologies, e-learning and serious games. LIUM is internationally recognized for its research works, as demonstrated for instance by the prestigious European Innovation Radar prize earned in 2016 for the development and industrial deployment of a technology dramatically reducing the costs of speech recognition.



60 people including
28 teachers-researchers
26 doctoral students and postdoctoral fellows
4 administrative and technical staff



Partnerships

LIUM's researchers actively cooperate with other French, European and international laboratories.
LIUM has also established industrial partnerships with Airbus, Orange Lab, AlloMédia, OpenClassrooms, Symetrix/SBT and 44screens.



Computing cluster with 1000 CPU cores and, 60 GPUs.
Experimental room for TEL research work (audio and video recording)
Software and corpus: SideKit/s4d, TEDLium, nmtptorch, JemlInventor, Moggle, Hop3X, UTL, Legadee, TraVis

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2 research teams

Engineering of Technology Enhanced Learning (IEIAH in French)

The aim of the team is to develop computer systems dedicated to teaching with the help of Model-Driven Engineering (MDE) and Human Computer Interaction (HCI) techniques: the models explicitly include pedagogical scenarios and evolve depending on the analysis of pedagogical uses. The team offers teachers/users dedicated methodologies and languages to help them design, revise or adapt their computing environment for learning.

In particular, the team works on authoring tools, learning analytics and advanced interactions for learning (serious games, mixed reality, mobile learning, etc.).



Language and Speech Technology (LST)

The team articulates its research activities in the field of natural language processing (NLP) around five axes: automatic speech recognition, text to speech synthesis, speaker characterization, semantic information extraction and machine translation. Historically working with statistical approaches, the team is now specialized in deep learning applied to natural language processing



5 research areas of research and 1 unifying project

