Laboratory of Algorithms, Complexity and Logic (LACL)

EA 4219 - UPEC

Key words
Computability • Symbolic dynamics • Performance evaluation • Models of computing • Theory of algorithms • Simulation • Synthesis • Verification

Objectives and research topics

The LACL laboratory works on fundamental computer science and mainly on the study and the development of formal models based on automata, logic, set theory and lambda calculus. The models are probabilistic, timed or topological.

The laboratory is composed of two teams: Logic, computing and programming (LCP) and Specification and system verification (SVS). The LCP team models different calculation aspects and the SVS team works on improving specification and verifcation software.

❯ Logic, computing and programming
- Computability, randomness, Turing degrees
- Abstract state machine, theory of algorithms
- Cellular automata, new computing paradigms

❯ Specification and system verification
- System synthesis from probabilistic or timed specification
- New modelling and specification techniques with the B method
- Performance evaluation of parallel programs in BSML
- Probabilistic simulation and performance review application