

31st International Conference on Principles and Practice of Constraint Programming

CP 2025, August 10–15, 2025, Glasgow, Scotland

Edited by

Maria Garcia de la Banda



Editors

Maria Garcia de la Banda 

Monash University, Clayton, Australia
maria.garciadelabanda@monash.edu

ACM Classification 2012

Theory of computation → Constraint and logic programming; Applied computing → Operations research; Mathematics of computing → Combinatorial algorithms; Mathematics of computing → Combinatorial optimization; Mathematics of computing → Solvers; Computing methodologies → Combinatorial algorithms; Computing methodologies → Optimization algorithms; Computing methodologies → Planning and scheduling; Computing methodologies → Theorem proving algorithms

ISBN 978-3-95977-380-5

Published online and open access by

Schloss Dagstuhl – Leibniz-Zentrum für Informatik GmbH, Dagstuhl Publishing, Saarbrücken/Wadern, Germany. Online available at <https://www.dagstuhl.de/dagpub/978-3-95977-380-5>.

Publication date

August, 2025

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at <https://portal.dnb.de>.

License

This work is licensed under a Creative Commons Attribution 4.0 International license (CC-BY 4.0): <https://creativecommons.org/licenses/by/4.0/legalcode>.



In brief, this license authorizes each and everybody to share (to copy, distribute and transmit) the work under the following conditions, without impairing or restricting the authors' moral rights:

- Attribution: The work must be attributed to its authors.

The copyright is retained by the corresponding authors.

Digital Object Identifier: 10.4230/LIPIcs.CP.2025.0

ISBN 978-3-95977-380-5

ISSN 1868-8969

<https://www.dagstuhl.de/lipics>

LIPIcs – Leibniz International Proceedings in Informatics

LIPIcs is a series of high-quality conference proceedings across all fields in informatics. LIPIcs volumes are published according to the principle of Open Access, i.e., they are available online and free of charge.

Editorial Board

- Christel Baier (TU Dresden, DE)
- Roberto Di Cosmo (Inria and Université Paris Cité, FR)
- Faith Ellen (University of Toronto, CA)
- Javier Esparza (TU München, DE)
- Holger Hermanns (Universität des Saarlandes, Saarbrücken, DE and Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Wadern, DE)
- Daniel Král' (Leipzig University, DE and Max Planck Institute for Mathematics in the Sciences, Leipzig, DE)
- Sławomir Lasota (University of Warsaw, PL)
- Meena Mahajan (Institute of Mathematical Sciences, Chennai, IN – Chair)
- Chih-Hao Luke Ong (Nanyang Technological University, SG)
- Eva Rotenberg (Technical University of Denmark, Lyngby, DK)
- Pierre Senellart (ENS, Université PSL, Paris, France)
- Alexandra Silva (Cornell University, Ithaca, US)

ISSN 1868-8969

<https://www.dagstuhl.de/lipics>

■ Contents

Preface	
<i>Maria Garcia de la Banda</i>	0:ix
List of Authors	
.....	0:xi
Senior Program Committee	
.....	0:xvii
Program Committee	
.....	0:xix
Additional Reviewers	
.....	0:xxi

Invited Talks

Privacy-Preserving SAT Solving	
<i>Ruzica Piskac</i>	1:1–1:2
Anytime and Exact Search for Planning Problems: How to explore a DP-based state transition graph with A*, CP and LS?	
<i>Christine Solnon</i>	2:1–2:2

Regular Papers

Solving the Agile Earth Observation Satellite Scheduling Problem with CP and Local Search	
<i>Valentin Antuori, Damien T. Wojtowicz, and Emmanuel Hebrard</i>	3:1–3:22
Conflict Analysis Based on Cutting-Planes for Constraint Programming	
<i>Robbin Baauw, Maarten Flippo, and Emir Demirović</i>	4:1–4:19
Transition Dominance in Domain-Independent Dynamic Programming	
<i>J. Christopher Beck, Ryo Kuroiwa, Jimmy H. M. Lee, Peter J. Stuckey, and Allen Z. Zhong</i>	5:1–5:23
Modeling and Explaining an Industrial Workforce Allocation and Scheduling Problem	
<i>Ignace Bleux, Ryma Boumazouza, Tias Guns, Nadine Laage, and Guillaume Poveda</i>	6:1–6:24
Optimizing 2D Cutting: A Bin Packing Approach to Minimize Scraps and Maximize Their Reusability	
<i>Manuel Chastenay, Xavier Zwingmann, Claude-Guy Quimper, and Jonathan Gaudreault</i>	7:1–7:21
Breaking Symmetries with Involutions	
<i>Michael Codish and Mikoláš Janota</i>	8:1–8:17

31st International Conference on Principles and Practice of Constraint Programming (CP 2025).

