



SÉMINAIRE / SEMINAR

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“GLOBAL CONSTRAINTS: EMBEDDING OR INTO CP ”

Résumé / Abstract : Constraint programming (CP) is a general and powerful method to solve some combinatorial problems. This method has been successfully used to solve a large range of real-life applications (roistering, time-tabling, car manufacturing, scheduling etc...), which can be quite different.

CP is on the borderline of AI and OR. CP inherits from IA the language aspect (that is the easy way to define a problem), the flexibility (that is the fact that problems can be easily modified) and the possibility to benefit from the knowledge of the application domain to improve the resolution of a problem. Operational Research brings to CP a lot of nice and powerful algorithms which gives to CP the computational aspect needed to solve some real world problems.

In this talk we will introduce the general principles of this method. We will show its strength and its weakness. Notably, we will insist on one major strength of CP: the Global Constraints. We will see how Global Constraints can be designed and we will give some general guidelines to create new Global Constraints. We will also detail how some OR algorithms are used within Global Constraints and we will present how it leads to new research areas. Some computational results will be given.

Note : Jean-Charles Régin received in 1995 a Ph.D. in Computer Science from the University of Montpellier II (France) and a "Habilitation à Diriger des Recherches" in 2004 at the University of Nice-Sophia Antipolis. He joined ILOG in 1995 as a developer of the ILOG Solver product, was promoted to Ilog Solver manager two years later, becoming the Director of Constraint Programming at Ilog in 2001. He left the company in October 2008 and he is now Professor at department of Computer Science of the École Polytechnique Universitaire.

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MARDI / TUESDAY

24 juillet 2012 /

July 24th, 2012

10h30

Salle / Room 5441
Pavillon André-Aisenstadt
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Bienvenue à tous / Welcome to all

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