Stamford, CT, USA
September 30 - October 4 2019

Main Conference Program

Tuesday

Room A

8:00 Registration

8:30 Invited Talk: Phebe Vayanos
(Chair: Chris Beck)

Data Science (Chair: Tias Gun)

09:45 Differential Privacy of Hierarchical Census Data: An Optimization Approach. Ferdinando Fioretto and Pascal Van Hentenryck

Applications (Chair: Hana Rudová)

11:00 Cristian Galleguillos, Zeynep Kiziltan, Alina Sirbu and Ozalp Babaoglu Constraint Programming-based Job Dispatching for Modern HPC Applications

11:30 Sara Frimodig and Christian Schulte Models for Radiation Therapy Patient Scheduling Applications

12:00 Lunch

SAT (Chair: Peter Stuckey)

13:30 Exploiting Glue Clauses to Design Effective CDCL Branching Heuristics. Md Solimul Chowdhury, Martin Mueller and Jia-Huai You.

14:00 Trimming Formulas by Trimming Proofs. Marijn Heule.

14:30 Break

14:45 Tutorial 1: Tomas Werner *(Chair: Thomas Schiex)*

15:45 Coffee break with posters

16:30 ACP Research Excellence Award.
(Chair: Laurent Michel)

17:30 ACP Doctoral Dissertation Award
(Chair: Maria Garcia de la Banda)

18:00 Welcome reception + Posters.

Room B

Theory (Chair: Sebastian Ordyniak)

Artem Kaznatcheev, David A. Cohen and Peter G. Jeavons. Representing fitness landscapes by valued constraints to understand the complexity of local search

Counting (Chair: Gilles Pesant)

On Symbolic Approaches for Computing the Matrix Permanent. Supratik Chakraborty, Aditya A. Shrotri and Moshe Y. Vardi

Dual Hashing-based Algorithms for Discrete Integration. Alexis de Colnet and Kuldeep S. Meel

Sequencing (Chair: Philippe Laborie)

Industrial Size Job-Shop Scheduling tackled by Present-Day CP Solvers. Giacomo Da Col and Erich Teppan

Improved Job Sequencing Bounds from Decision Diagrams. John Hooker

Tutorial 2: Neg-Fa Zhou
(Chair: Claude-Guy Quimper)

Wednesday

Room A

8:30 Invited Talk: Ian Davidson *(Chair: M. Lombardi)*

Abstract slot 1 (Chair: Sebastian Ordyniak)

09:45 Rémy Garcia, Claude Michel and Michel Rueher. Searching for Input Data that Exercise Maximal Errors in Floating-Point Computations.

10:00 Ruiwei Wang and Roland Yap. Arc Consistency Revisited

10:15 Coffee break

CP and Data Science (Chair: Carmen Gervet)

11:00 Dimosthenis C. Tsouros, Kostas Stergiou and Christian Bessiere. Structure-driven Multiple Constraint Acquisition

11:30 John Aoga, Siegfried Nijssen and Pierre Schaus. Modeling Pattern Set Mining using Logical Circuits

12:00 Lunch

CP instances (Chair: Ferdinando Fioretto)

13:30 Patrick Spracklen, Nguyen Dang, Özgür Akgün and Ian Miguel. Automatic Streamlining for Constrained Optimisation

14:00 Özgür Akgün, Nguyen Dang, Ian Miguel, Andras Z. Salamon and Christopher Stone. Instance Generation via Generator Instances

Parallel and Multi-Agent CP/SAT (Chair: S. de Givry)

14:45 Alexander Schiendorfer and Wolfgang Reif. Reducing Bias in Preference Aggregation for Multiagent Soft Constraint Problem

Best papers (Chair: T. Schiex, S. de Givry)

15:15 Mohd Hafiz Hasan and Pascal Van Hentenryck. The Flexible and Real-Time Commute Trip Sharing Problems

15:45 Coffee break

16:30 Alex Mattenet, Ian Davidson, Siegfried Nijssen and Pierre Schaus. Generic Constraint-based Block Modeling using Constraint Programming

17:00 Rocsildes Canoy and Tias Guns. Vehicle routing by learning from historical solutions

17:30 25th Anniversary Panel.

20:00 Banquet

Room B

Verification (Chair: Pierre Flener)

Grigory Fedyukovich and Aarti Gupta. Functional. Synthesis with Examples.

Verification (Chair: Marijn Heule)

Weikun Yang, Grigory Fedyukovich and Aarti Gupta. Lemma Synthesis for Automating Induction over Algebraic Data Type

Li-Cheng Chen and Jie-Hong Roland Jiang. A Cube Distribution Approach to QBF Solving and Certificate Minimization

Verification (Chair: Arnaud Gotlieb)

Pedro Orvalho, Miguel Terra-Neves, Miguel Ventura, Ruben Martins and Vasco Manquinho. Encodings for Enumeration-Based Program Synthesis

Xavier Gillard, Pierre Schaus and Yves Deville. SolverCheck: Declarative Testing of Constraints

Applications (Chair: Philippe Laborie)

Adriana Pacheco, Cédric Pralet and Stephanie Roussel. Decomposition and Cut Generation Strategies for Solving Multi-Robot Deployment Problems