Editor: Maria Garcia de la Banda



Leibniz International Proceedings in Informatics
Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany

Constraint Models for Klondike <i>Nguyen Dang, Ian P. Gent, Peter Nightingale, Felix Ulrich-Oltean, and Jack Waller</i>	9:1–9:20
Unit Types for MiniZinc <i>Jip J. Dekker, Jason Nguyen, Peter J. Stuckey, and Guido Tack</i>	10:1–10:20
Cargo Routing Optimization in Liner Shipping Networks <i>Yousra El Ghazi, Djamal Habet, and Cyril Terrioux</i>	11:1–11:18
An Expansion-Based Approach for Quantified Integer Programming <i>Michael Hartisch and Leroy Chew</i>	12:1–12:26
Disjunctive Scheduling in Tempo <i>Emmanuel Hebrard</i>	13:1–13:22
Guess and Prove: A Hybrid Approach to Linear Polynomial Recovery in Circuit Verification <i>Clemens Hofstadler and Daniela Kaufmann</i>	14:1–14:22
Symmetric Core Learning for Pseudo-Boolean Optimization by Implicit Hitting Sets <i>Hannes Ihalaainen, Jeremias Berg, Matti Järvisalo, and Bart Bogaerts</i>	15:1–15:26
PrintTalk: A Language for Constraint-Based 3D Modelling <i>Jef Jacobs, Wolfgang De Meuter, and Jens Nicolay</i>	16:1–16:22
Scalable Counting of Minimal Trap Spaces and Fixed Points in Boolean Networks <i>Mohimenul Kabir, Van-Giang Trinh, Samuel Pastva, and Kuldeep S Meel</i>	17:1–17:26
Greed Is Slow on Sparse Graphs of Oriented Valued Constraints <i>Artem Kaznatcheev and Sofia Vazquez Alferez</i>	18:1–18:13
Analyzing Self-Stabilization of Synchronous Unison via Propositional Satisfiability <i>Asma Khoualdia, Sami Cherif, Stéphane Devismes, and Léo Robert</i>	19:1–19:21
Dependency-Curated Large Neighbourhood Search <i>Frej Knutar Lewander, Pierre Flener, and Justin Pearson</i>	20:1–20:17
Practically Feasible Proof Logging for Pseudo-Boolean Optimization <i>Wietze Koops, Daniel Le Berre, Magnus O. Myreen, Jakob Nordström, Andy Oertel, Yong Kiam Tan, and Marc Vinyals</i>	21:1–21:27
Learning to Bound for Maximum Common Subgraph Algorithms <i>Buddhi W. Kothalawala, Henning Koehler, and Qing Wang</i>	22:1–22:18
RPID: Rust Programmable Interface for Domain-Independent Dynamic Programming <i>Ryo Kuroiwa and J. Christopher Beck</i>	23:1–23:21
The Work Task Variation Problem <i>Mikael Z. Lagerkvist and Magnus Rattfeldt</i>	24:1–24:23
Aircraft Resource-Constrained Assembly Line Balancing with Learning Effect: A Constraint Programming Approach <i>Duc Anh Le, Stéphanie Roussel, and Christophe Lecoutre</i>	25:1–25:24

