Marie Pelleau

Associate Professor
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Education

2009 – 2012 **Ph.D. in computer science**, *LINA (team TASC)*, Université de Nantes, defended on november 29th 2012.
Title Domaines abstraits en Programmation par Contraintes
Supervisors Frédéric Benhamou, Pascal van Hentenryck and Charlotte Truchet
Committee Pedro Barahona, Xavier Rival and Benoit Baudry

2008 – 2009 **Master in computer science**, *Optimisation and Operational Research*, Université de Nantes, Ranked: 3rd out of 11.

2007 – 2008 **Fourth year in computer science**, Université de Nantes, Ranked: 7th out of 61.

2006 – 2007 **Third year in computer science**, Université de Nantes, Ranked: 1st out of 64.

2006 **University diploma in computer science**, *Programmer Object Java*, Université de la Nouvelle-Calédonie.

2005 **Second year in computer science**, Université de la Nouvelle-Calédonie.

2004 **First year**, *Mathematics and computer science applied to sciences*, Université de la Nouvelle-Calédonie.

Professional Experience

10/2017 – today **Associate professor**, *i3s (team MDSC)*, Université Nice Sophia Antipolis.

02/2016 – 09/2017 **Postdoctoral fellow**, *LIP6 (team APR)*, Université Pierre et Marie Curie – École Normale Supérieure.
Combination of Abstract Interpretation and Constraint Programming

04/2015 – 10/2015 **Postdoctoral fellow**, *CIRRELT*, Université de Montréal.
Scheduling agents using forecast call arrivals in call centers

09/2013 – 01/2015 **Postdoctoral fellow**, *CIRRELT*, Université de Montréal.
Scheduling agents using forecast call arrivals at Hydro-Québec's call centers

10/2012 – 08/2013 **ATER (1/2 poste)**, *LINA (team TASC)*, Université de Nantes.

11/2011 **Research intern**, *DIENS (team Abstraction)*, École Normale Supérieure.

10/2009 – 09/2012 **Ph.D. student**, *LINA (team TASC)*, Université de Nantes.

06/2006 - 08/2006 **Research intern**, Institut de Recherche pour le Développement, Nouvelle-Calédonie.

Scientific Activities

Invited Talks

Workshop AbSolute: From Static Analyzer to Constraint Solver, *The 2017 Edition of the Workshop on Constraint Solvers in Testing, Verification and Analysis*, Melbourne, Australia, 2017.

Seminar AbSolute, un solveur basé sur les domaines abstraits, *the CEA LSL seminar*, Saclay, France, 2017.

Scientific committees

Organisation CP-DP'15, CPAIOR 2012 (participation), Ph.D. students seminars.

Program AAAI'19, ICTAI 2018, IJCAI'18, SMT 2018, CP 2018, CP 2017 (Test & Verification Track), ICTAI 2017 (SAT/CSP Track), IJCAI'16, CP-DP'16, JFPC 2018, JFPC 2016, JFPC 2015, JFPC 2014.

Reviews

Conferences AAAI'17, CP 2016, CP 2015, JFPC 2011, JFPC 2010.

Publications

Ph.D. Thesis

[.pdf] M. Pelleau, Domaines abstraits en programmation par contraintes, *Ph.D. thesis,* Université de Nantes, France, Novembre 2012.

Books

[.pdf] M. Pelleau, Abstract Domains in Constraint Programming, *Elsevier Science Publishers,* 2015.

Refereed international journal

[.pdf] M. Pelleau, C. Truchet, F. Benhamou, The Octagon Abstract Domain for Continuous Constraint, *Constraints, Volume 19, Issue 3,* July 2014.

Refereed international conferences with proceedings

A. Malapert, M. Pelleau, M. Schmied, D. Fissore, Cryptarithmetic Playtime, *37th International Conference on Tools with Artificial Intelligence (ICTAI),* Athènes, Grèce, 2025.

M. Pelleau, L. Simon, J.-C. Regin, Enumerating Cliques of Hypergraphs, *37th International Conference on Tools with Artificial Intelligence (ICTAI),* Athènes, Grèce, 2025.

S. Malalel, A. Malapert, M. Pelleau, J.-C. Régin, MDD Archive for Boosting the Pareto Constraint, *29th International Conference on Principles and Practice of Constraint Programming, (CP),* Toronto, Canada, 2023.

G. Perez, S. Malalel, G. Glorian, V. Jung, A. Papadopoulos, M. Pelleau, W. Suijlen, J.-C. Régin, A. Lallouet, Generalized Confidence Constraints, *37th International Conference on Artificial Intelligence (AAAI),* Washington, USA, 2023.

S. Malalel, V. Jung, J.-C. Régin, M. Pelleau, Dealing with the Product Constraint, *19th International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research (CPAIOR),* Los Angeles, USA, 2022.

[.pdf] J. Behaegel, J.-P. Comet, M. Pelleau, Identification of Dynamic Parameters for Gene Networks, *30th International Conference on Tools with Artificial Intelligence (ICTAI),* Volos, Greece, 2018.