Thursday

	Room A	Room B
8:30	Invited Talk: Bistra Dilkina *(Chair: Tias Gun)*	
	MaxSAT (Chair: Nina Narodytska)	*CP and Life Sciences (Chair: François Fages)*
09:45	Mohamed Sami Cherif and Djamal Habet. Towards the Characterization of Max-Resolution Transformations of UCSs by UP-Resilience	Grigory Fedyukovich and Aarti Gupta. Functional. Synthesis with Examples.
	MaxSAT (Chair: Nina Narodytska)	*Decompositions (Chair: Peter Jeavons)*
11:00	Andreia P. Guerreiro, Miguel Terra-Neves, Ines Lynce, José Rui Figueira and Vasco Manquinho. Constraint-based Techniques in Stochastic Local Search MaxSAT Solving	David Mitchell. Guarded Constraint Models Define Treewidth Preserving Reductions
11:30	Emir Demirović and Peter J. Stuckey. Techniques Inspired by Local Search for Incomplete MaxSAT and the Linear Algorithm: Varying Resolution and Solution-Guided Search	Robert Ganian, Sebastian Ordyniak and Stefan Szeider. A Join-Based Hybrid Parameter for Constraint Satisfaction
12:00	Lunch	
	CP (Chair: Pierre Flener)	*Computational Sustainability (Chair: Willem van Hoeve)*
13:30	Peter J. Stuckey and Guido Tack. Compiling Conditional Constraints	John M. Betts, David L. Dowe, Daniel Guimarans, Daniel Harabor, Heshan Kumarage, Peter J. Stuckey and Michael Wybrow. Rail Demand Shifting with Passenger Incentives
14:00	Nicolas Isoart and Jean-Charles Régin. Integration of structural constraints into TSP models	Nadeem Alkurdi, Benjamin Pillot, Carmen Gervet and Laurent Linguet. Towards robust scenarios of spatio-temporal renewable energy planning: A GIS-RO approach
14:45	Tutorial 3: Philippe Laborie *(Chair: Christian Schulte)*	Tutorial 4: Andrei Bulatov. *(Chair: Charlotte Truchet)*
15:45	Coffee Break	
	Abstract slot 2 (Chair: Pierre Schaus)	*Abstract slot 3 (Chair: Thierry Moisan)*
16:30	Bishwamittra Ghosh and Kuldeep S. Meel. Incremental Approach to Interpretable Classification Rule Learning	Gilles Pesant. From Support Propagation to Belief Propagation in Constraint Programming
16:45	Amin Hosseininasab, Willem-Jan Van Hoeve and Andre Augusto Cire. Constraint-based Sequential Pattern Mining with Decision Diagrams	Javier Larrosa and Emma Rollon. Augmenting the Power of MaxSAT Resolution
17:00	CP2020/CPAIOR2020 teasers	
17:15	ACP General Assembly *(Chair: Maria Garcia de la Banda)*	

Friday

	Room A	Room B
8:30	Invited Talk: Nina Narodytska. *(Chair: André A. Ciré)*	
	Local Search (Chair: Maria Garcia de la Banda)	*MIP (Chair: Claude-Guy Quimper)*
09:45	Gustav Björdal, Pierre Flener, Justin Pearson and Peter J. Stuckey. Exploring Declarative Local-Search Neighbourhoods with Constraint Programming	Danuta Sorina Chisca, Michele Lombardi, Michela Milano and Barry O'Sullivan. Logic-Based Benders Decomposition for Super Solutions: an Application to the Kidney Exchange Problem
	CP and Neural Nets (Chair: Nina Narodytska)	*SAT (Chair: Laurent Perron)*
11:00	Rodrigo Toro Icarte, León Illanes, Margarita Castro, Andre Cire, Sheila McIlraith and J. Christopher Beck. Training Binarized Neural Networks using MIP and CP	Gael Glorian, Jean Marie Lagniez, Valentin Montmirail and Nicolas Szczepanski. An Incremental SAT-Based Approach for Graph Colouring Problem
11:30	Buser Say, Scott Sanner and Sylvie Thiébaux. Reward Potentials for Planning with Learned Neural Network Transition Models	Carlos Ansótegui, Miquel Bofill, Jordi Coll, Nguyen Dang, Juan Luís Esteban, Ian Miguel, Peter Nightingale, András Salamon, Josep Suy and Mateu Villaret. Automatic Detection of At-Most-One and Exactly-One Relations for Improved SAT Encodings of Pseudo-Boolean Constraints
12:00	Lunch	
	CP and Data Science (Chair: André A. Ciré)	*CP and randomness (Chair: Gilles Pesant)*
13:30	Meinolf Sellmann, Kevin Tierney and Stefan Kuhlemann. Exploiting Counterfactuals for Scalable Stochastic Optimization	Ciaran McCreesh, William Pettersson and Patrick Prosser. Understanding the Empirical Hardness of Random Optimisation Problems
14:00	Hélène Verhaeghe, Siegfried Nijssen, Gilles Pesant, Claude-Guy Quimper and Pierre Schaus. Learning Optimal Decision Trees using Constraint Programming	Giovanni Lo Bianco, Xavier Lorca and Charlotte Truchet. Estimating the Number of Solutions of Cardinality Constraints through range and roots Decomposition
	Parallel and Multi-Agent CP/SAT (Chair: S. de Givry)	*Applications (Chair: Philippe Laborie)*
14:45	Johannes K. Fichte, Markus Hecher and Markus Zisser. An Improved GPU-based SAT Model Counter	Stanislav Murín and Hana Rudová. Scheduling of Mobile Robots using Constraint Programming
15:15	Coffee Break	