# CP 2017 Program

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| **Tuesday, August 29 2017** | | | | |
| 8:30 - 9:00 | Welcome | | | |
| 9:00 - 10:00 | Invited Talk | | | |
| 10:00 - 10:30 | Coffee Break | | | |
| 10:30 - 12:10 | **CP1: Graphs and Graphical Models** | | **CP2: Theory** | |
| | Ciaran McCreesh, Patrick Prosser, Kyle Simpson and James Trimble. | On Maximum Weight Clique Algorithms, and How They Are Evaluated | Victor Lagerqvist and Magnus Wahlström. | Kernelization of Constraint Satisfaction Problems: A Study through Universal Algebra |
| | Mohamed Siala and Barry O'Sullivan. | Rotation-Based Filtering for Stable Matching | Lucy Ham and Marcel Jackson. | All or nothing: toward a promise problem dichotomy for constraint problems |
| | Hong Xu, Sven Koenig and T. K. Satish Kumar. | A Constraint Composite Graph-Based ILP Encoding of the Weighted CSP | K. Subramani and Piotr Wojciechowski. | Analyzing lattice point feasibility in UTVPI constraints |
| | Guillaume Perez and Jean-Charles Regin. | MDDs: Sampling and Probability Constraints | Mark Rowland, Aldo Pacchiano and Adrian Weller | Conditions Beyond Treewidth for Tightness of Higher-order LP Relaxations |
| 12:10 - 13:30 | Lunch | | | |
| 13:30 - 14:30 | **Tutorial 1: Pietro Belotti: Mixed Integer Nonlinear Programming** | | **Tutorial 2: Armin Biere: Introduction to SAT** | |
| 14:30 - 15:20 | **CP3: Search** | | **CP4: Probabilistic Reasoning** | |
| | Heytem Zitoun, Claude Michel, Laurent Michel and Michel Rueher. | Search strategies for solving floating point constraint systems | Jeremias Berg, Emilia Oikarinen, Matti Järvisalo and Kai Puolamäki. | Minimum-Width Confidence Bands via Constraint Optimization |
| | Jia Liang, Vijay Ganesh, Pascal Poupart and Krzysztof Czarnecki | Learning Rate Based Branching Heuristic for SAT Solvers | Anna Latour, Behrouz Babaki, Anton Dries, Angelika Kimmig, Guy Van den Broeck, Luc De Raedt and Siegfried Nijssen. | Combining Stochastic Constraint Optimization and Probabilistic Programming: From Knowledge Compilation to Constraint Solving |
| 15:20 - 15:30 | CPAIOR2018 and CP2018 Presentation | | | |
| 15:30 - 16:00 | Coffee Break | | | |
| 16:00 - 17:00 | ACP Research Excellence Award & ACP Dissertation Award | | | |
| 17:00 - 17:50 | **CP5: Modeling** | | **CP6: Security and Attacks** | |
| | Neng-Fa Zhou and Håkan Kjellerstrand. | Optimizing SAT Encodings for Arithmetic Constraints | Fanghui Liu, Waldemar Cruz, Chujiao Ma, Gregory Johnson and Laurent Michel. | A Tolerant Algebraic Side-Channel Attack on AES Using CP |
| | Andre Cire, John Hooker and Tallys Yunes | Modeling with Metaconstraints and Semantic Typing of Variables | Behnaz Hassanshahi and Roland Yap | Android Database Attacks Revisited |

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| **Wednesday, August 30 2017** | | | | |
| 8:45 - 9:00 | Sponsor Presentation | | | |
| 9:00 - 10:00 | Invited Talk | | | |
| 10:00 - 10:30 | Coffee Break | | | |
| 10:30 - 12:10 | **CP7: Clustering, Mining, & Synthesis** | | **CP8: Scheduling** | |
| | Maxime Chabert and Christine Solnon. | Constraint Programming for Multi-criteria Conceptual Clustering | Cédric Pralet. | An Incomplete Constraint-Based System for Scheduling With Renewable Resources |
| | Mohadeseh Ganji, James Bailey and Peter J. Stuckey. | A New Declarative Framework for Constrained Community Detection | Willem-Jan Van Hoeve and Sridhar Tayur. | Integer and Constraint Programming for Batch Annealing Process Planning |
| | Pierre Schaus, John Aoga and Tias Guns. | CoverSize: A Global Constraint for Frequency-based Itemset Mining | Tong Liu, Jacopo Mauro, Maurizio Gabbrielli and Roberto Di Cosmo. | NightSplitter: a scheduling tool to optimize (sub)group activities |
| | Aws Albarghouthi, Paraschos Koutris, Mayur Naik and Calvin Smith. | Constraint-Based Synthesis of Datalog Programs | Morten Mossige, Arnaud Gotlieb, Helge Spieker, Hein Meling and Mats Carlsson. | Time-aware Test Case Execution Scheduling for Cyber-Physical Systems |
| 12:10 - 13:30 | Lunch | | | |
| 13:30 - 14:30 | **Tutorial 3: Tias Guns: Machine Learning and Data Science** | | **Tutorial 4: Guido Tack: Introduction to Constraint Programming** | |
| 14:30 - 15:30 | Invited Talk | | | |
| 15:30 - 16:00 | Coffee Break | | | |
| 16:00 - 17:40 | **Best Papers** | | | |
| | Grigori German, Olivier Briant, Hadrien Cambazard and Vincent Jost. | Arc consistency via Linear Programming | | |
| | Fahiem Bacchus, Matti Järvisalo, Paul Saikko and Antti Hyttinen. | Reduced Cost Fixing in MaxSAT | | |
| | Adrian Goldwaser and Andreas Schutt. | Optimal Torpedo Scheduling | | |
| | Guillaume Derval, Jean-Charles Regin and Pierre Schaus. | Improved Filtering for the Bin-Packing with Cardinality Constraint | | |
| 17:40 - 18:10 | XCSP Competition and Minizinc Challenge Results | | | |