Parallel MIP Solving with Dynamic Task Decomposition <i>Peng Lin, Shaowei Cai, Mengchuan Zou, and Shengqi Chen</i>	26:1–26:19
Understanding the Impact of Value Selection Heuristics in Scheduling Problems <i>Tim Luchterhand, Emmanuel Hebrard, and Sylvie Thiébaux</i>	27:1–27:23
SLS-Enhanced Core-Boosted Linear Search for Anytime Maximum Satisfiability <i>Ole Lübke and Jeremias Berg</i>	28:1–28:20
From Prediction to Action: A Constraint-Based Approach to Predictive Policing <i>Younes Mechqrane and Ismail Elabbassi</i>	29:1–29:18
Exact Methods for the Travelling Salesperson Problem with Self-Deleting Graphs <i>Daniel Pekar and J. Christopher Beck</i>	30:1–30:19
Transformer-Based Feature Learning for Algorithm Selection in Combinatorial Optimisation <i>Alessio Pellegrino, Özgür Akgün, Nguyen Dang, Zeynep Kiziltan, and Ian Miguel</i>	31:1–31:22
BFS-Based Canonical Codes for Generating Graphs with Constraint Programming <i>Xiao Peng and Christine Solnon</i>	32:1–32:16
Constraint-Based In-Station Train Dispatching <i>Andreas Schutt, Matteo Cardellini, Jip J. Dekker, Daniel Harabor, Marco Maratea, and Mauro Vallati</i>	33:1–33:24
DynamicSAT: Dynamic Configuration Tuning for SAT Solving <i>Zhengyuan Shi, Wentao Jiang, Xindi Zhang, Jin Luo, Yun Liang, Zhufei Chu, and Qiang Xu</i>	34:1–34:23
Unite and Lead: Finding Disjunctive Cliques for Scheduling Problems <i>Konstantin Sidorov, Imko Marijnissen, and Emir Demirović</i>	35:1–35:24
Balancing Latin Rectangles with LLM-Generated Streamliners <i>Florentina Voboril, Vaidyanathan Peruvemba Ramaswamy, and Stefan Szeider</i> ...	36:1–36:17
Multi-League Sports Scheduling with Team Interdependencies: An Optimization Model <i>Nils Weidmann</i>	37:1–37:19
Reducing Quantum Circuit Synthesis to #SAT <i>Dekel Zak, Jingyi Mei, Jean-Marie Lagniez, and Alfons Laarman</i>	38:1–38:21
The 3-Decomposition Conjecture: A SAT-Based Approach with Specialized Propagators <i>Tianwei Zhang and Stefan Szeider</i>	39:1–39:19
An Efficient and Uniform CSP Solution Generator Generator <i>Ghiles Ziat and Martin Pépin</i>	40:1–40:18

Short Papers

Modeling and Solving a Composite Structure Design Problem with Constraint Programming <i>Miguel Antoons, Augustin Delecluse, Samih Zein, and Pierre Schaus</i>	41:1–41:9
---	-----------

Towards Modern and Modular SAT for LCG	
<i>Jip J. Dekker, Alexey Ignatiev, Peter J. Stuckey, and Allen Z. Zhong</i>	42:1–42:12
Scheduling Telescope Observations for the European Southern Observatory	
<i>Michael Prümm, Peter Nightingale, and Felix Ulrich-Oltean</i>	43:1–43:10

■ Preface

This volume contains the proceedings of the 31st International Conference on Principles and Practice of Constraint Programming (CP 2025), which took place at the University of Glasgow in Scotland, from the 10th to the 15th of August 2025. Held annually, CP is the premier international conference on constraint programming. This year CP is co-located with the 28th International Conference on Theory and Applications of Satisfiability Testing (SAT 2025), the 18th International Symposium on Combinatorial Search (SoCS 2025), and the 23rd International Workshop on Satisfiability Modulo Theories (SMT 2025). More details about the CP 2025 conference can be found at <https://cp2025.a4cp.org/>.

CP 2025 received a total of 106 submissions of original unpublished research papers. After an initial screening, 101 papers were sent out for double-blind peer review – a process where authors and reviewers are anonymous to each other. Each paper received at least three reviews from members of the Program Committee and from several additional reviewers recruited whenever extra expertise was required, all under the guidance of a member of the Senior Program Committee. Authors had the opportunity to answer the questions posed by the reviewers in their reviews during an author response phase. This was followed by an extensive discussion of each paper among the reviewers and the member of the Senior Program Committee assigned to the paper. After the discussion, the Senior Program Committee member wrote a meta-review which summarised the discussion, the pros and cons of the paper, and either made a recommendation to accept/reject the paper or marked it as borderline. The latter generated extra discussions with me as Chair, sometimes leading to a request for additional Senior Program Committee members to provide their recommendations. At the end of this process, 41 papers were accepted for presentation at the conference and publication in these proceedings. Of these, 38 are regular length papers while 3 are short ones; 25 are technical papers while 16 are application ones; and 18 of the 41 are student papers, that is, papers where the first author is a student who contributed significantly more than any other author in the paper.

The Senior Program Committee nominated several papers for the best paper awards, and two sub-committees from the Senior Program Committee were organised to select the winners. These subcommittees awarded the Best Technical Paper Award to J. Christopher Beck, Ryo Kuroiwa, Jimmy H. M. Lee, Peter J. Stuckey, and Allen Z. Zhong for their paper “Transition Dominance in Domain-Independent Dynamic Programming”, the Best Application Paper Awards to Ignace Bleukx, Ryma Boumazouza, Tias Guns, Nadine Laage, and Guillaume Poveda for their paper “Modeling and Explaining an Industrial Workforce Allocation and Scheduling Problem”, and the Best Student Paper Award to Hannes Ihalainen, Jeremias Berg, Matti Järvisalo, and Bart Bogaerts for their paper “Symmetric Core Learning for Pseudo-Boolean Optimization by Implicit Hitting Sets”.

