



Laboratoire Angevin de Recherche en Ingénierie des Systèmes

http://laris.univ-angers.fr/fr/index.html

Research – May 2018

Organization

- 3 research teams:
 - Dynamic and discrete events and Optimization (SDO)
 - Information, Signal, Image Processing and Life Sciences (ISISV)
 - Reliability Engineering and Decision-Making tools (SFD)
- Members:
 - 53 professors and associate professors
 - 5 staffs
 - 7 Research and teaching assistants
 - 36 Ph.D. students
 - 4 Post-doctorate fellows

Dynamic and discrete events and Optimization (SDO)

Topics:

- Partial derivative models, which make it possible to predict the behavior of thermal or fluid systems,
- discrete models to describe the evolution of systems whose state evolves according to the occurrence of events, such as production systems, computer or transport.

Key words:

Partial differential equations, thermic systems, combinatorial optimization, operation research, vehicle routing, discrete event systems, theory of max-plus linear systems, scheduling, mobile robotics, cartography, interval analysis.

Information, Signal, Image Processing and Life Sciences (ISISV)

Topics:

- Information, fluctuations and noise
- Nonlinear analyzes
- Perception, interaction and cognition

Key words :

Statistical theory of the information, Stochastic resonance, useful noise, Multiscale enthropy, multiresolution analysis, data-driven, healthcare, Diagnostic, Virtual reality

Reliability Engineering and Decision-Making (SFD)

Topics:

- System reliability in design: assessment models and tests plans for the interaction and the integration of multiple technologies and multiple coupling effects of the physics
- Quality control in the production phase for complex systems
- Performance assessment models for complex systems in operational phase for garanteeing and maintaining complex systems, structures and buildings.

Key words:

Physic-based reliability models, Accelerated tests plans, Bayesian statistics, Probabilistic graph models, Stochastic models, Diagnosis, Prognosis, Maintenance, Reliability, Durability, Statistical Process Control, Mechanical Engineering, Civil Engineering, Industrial Engineering, Energy and thermic, Electronic