# CP 2017 Program

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| | **Thursday, August 31 2017** | | | |
| 9:00 - 10:00 | Invited Talk | | | |
| 10:00 - 10:30 | Coffee Break | | | |
| 10:30 - 12:10 | **CP9: Explanations, Nogoods, Cuts, and Preferences** | | **CP10: Scheduling & Sequencing** | |
| | Gael Glorian, Frederic Boussemart, Jean-Marie Lagniez, Christophe Lecoutre and Bertrand Mazure. | Combining Nogoods in Restart-Based Search | Jordi Coll, Miquel Bofill, Josep Suy and Mateu Villaret. | An efficient SMT approach to solve MRCPSP/max instances with tight constraints on resources |
| | Atena M.Tabakhi, Tiep Le, Ferdinando Fioretto and William Yeoh. | Preference Elicitation for DCOPs | Kenneth D. Young, Thibaut Feydy and Andreas Schutt. | Constraint Programming applied to the Multi-Skill Project Scheduling Problem |
| | Ekaterina Arafailova, Nicolas Beldiceanu and Helmut Simonis. | Generating Linear Invariants for a Conjunction of Automata Constraints | Joris Kinable, Andre Augusto Cire and Willem-Jan Van Hoeve | Hybrid Optimization Methods for Time-Dependent Sequencing Problems |
| | Simon De Givry and George Katsirelos. | Clique Cuts in Weighted Constraint Satisfaction | John Hooker. | Job Sequencing Bounds from Decision Diagrams |
| 12:10 - 13:30 | Lunch | | | |
| 13:30 - 14:00 | **Session in Honour of Alain Colmeraur** | | | |
| 14:00 - 15:30 | **ACP Annual Meeting** | | | |

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| | **Friday, September 1 2017** | | | |
| 9:00 - 10:00 | Invited Talk | | | |
| 10:00 - 10:30 | Coffee Break | | | |
| 10:30 - 12:10 | **CP11: SAT** | | **CP12: Constraint Types** | |
| | Linjie Pan, Jiwei Jin, Xin Gao, Wei Sun, Feifei Ma, Minghao Yin and Jian Zhang. | Integrating ILP and SMT for Shortwave Radio Broadcast Resource Allocation and Frequency Assignment | Roberto Amadini, Graeme Gange, Peter J. Stuckey and Guido Tack. | A Novel Approach to String Constraint Solving |
| | Jeremias Berg and Matti Järvisalo. | Weight-Aware Core Extraction in SAT-Based MaxSAT Solving | Erez Bilgory, Eyal Bin and Avi Ziv. | Solving Constraint Satisfaction Problems Containing Vectors of Unknown Size |
| | Emir Demirović and Nysret Musliu | MaxSAT-Based Large Neighborhood Search For High School Timetabling | Jean Marie Lagniez, Pierre Marquis and Anastasia Paparrizou. | Defining and Evaluating Heuristics for the Compilation of Constraint Networks |
| | Takehide Soh, Mutsunori Banbara, Naoyuki Tamura and Daniel Le Berre. | Solving Multiobjective Discrete Optimization Problems with Propositional Minimal Model Generation | Hélène Verhaeghe, Christophe Lecoutre, Yves Deville and Pierre Schaus. | Extending Compact-Table to Basic Smart Tables |
| 12:10 - 13:30 | Lunch | | | |
| 13:30 - 15:35 | **CP13: Global Constraints** | | **CP14: Routing and Transportation** | |
| | Ekaterina Arafailova, Nicolas Beldiceanu and Helmut Simonis. | Among Implied Constraints for Two Families of Time-Series Constraints | Anders Nicolai Knudsen, Marco Chiarandini and Kim S. Larsen. | Constraint Handling in Flight Planning |
| | Christian Bessiere, Emmanuel Hebrard, George Katsirelos, Zeynep Kiziltan and Toby Walsh | Ranking Constraints | Tommaso Urli and Philip Kilby. | Constraint-Based Fleet Design Optimisation for Multi-Compartment Split-Delivery Rich Vehicle Routing |
| | Nina Narodytska, Thierry Petit, Mohamed Siala and Toby Walsh | Three Generalizations of the Focus Constraint | Mohd. Hafiz Hasan and Pascal Van Hentenryck. | A Column-Generation Algorithm for Evacuation Planning with Elementary Paths |
| | Victor Dalmau. | Conjunctions of Among Constraints | Edward Lam and Pascal Van Hentenryck. | Branch-and-Check with Explanations for the Vehicle Routing Problem with Time Windows |
| | Emilie Picard-Cantin, Mathieu Bouchard, Claude-Guy Quimper and Jason Sweeney. | Learning the Parameters of Global Constraints Using Branch-and-Bound | Gleb Belov, Tobias Czauderna, Maria Garcia de La Banda, Mark Wallace, Michael Wybrow and Amel Dzaferovic. | An Optimization Model for 3D Pipe Routing with Flexibility Constraints |
| 15:35 - 16:00 | Coffee Break | | | |