It is traditional for CP to dedicate an entire day before the accepted papers are presented to a series of workshops where the latest ideas on emerging/focus areas are discussed, and to the doctoral program where PhD students come together to exchange ideas and network both with their peers and with senior researchers. This year, as part of the co-location with SAT, we shared these important activities and thus extended the program to dedicate two entire days to them. The selection and organisation of the workshops was chaired by Zeynep Kiziltan (CP) and Marc Vinyals (SAT), while the doctoral program was chaired by Mun See Chang (CP) and Katalin Fazekas (SAT). My thanks to all four for their wonderful work. See <https://cp2025.a4cp.org/workshops.html> for details on the workshops and <https://satcpdp25.github.io/> for the doctoral program.

31st International Conference on Principles and Practice of Constraint Programming (CP 2025).
Editor: Maria García de la Banda



Leibniz International Proceedings in Informatics
Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany


The co-location also gave us an opportunity to share invited speakers selected by their expertise on cutting-edge topics of interest to all three communities. Each conference selected one, with CP having the pleasure of inviting Christine Solnon to speak about “Anytime and exact search for planning problems: How to explore a DP-based state transition graph with A*, CP and LS?”. The abstract of this talk, as well as the one for the talk selected by SAT (Ruzica Piskac, on “Privacy-preserving SAT Solving”) are included in these proceedings, while the one for the talk selected by SoCS (Sylvie Thiebaux on “Graph Learning for Planning”) did not make it on time to be published. I am really looking forward to all three! We also continued the CP tradition of offering tutorials that aim to disseminate insights on emerging topics and trends, provide surveys of complementary techniques to those commonly studied in CP, or inform industrial practitioners on state-of-the-art developments in the CP field. This year two tutorials were selected: “Modelling for Scheduling and Rostering Problems with Constraint Programming” by Helmut Simonis, and “Parallel Constraint Solving” by Shaowei Cai and Dominik Schreiber. My heartfelt thanks to the tutorial chair Andre Cire who organised the selection process and selected the final two. I would also like to welcome Mohamed Siala who joins Özgür Akgün as joint DEI chair, a role Mohamed will hold for two years. Together they organised the DEI event that is becoming traditional in our conference series.

A conference like CP relies on the support of many people to make it a success. First, I would like to thank everybody who contributed to the submitted papers, as without them there would be no conference. Then, of course, I would like to thank the Program Committee, the additional reviewers, and the Senior Program Committee for their careful reviews, meta-reviews and subsequent discussions. It was a pleasure to see engaging, respectful and insightful discussions where reviewers were willing to consider other points of view and even change their mind when presented with the right argument. A special thanks goes to the members of the Senior Program Committee for supporting many of my tasks, from proposing extra members for the Program Committee to helping me select the invited talk, and for providing their advice on the process to follow when non-existing citations were detected in a couple of the submitted papers. In addition, I would like to thank the Association for Constraint Programming (ACP) for its trust and for making the CP conference series possible, with a more specific thank to the ACP president Gilles Pesant, and the ACP conference coordinator H  l  ne Verhaeghe.

Last, but not least, I would like to thank everyone involved in the local conference organisation chaired by Ciaran McCreesh and Blair Archibald, whose great work both on the physical site and on the website made the conference possible, as well as our sponsorship chair, Ruth Hoffmann who secured the generous support of our sponsors. I am writing this two months before CP 2025 starts, but I am sure the conference venue and organization will be fabulous, and I am really looking forward to again be among my colleagues discussing the many exciting ideas in the invited talks, papers, workshops, tutorials and student posters. I cannot wait!

