

**Name:** GRES-UOC. Research Group on Software Engineering.

**Knowledge area description:**

Tools and Methods for Computer-Aided Software Engineering (CASE), including automated synthesis, verification, optimization and simulation.

**Group Researchers:**

Robert Clarisó Viladrosa (Universitat Oberta de Catalunya)

Jordi Cabot Sagrera (Universitat Oberta de Catalunya)

Daniel Riera Terrén (Universitat Oberta de Catalunya)

**Selected list of publications:**

- **Journal articles**

CABOT, J. RAVENTÓS, R. (2004) "Conceptual Modelling Patterns for Roles", selected from the best papers of the ER'04 Conference. *Journal on Data Semantics V*, pp. 158-184

CLARISÓ, R. CORTADELLA, J. (2006) "The Octahedron Abstract Domain" (Extended version). *Special Issue on Static Analysis, Science of Computer Programming, Elsevier*. In press.

PIERA, M.A. NARCISO, M. GUASCH, A. RIERA, D. (2004) "Optimization of Logistic and manufacturing Systems through Simulation: A Colored Petri Net based methodology". *SIMULATION. Modeling and Simulation Methodologies for Logistics and Manufacturing Optimization*. SAGE Pub. Vol. 80 (3).

RIERA, D. NARCISO, M. BENQLILOU, CH. (2005) "A Petri Nets-based Scheduling Methodology for Multipurpose Batch Plants". *SIMULATION. Applied Methodologies in Logistics and Manufacturing Simulation*. SAGE Pub. Volume 81 (9).

RIERA, D. YORKE-SMITH, N. (2002) "An improved hybrid model for the generic Hoist Scheduling Problem". *Annals of Operations Research on the integration of CP, AI and OR methods*. Kluwer Academic Publishers.

- **Conference contributions**

CABOT, J. TENIENTE, E. (2005) "Computing the Relevant Instances That May Violate an OCL Constraint". 17th Int. Conf. on the Advanced Information Systems Engineering (CAISE'05), *Lecture Notes in Computer Science* 3520, pp. 48-62

CABOT, J. TENIENTE, E. (2006) "Incremental Evaluation of OCL Constraints". 18th Int. Conf. on the Advanced Information Systems Engineering (CAISE'06), *Lecture Notes in Computer Science*, vol. 4001, pp. 81-96. In press.

CLARISÓ, R. RODRÍGUEZ-CARBONELL, E. CORTADELLA, J. (2005) "Derivation of Non-structural Invariants of Petri Nets Using Abstract Interpretation". In. Proc. 26th International Conference On Application and Theory of Petri Nets and Other Models of Concurrency (ICATPN'05), *Lecture Notes in Computer Science*. 3536, 188-207, Springer-Verlag.

- **Others**

RIERA, D. (JULIOL 2006) "CSP generation from PN models". PhD Thesis, Dept. Telecomunicació i Enginyeria de Sistemes, Universitat Autònoma de Barcelona. Data prevista per la defensa: Juliol 2006. [Phd Dissertation]

CLARISÓ, R. (2005) "Abstract Interpretation Techniques for the Verification of Timed Systems". PhD Thesis, Dept. Lleng. i Sistemes Informàtics, Universitat Politècnica de Catalunya. [Phd Dissertation]

**Current projects**

| Project name  | Funding program |
|---|-----------------|
| A distributed methodology for modeling and simulation oriented toward the distributed optimization of logistic and production processes | CICYT           |
| Construction of an integrated environment for development, centred into the conceptual scheme of the information systems.               | CICYT           |