

Guillaume Perez

Education

- 2017 – **Postdoctoral position - Artificial Intelligence.**
CORNELL UNIVERSITY, USA.
Development of methods linking together advantages of machine learning and constraint optimization. Applications in materials science, biology and ecology.
- 2014 – 2017 **PhD in computer science - Constraint Programming.**
UNIVERSITY NICE SOPHIA ANTIPOLIS, France.
Development and implementation of efficient algorithms for compression using Multivalued Decision Diagrams (MDDs) with application in constraint programming, text and music generation, and statistical constraints.
- 2012 – 2014 **Master degree in computer science.**
UNIVERSITY NICE SOPHIA ANTIPOLIS, France.
Promotion leader.

Experiences

- 2013-2017
(4 years) **Teaching.**
UNIVERSITY NICE SOPHIA ANTIPOLIS, Sophia-Antipolis, France.
During 4 years, I taught C++ advanced programming, Problem solving, Web Server, R and HTML-CSS. Moreover, I taught Python and JEE in several companies.
- 2012-2014
(2+3+6 months) **Three Constraint programming internships.**
I3S LABORATORY, Sophia-Antipolis, France.
Design and implementation of MDD and Table algorithms for constraint solvers. State of the art for MDDs in many CP solvers - Published in CP14.

Research

- 2018 **Relaxed Projection Method for Constrained Non-negative Matrix Factorization (shortened title).**
JUNWEN BAI, SEBASTIAN AMENT, GUILLAUME PEREZ ET AL.
CPAIOR, June. 2018, Delft, The Netherlands.
- Parallel Algorithms for Operations on Multi-valued Decision Diagrams.**
PEREZ G. AND RÉGIN J-C.
AAAI, February. 2018, New Orleans, USA.
- 2017 **MDDs : Sampling and Probability Constraints.**
PEREZ G. AND RÉGIN J-C.
CP. Melbourne, Australia.
- Soft and Cost MDD Propagators.**
PEREZ G. AND RÉGIN J-C.
AAAI. San Francisco, USA.

MDDs are Efficient Modeling Tools : An Application to some Statistical Constraints.

PEREZ G. AND RÉGIN J-C.
CPAIOR. Padova, Italia.

2016 **Enforcing Structure on Temporal Sequences : The Allen Constraint.**
ROY P., PEREZ G., ET AL.
CP. Toulouse, France.

Constructions and In-Place Operations for MDDs Based Constraints.

PEREZ G. AND RÉGIN J-C.
CPAIOR. Banff, Canada.

Compact-Table : Efficiently Filtering Table Constraints with Reversible Sparse Bit-Sets.

DEMEULENAERE J., HARTERT R., LECOUTRE C., PEREZ G., ET AL.
CP. Toulouse, France.

2015 **Efficient operations on MDDs for building constraint programming models.**
PEREZ G. AND RÉGIN J-C.
IJCAI. Buenos aires, Argentina.

2014 **Improving GAC-4 for Table and MDD based constraints.**
PEREZ G. AND RÉGIN J-C.
CP. Lyon, France.

Computer science projects

- *C++* MCTS-RPG : A Monte-Carlo driven tree search combined with constrained non-negative matrix factorization solver.
- *C++ - Java* Constraint implementation in the CP solver [OR-TOOLS](#) - In the CP solver
- *Scala* [CHOCO](#) - In the CP solver [OscaR](#).
- *Python* Implementation of the Multi-Armed Bandit for algorithm selection on [GitHub](#).
- *C++* [LibGraph](#) : A game engine including graphics and controls for my C++ students.
- *C++* [TicTacToe](#) : A game using LibGraph for my AI students.
- *Racket* [GeoMeter](#) A constrained geometry software.
- *Java EE* Dynamic graphic user interface for the YOURCAST project.

More

- Language :* Advanced English. native French. middle Spanish
- Sports :* Football - Tennis
- Links :* [github](#) - [DBLP](#) - [Google Scholar](#) - [My researches](#)

Personal information

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14 850 Ithaca - New York - USA	(28 years old)
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