Maria Garcia de la Banda


■ List of Authors

Özgür Akgün  (31)
School of Computer Science,
University of St Andrews, Scotland

Miguel Antoons  (41)
UCLouvain, Belgium

Valentin Antuori (3)
LAAS – CNRS, Toulouse, France


Robbin Baauw (4)
Delft University of Technology, The Netherlands


J. Christopher Beck  (5, 23, 30)
Department of Mechanical and Industrial
Engineering, University of Toronto, Canada

Jeremias Berg  (15, 28)
University of Helsinki, Finland


Ignace Bleux  (6)
Department of Computer Science,
KU Leuven, Belgium


Bart Bogaerts  (15)
KU Leuven, Belgium;
Vrije Universiteit Brussel, Belgium

Ryma Boumazouza  (6)
Airbus SAS, Institut de Recherche
Technologique Saint-Exupery, Toulouse, France


Shaowei Cai  (26)
Key Laboratory of System Software (Chinese
Academy of Sciences) and State Key Laboratory
of Computer Science, Institute of Software,
Chinese Academy of Sciences, Beijing, China;
School of Computer Science and Technology,
University of Chinese Academy of Sciences,
Beijing, China

Matteo Cardellini  (33)
DIBRIS, University of Genova, Italy


Manuel Chastenay  (7)
Lab-Usine – Joint Research Unit for Advanced
Manufacturing, Université Laval, Québec,
Canada;
SOKIO Industrie, Saint-Augustin-de-Desmaures,
Canada

Shengqi Chen  (26)
Department of Computer Science and
Technology, Tsinghua University, Beijing, China


Sami Cherif  (19)
MIS UR 4290, Université de Picardie Jules
Verne, Amiens, France


Leroy Chew  (12)
TU Wien, Austria

Zhufei Chu  (34)
Ningbo University, China

Michael Codish  (8)
Department of Computer Science, Ben-Gurion
University of the Negev, Beer-Sheva, Israel

Nguyen Dang  (9, 31)
School of Computer Science,
University of St Andrews, UK

Wolfgang De Meuter  (16)
Software Languages Lab,
Vrije Universiteit Brussel, Belgium


Jip J. Dekker  (10, 33, 42)
Department of Data Science and Artificial
Intelligence, Monash University, Clayton,
Australia;
ARC Training Centre in Optimisation
Technologies, Integrated Methodologies, and
Applications (OPTIMA), Melbourne, Australia


Augustin Delecluse  (41)
TRAIL, ICTEAM, UCLouvain, Belgium

Emir Demirović  (4, 35)
Delft University of Technology, The Netherlands

Stéphane Devismes  (19)
MIS UR 4290, Université de Picardie Jules
Verne, Amiens, France

Yousra El Ghazi  (11)
Aix Marseille Univ, CNRS, LIS,
Marseille, France

Ismail Elabbassi  (29)
Ai movement – International Artificial
Intelligence Center of Morocco, University
Mohammed VI Polytechnic, Rabat, Morocco

Pierre Flener  (20)
Department of Information Technology,
Uppsala University, Sweden


Maarten Flippo  (4)
Delft University of Technology, The Netherlands


31st International Conference on Principles and Practice of Constraint Programming (CP 2025).
Editor: Maria Garcia de la Banda




Leibniz International Proceedings in Informatics
Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany


- Jonathan Gaudreault  (7)
Lab-Usine – Joint Research Unit for Advanced
Manufacturing, Université Laval, Québec,
Canada
- Ian P. Gent  (9)
School of Computer Science,
University of St Andrews, UK
- Tias Guns  (6)
Department of Computer Science,
KU Leuven, Belgium
- Djamal Habet  (11)
Aix Marseille Univ, CNRS, LIS,
Marseille, France
- Daniel Harabor  (33)
Department of Data Science and Artificial
Intelligence, Monash University, Clayton,
Australia
- Michael Hartisch  (12)
University of Passau, Germany;
FAU Erlangen-Nürnberg, Germany
- Emmanuel Hebrard  (3, 13, 27)
LAAS-CNRS, Toulouse, France
- Clemens Hofstadler  (14)
Johannes Kepler University, Linz, Austria
- Alexey Ignatiev  (42)
Department of Data Science and Artificial
Intelligence, Monash University, Clayton,
Australia
- Hannes Ihalainen  (15)
University of Helsinki, Finland
- Jef Jacobs  (16)
Software Languages Lab,
Vrije Universiteit Brussel, Belgium
- Mikoláš Janota  (8)
CIIRC, Czech Technical University in Prague,
Czech Republic
- Wentao Jiang  (34)
Ningbo University, China;
National Center of Technology Innovation for
EDA, Nanjing, China
- Matti Järvisalo  (15)
University of Helsinki, Finland
- Mohimenul Kabir  (17)
School of Computing, National University of
Singapore, Singapore
- Daniela Kaufmann  (14)
TU Wien, Austria
- Artem Kaznatcheev  (18)
Department of Mathematics, and Department of
Information and Computing Sciences, Utrecht
University, The Netherlands
- Asma Khoualdia  (19)
MIS UR 4290, Université de Picardie Jules
Verne, Amiens, France
- Zeynep Kiziltan  (31)
Dept. of Computer Science and Engineering,
University of Bologna, Italy
- Frej Knutar Lewander  (20)
Department of Information Technology,
Uppsala University, Sweden
- Henning Koehler  (22)
Massey University, Palmerston North,
New Zealand
- Wietze Koops  (21)
Lund University, Sweden;
University of Copenhagen, Denmark
- Buddhi W. Kothalawala  (22)
The Australian National University,
Canberra, Australia
- Ryo Kuroiwa  (5, 23)
National Institute of Informatics, Tokyo, Japan;
The Graduate School of Advanced Studies,
SOKENDAI, Tokyo, Japan
- Nadine Laage (6)
Airbus Aerostructures GmbH,
Hamburg, Germany
- Alfons Laarman  (38)
Leiden University, The Netherlands
- Mikael Z. Lagerkvist  (24)
SambaNova Systems, Stockholm, Sweden;
Optischedule, Stockholm, Sweden
- Jean-Marie Lagniez  (38)
Artois University, Lens, France
- Daniel Le Berre  (21)
Univ. Artois, CNRS, UMR 8188 CRIL,
Lens, France
- Duc Anh Le  (25)
DTIS, ONERA, Université de Toulouse, France
- Christophe Lecoutre  (25)
CRIL, Université d'Artois & CNRS, France
- Jimmy H. M. Lee  (5)
Department of Computer Science and
Engineering, The Chinese University of Hong
Kong, Hong Kong


