![G-SCOP logo - SCIENCES POUR LA CONCEPTION, L'OPTIMISATION ET LA PRODUCTION]

SIREP TEAM
Information Systems and Robust Product Design

Developing methods and IT tools to facilitate product design

SIREP's research focus is on improving design process efficiency: more efficient flows for supporting product lifecycle management, robust designs able to cope with unexpected events and uncertainty, improved test plans to enhance technical production knowledge and make accurate data available for design.
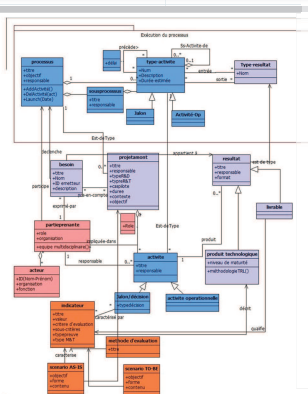
Research Topics

Our research activity is especially geared towards the design of products and services. We focus on two main areas:

• **(Meta)Modeling of IS (Information Systems)** to manage product development process changes, the complexity of structured and unstructured data, organizational structuring and customized and evolving workflows.

• **Assistance with design itself, and particularly robust design,** by taking into account design data uncertainty using the optimization methods included in legacy operational tools based on components and services integrated into industrial design tools

Scientific Challenges

Development of models, methods and tools able to accommodate changes in organizations, information technology and corporate data requirements.

Our research strives to produce generic, user-friendly solutions applicable to different types of companies (software vendors, large groups with international dimensions, SMI's, etc.).

This generic approach is based on more formal methods (UML description language, BPMN, automatic code generation, etc.) allowing our research results to be widely deployed.

Partnerships

• GIPSA (Grenoble), INRIA (Rhône Alpes), LAPLACE (Toulouse), LGEP (Paris), LIG (Grenoble), LJK (grenoble), etc.
• Universités (Chine), Gerad (Montreal Canada), ETS Montreal (Canada), Université Polytechnique de Montréal, UQTR (Canada), etc.
• Airbus Helicopters, Alstom, Audros, HAGER, SNCF, ST Microelectronics, etc.

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