[.pdf] G. Ziat, M. Pelleau, C. Truchet, A. Miné, Finding Solutions by Finding Inconsistencies, *24th International Conference on Principle and Practice of Constraint Programming (CP),* Lille, France, 2018.

[.pdf] M. Pelleau, L.-M. Rousseau, P. L'Ecuyer, W. Zegal, L. Delorme, Scheduling agents using forecast call arrivals at Hydro-Québec's call centers, (short paper), *20th International Conference on Principle and Practice of Constraint Programming (CP),* Lyon, France, 2014.

[.pdf] M. Pelleau, A. Miné, C. Truchet, F. Benhamou, Constraint Solver based on Abstract Domains, *14th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI),* Rome, Italy, 2013.

[.pdf] M. Pelleau, C. Truchet, F. Benhamou, Octagonal Domains for Continuous Constraints, *17th International Conference on Principle and Practice of Constraint Programming (CP),* Perugia, Italy, 2011.

[.pdf] M. Pelleau, C. Truchet, F. Benhamou, Abstract domains for constraint programming, with the example of octagons, *12th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC),* Timisoara, Roumania, 2010.

Refereed international workshops with proceedings

[.pdf] G. Ziat, A. Maréchal, M. Pelleau, A. Miné, C. Truchet, Combination of Boxes and Polyhedra Abstractions for Constraint Solving, *8th International Workshop on Numerical and Symbolic Abstract Domains (NSAD),* Porto, Portugal, 2019.

[.pdf] M. Pelleau, P. van Hentenryck, C. Truchet, Sonet Network Design Problems, *6th International Workshop on Local Search Techniques in Constraint Satisfaction (LSCS),* Lisbonne, Portugal, 2009.

Refereed national conferences with proceedings

A. Malapert, M. Schmied, D. Fissore, M. Pelleau, A. Picard Marchetto, Jouer avec des Cryptarithmes en Programmation par Contraintes, *18e Journées Francophones de Programmation par Contraintes (JFPC),* Strasbourg, 2023.

S. Malalel, V. Jung, J.-C. Régin, M. Pelleau, Étude de la contrainte de produit, *17e Journées Francophones de Programmation par Contraintes (JFPC),* Saint-Étienne, 2022.

F. Régin, E. De Maria, M. Pelleau, Résolution de problèmes dynamiques à l'aide du Model Checking, *17e Journées Francophones de Programmation par Contraintes (JFPC),* Saint-Étienne, 2022.

J. Behaegel, J.-P. Comet, M. Pelleau, Identification de paramètres dynamiques de réseaux de gènes, *14e Journées Francophones de Programmation par Contraintes (JFPC),* Amiens, France, 2018.

R. Garcia, C. Michel, M. Pelleau, M. Rueher, Vers un système de contraintes pour l'analyse des erreurs de précision des calculs sur les flottants, *14e Journées Francophones de Programmation par Contraintes (JFPC),* Amiens, France, 2018.

G. Ziat, M. Pelleau, C. Truchet, A. Miné, Améliorer la propagation : l'Importance d'être Inconsistant, *13e Journées Francophones de Programmation par Contraintes (JFPC),* Montreuil sur Mer, France, 2017.

M. Pelleau, A. Miné, C. Truchet, F. Benhamou, Un solveur de contraintes basé sur les domaines abstraits, *9e Journées Francophones de Programmation par Contraintes (JFPC),* Aix-en-Provence, France, 2013.

M. Pelleau, C. Truchet, F. Benhamou, Au-delà des produits cartésiens de domaines : l'exemple des octogones, *7e Journées Francophones de Programmation par Contraintes (JFPC),* Lyon, France, 2011.

Refereed international conferences or workshop with abstracts

M. Pelleau, E. Rauzy, G. Ziat, C. Truchet, A. Miné, Mixing Polyhedra and Boxes Abstract Domain for Constraint Solving, *CP meets Verification Workshop,* Toulouse, France, 2016.

M. Pelleau, L.-M. Rousseau, P. L'Ecuyer, Simulation-based Scheduling of Agents using Historical Data in Call Centers, *CORS/INFORMS 2015 Joint International Meeting,* Montreal, Canada, 2015.

M. Pelleau, L.-M. Rousseau, P. L'Ecuyer, W. Zegal, L. Delorme, Scheduling agents using forecast call arrivals at Hydro-Québec's call centers, *INFORMS Computing Society Conference (ICS),* Richmond, Virginia, USA, 2015.

M. Pelleau, C. Truchet, F. Benhamou, Octagonal Domains for Constraint Programming, *21st International Symposium on Mathematical Programming (ISMP),* Berlin, Allemagne, 2012.

Refereed national conferences or workshop with abstracts

M. Pelleau, L.-M. Rousseau, P. L'Ecuyer, W. Zegal, L. Delorme, Scheduling agents using forecast call arrivals at Hydro-Québec's call centers, *Journées de l'Optimisations (JOpt),* Montreal, Canada, 2014.

Distinctions

Best Paper Award, *for the paper Cryptarithmetic Playtime*, ICTAI 2025.

Best Student Paper Award, *for the paper Octagonal Domains for Continuous Constraint*, CP 2011.