Yun Liang  (34)
Peking University, Beijing, China

Peng Lin  (26)
Key Laboratory of System Software (Chinese Academy of Sciences) and State Key Laboratory of Computer Science, Institute of Software, Chinese Academy of Sciences, Beijing, China; School of Computer Science and Technology, University of Chinese Academy of Sciences, Beijing, China


Tim Luchterhand  (27)
LAAS – CNRS, Toulouse, France;
Université de Toulouse, France


Jin Luo  (34)
Peking University, Beijing, China;
National Center of Technology Innovation for EDA, Nanjing, China

Ole Lübke  (28)
Institute for Software Systems,
Hamburg University of Technology, Germany


Marco Maratea  (33)
Department of Mathematics and Informatics,
University of Calabria, Rende, Italy

Imko Marijnissen  (35)
Delft University of Technology, The Netherlands


Younes Mechqrane  (29)
Ai movement - International Artificial
Intelligence Center of Morocco, University
Mohammed VI Polytechnic, Rabat, Morocco


Kuldeep S Meel  (17)
School of Computer Science, Georgia Institute of
Technology, Atlanta, GA, USA


Jingyi Mei  (38)
Leiden University, The Netherlands

Ian Miguel  (31)
School of Computer Science,
University of St Andrews, Scotland


Magnus O. Myreen  (21)
Chalmers University of Technology,
Gothenburg, Sweden;
University of Gothenburg, Sweden


Jason Nguyen  (10)
Department of Data Science and Artificial
Intelligence, Monash University, Clayton,
Australia;
ARC Training Centre in Optimisation
Technologies, Integrated Methodologies, and
Applications (OPTIMA), Melbourne, Australia


Jens Nicolay  (16)
Software Languages Lab,
Vrije Universiteit Brussel, Belgium


Peter Nightingale  (9, 43)
Department of Computer Science,
University of York, UK


Jakob Nordström  (21)
University of Copenhagen, Denmark;
Lund University, Sweden

Andy Oertel  (21)
Lund University, Sweden;
University of Copenhagen, Denmark


Samuel Pastva  (17)
Faculty of Informatics, Masaryk University,
Brno, Czechia

Justin Pearson  (20)
Department of Information Technology,
Uppsala University, Sweden


Daniel Pekar  (30)
Department of Mechanical and Industrial
Engineering, University of Toronto, Canada

Alessio Pellegrino  (31)
Department of Mathematics and Computer
Science, University of Southern Denmark,
Denmark


Xiao Peng  (32)
LAAS-CNRS, Université de Toulouse,
Toulouse, France


Vaidyanathan Peruvemba Ramaswamy  (36)
Algorithms and Complexity Group,
TU Wien, Austria

Ruzica Piskac  (1)
Yale University, New Haven, CT, USA

Guillaume Poveda  (6)
Airbus SAS, Toulouse, France

Michael Prümm  (43)
European Southern Observatory,
Garching, Germany

Martin Pépin  (40)
Université Caen Normandie, ENSICAEN,
CNRS, Normandie Univ, GREYC UMR 6072,
F-14000 Caen, France

Claude-Guy Quimper  (7)
Lab-Usine – Joint Research Unit for Advanced
Manufacturing, Université Laval, Québec,
Canada


Magnus Rattfeldt  (24)
Jeppesen, Gothenburg, Sweden;
Optischedule, Stockholm, Sweden

Léo Robert  (19)
MIS UR 4290, Université de Picardie Jules
Verne, Amiens, France


Stéphanie Roussel  (25)
DTIS, ONERA, Université de Toulouse, France


Pierre Schaus  (41)
ICTEAM, UCLouvain, Belgium


Andreas Schutt  (33)
Data61, CSIRO, Melbourne, Australia


Zhengyuan Shi  (34)
The Chinese University of Hong Kong,
Hong Kong;
National Center of Technology Innovation for
EDA, Nanjing, China


Konstantin Sidorov  (35)
Delft University of Technology, The Netherlands

Christine Solnon  (2, 32)
Univ Lyon, INSA Lyon, Inria, CITI, EA3720,
69621 Villeurbanne, France


Peter J. Stuckey  (5, 10, 42)
Department of Data Science and AI, Monash
University, Clayton, Australia;
ARC Training Centre OPTIMA,
Melbourne, Australia


Stefan Szeider  (36, 39)
Algorithms and Complexity Group,
TU Wien, Austria


Guido Tack  (10)
Department of Data Science and Artificial
Intelligence, Monash University, Clayton,
Australia;
ARC Training Centre in Optimisation
Technologies, Integrated Methodologies, and
Applications (OPTIMA), Melbourne, Australia


Yong Kiam Tan  (21)
Institute for Infocomm Research (I²R), A*STAR,
Singapore;
Nanyang Technological University, Singapore


Cyril Terrioux  (11)
Aix Marseille Univ, CNRS, LIS,
Marseille, France

Sylvie Thiébaux  (27)
LAAS-CNRS, Toulouse, France;
Université de Toulouse, France;
Australian National University, Canberra,
Australia

Van-Giang Trinh  (17)
Inria Saclay, EP Lifeware, Palaiseau, France

Felix Ulrich-Oltean  (9, 43)
Department of Computer Science,
University of York, UK

Mauro Vallati  (33)
Department of Computer Science,
University of Huddersfield, UK

Sofia Vazquez Alferez  (18)
Department of Mathematics, and Department of
Information and Computing Sciences, Utrecht
University, The Netherlands

Marc Vinyals  (21)
University of Auckland, New Zealand


Florentina Voboril  (36)
Algorithms and Complexity Group,
TU Wien, Austria

Jack Waller  (9)
Skyscanner, London, UK


Qing Wang  (22)
The Australian National University,
Canberra, Australia

Nils Weidmann  (37)
Westdeutscher Tischtennis Verband e.V.,
Duisburg, Germany

Damien T. Wojtowicz (3)
LAAS – CNRS, Toulouse, France

Qiang Xu  (34)
The Chinese University of Hong Kong,
Hong Kong;
National Center of Technology Innovation for
EDA, Nanjing, China

Dekel Zak  (38)
Leiden University, The Netherlands

Samih Zein  (41)
High Performance Composite team, Cenaero,
Gosselies, Belgium

Tianwei Zhang  (39)
Algorithms and Complexity Group,
TU Wien, Austria

Xindi Zhang  (34)


Key Laboratory of System Software (Chinese Academy of Sciences) and State Key Laboratory of Computer Science, Institute of Software, Chinese Academy of Science, Beijing, China

Allen Z. Zhong  (5, 42)

Department of Data Science and AI, Monash University, Clayton, Australia;
ARC Training Centre OPTIMA, Melbourne, Australia

Ghiles Ziat  (40)

EPITA Reasearch Lab (LRE),
Le Kremlin-Bicêtre, France

Mengchuan Zou  (26)

Key Laboratory of System Software (Chinese Academy of Sciences) and State Key Laboratory of Computer Science, Institute of Software, Chinese Academy of Sciences, Beijing, China

Xavier Zwingmann  (7)

Lab-Usine – Joint Research Unit for Advanced Manufacturing, Université Laval, Québec, Canada;
SOKIO Industrie, Saint-Augustin-de-Desmaures, Canada

■ Senior Program Committee

- Özgür Akgün (University of St Andrews)
- J. Christopher Beck (University of Toronto)
- Sophie Demassey (Mines Paris)
- Ian P. Gent (University of St Andrews)
- Tias Guns (KU Leuven)
- Emmanuel Hebrard (LAAS)
- Zeynep Kiziltan (University of Bologna)
- Jimmy H. M. Lee (Chinese University of Hong Kong)
- Laurent Michel (University of Connecticut)
- Nina Narodytska (VMWare)
- Gilles Pesant (Polytechnic Montréal)
- Christine Solmon (INSA Lyon)
- Peter J. Stuckey (Monash University)
- Charlotte Truchet (Nantes Université)
- Standa Zivny (University of Oxford)



■ Program Committee

- Carlos Ansótegui (Universitat de Lleida)
- John Aoga (UCLouvain)
- Andre Augusto Cire (University of Toronto)
- David Bergman (University of Connecticut)
- Kyle Booth (AWS)
- Kenneth N. Brown (University College Cork)
- Silvia Butti (University of Oxford)
- Shaowei Cai (Institute of Software, Chinese Academy of Sciences)
- Quentin Cappart (École Polytechnique de Montréal)
- Clément Carbonnel (LIRMM/CNRS)
- Mats Carlsson (Research Institutes of Sweden)
- Michael Codish (Ben-Gurion University of the Negev)
- Martin C. Cooper (University of Toulouse)
- Nguyen Dang (University of St Andrews)
- Jip J. Dekker (Monash University)
- Marianne Defresne (KU Leuven)
- Emir Demirović (Delft University of Technology)
- Pierre Flener (Uppsala University)
- María Andreína Francisco Rodríguez (Uppsala University)
- Simon de Givry (INRAE - MIAT)
- Stephan Gocht (AI Software Engineering)
- Ruth Hoffmann (University of St Andrews)
- Vinasetan Ratheil Houndji (Université d'Abomey-Calavi)
- (Eliza) Xin-Yi Hu (Chinese University of Hong Kong)
- Marie-José Huguet (LAAS-CNRS)
- Alexey Ignatiev (Monash University)
- Matti Järvisalo (University of Helsinki)
- Christopher Jefferson (University of St Andrews)
- George Katsirelos (MIA Paris INRAE AgroParisTech)
- Ryo Kuroiwa (National Institute of Informatics, Japan)
- Mikael Z. Lagerkvist (Sambanova Systems)
- Arnaud Lallouet (Huawei)
- Edward Lam (Monash University)
- Nadjib Lazaar (Université Paris-Saclay)
- Kevin Leo (Monash University)
- Andrea Lodi (Cornell Tech)
- Michele Lombardi (University of Bologna)
- Jayanta Mandi (KU Leuven)
- Vasco Manquinho (Universidade de Lisboa)
- Ian Miguel (University of St Andrews)
- Nysret Musliu (TU Wien)
- Peter Nightingale (University of York)
- Anastasia Paparrizou (CNRS-LIRMM, University of Montpellier)
- Xiao Peng (INSA Lyon)
- Thierry Petit (Emotia)

31st International Conference on Principles and Practice of Constraint Programming (CP 2025).

Editor: Maria Garcia de la Banda



Leibniz International Proceedings in Informatics
Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany

- Charles Prud'Homme (IMT Atlantique, LS2N)
- Claude-Guy Quimper (Université Laval)
- Louis-Martin Rousseau (Polytech Montreal)
- Stéphanie Roussel (Onera)
- Pierre Schaus (UCLouvain)
- Andreas Schutt (CSIRO)
- Ilankaikone Senthooran (Monash University)
- Paul Shaw (IBM)
- Mohamed Siala (INSA Toulouse & LAAS-CNRS)
- Laurent Simon (Bordeaux University)
- Kostas Stergiou (University of Western Macedonia)
- Guido Tack (Monash University)
- Dimos Tsouros (KU Leuven)
- Willem-Jan Van Hoeve (Carnegie Mellon University)
- Hélène Verhaeghe (UCLouvain)
- Petr Vilím (Coenzyme Fr)
- Roland Yap (National University of Singapore)
- Allen Z. Zhong (Monash University)

■ Additional Reviewers

- Eric Bourreau (LIRMM, Université de Montpellier)
- Carleton Coffrin (Los Alamos National Laboratory)
- Frits de Nijs (Monash University)
- Welington de Oliveira (Mines PSL)
- Rohit Dureja (Advanced Micro Devices)
- Marijn Heule (Carnegie Mellon University)
- Kuldeep S. Meel (University of Toronto)
- Tomáš Peitl (Technische Universität Wien)
- Alexey Solovyev (University of Utah)
- Marcel Steinmetz (LAAS / CNRS)
- Adel N. Toosi (University of Melbourne)



