

	N1	T1
SATURDAY (July 8, 2023)		
08:00-09:00	Registration (Malá Strana)	
09:00-17:00	Doctoral Consortium (Malá Strana)	
SUNDAY (July 9, 2023)		
08:00-09:00	Registration	
09:00-10:30	Workshops & Tutorial	
10:30-11:00	COFFEE BREAK	
11:00-12:00	Workshops & Tutorial	
12:00-14:00	LUNCH	
14:00-15:30	Workshops & Tutorials	
15:30-16:00	COFFEE BREAK	
16:00-18:00	Workshops & Tutorials	
MONDAY (July 10, 2023)		
08:00-09:00	Registration	
09:00-10:30	Workshops & Tutorials	
10:30-11:00	COFFEE BREAK	
11:00-12:00	Workshops & Tutorials	
12:00-14:00	LUNCH	
14:00-15:30	Workshops & Tutorial	
15:30-16:00	COFFEE BREAK	
16:00-17:30	Workshops & Tutorial	
17:00-18:00	Registration	
18:00-20:00	Welcome Reception	
TUESDAY (July 11, 2023)		
08:00-09:00	Registration	
09:00-09:10	ICAPS Opening	
09:10-10:10	Invited Talk 1	
10:10-11:10	Main 1	Learning 1
11:10-11:40	COFFEE BREAK	
11:40-12:40	Main 2	Robotics 1
12:40-14:00	LUNCH & ICAPS 101 Quiz	
14:00-15:30	Main 3	IPC results 1
15:30-16:00	COFFEE BREAK	
16:00-17:00	Main 4	Journal 1
17:00-18:30	Poster & System Demo	
WEDNESDAY (July 12, 2022)		
09:00-10:10	Invited Talk 2	
10:10-11:10	Main 5	Learning 2
11:10-11:40	COFFEE BREAK	
11:40-12:40	Main 6	Apps 1
12:40-14:00	LUNCH	
14:00-15:30	Main 7	IPC results 2 & MAPF
15:30-16:00	COFFEE BREAK	
16:00-17:00	Awards Ceremony	
17:00-18:30	Community Meeting	
19:45-22:30	Dinner on a Boat	
THURSDAY (July 13, 2023)		
09:00-10:10	Invited Talk 3	
10:10-11:10	Main 8	Learning 3
11:10-11:40	COFFEE BREAK	
11:40-12:40	Main 9	Apps 2
12:40-14:00	LUNCH	
14:00-15:30	Main 10	Journal 2
15:30-16:00	COFFEE BREAK	
16:00-17:00	Main 11	
17:00-17:10	ICAPS Closing	

SUNDAY (July 9, 2023)

08:00-09:00	Registration (N3)	
09:00-10:30	Workshop PRL (T1)	
	Opening Remarks	
	Value Function Learning via Prolonged Backward Heuristic Search	Zlatan Ajanovic, Bakir Lacevic, Jens Kober
	Learning General Policies with Policy Gradient Methods	Simon Ståhlberg, Blai Bonet, Hector Geffner
	Learning Hierarchical Policies by Iteratively Reducing the Width of Sketch Rules	Dominik Drexler, Jendrik Seipp, Hector Geffner
	Towards a Unified Framework for Sequential Decision Making	Carlos Núñez-Molina, Pablo Mesejo, Juan Fernández-Olivares
09:00-10:30	Workshop SPARK (N2)	
	Opening Remarks	
	Modelling the Spread of COVID-19 in Indoor Spaces using Automated Probabilistic Planning	Mohamed Harmanani
	PARIS: Planning Algorithms for Reconfiguring Independent Sets	Remo Christen, Salomé Eriksson, Michael Katz, Christian Muise, Alice Petrov, Florian Pommerening, Jendrik Seipp, Silvan Sievers and David Speck
	Planning for Proofs	Alice Petrov and Christian Muise
09:00-10:30	Tutorial Complexity (N6)	
	How hard can it be? The computational complexity of planning	Nicola Gigante
10:30-11:00	COFFEE BREAK (foyer - ground floor)	
11:00-12:20	Workshop PRL (T1)	
	pyRDDLGym: From RDDDL to Gym Environments	Ayal Taitler, Michael Gimelfarb, Jihwan Jeong, Sriram Gopalakrishnan, Martin Mladenov, Xiaotian Liu, Scott Sanner
	Inapplicable Actions Learning for Knowledge Transfer in Reinforcement Learning	Leo Ardon, Alberto Pozanco, Daniel Borrajo, Sumitra Ganesh
	Multi-Agent Reinforcement Learning with Epistemic Priors	Thayne T. Walker, Jaime S. Ide, Minkyu Choi, Michael John Guarino, Kevin Alcedo
	Mind the Uncertainty: Risk-Aware and Actively Exploring Model-Based Reinforcement Learning	Marin Vlastelica, Sebastian Blaes, Cristina Pinneri, Georg Martius
11:00-12:30	Workshop SPARK (N2)	
	Panel: Challenges and Opportunities in AI Planning and Scheduling in applications	
11:00-12:20	Workshop KEPS (T2)	

	Opening Remarks	
	Taming Discretised PDDL+ through Multiple Discretisations	Matteo Cardellini, Marco Maratea, Francesco Percassi, Enrico Scala and Mauro Vallati
	Planning with Qualitative Action-Trajectory Constraints in PDDL	Luigi Bonassi, Alfonso Emilio Gerevini and Enrico Scala
	Scheduling Problems in PDDL	Jan Dolejsi, Derek Long and Michal Stolba
	PDSim: Planning Domain Simulation and Animation with the Unity Game Engine	Emanuele De Pellegrin and Ron Petrick
	Challenges in Modelling and Solving Plotting with PDDL	Joan Espasa Arxer, Ian Miguel, Peter Nightingale, Mateu Villaret and András Z. Salamon
11:00-12:30	Tutorial Complexity (N6)	
	How hard can it be? The computational complexity of planning	Nicola Gigante
12:30-14:00	LUNCH (foyer - 1. floor)	
13:40-15:30	Workshop PRL (T1)	
	Keynote: Building Taskable RL Agents using Advice, Instructions, and AI Planning	Sheila McIlraith
	Panel: Sequential decision making in the era of large language models	
14:15-15:30	Workshop SPARK (N2)	
	Supporting Decision-Making for City Management through Automated Planning and Execution	Riccardo De Benedictis, Gloria Beraldo, Amedeo Cesta and Gabriella Cortellessa
	Using Planning to Construct Code Reuse Attacks in Obfuscated Programs	Naiqian Zhang, Daroc Alden, Dongpeng Xu, Shuai Wang, Trent Jaeger and Wheeler Ruml
	Towards Rolling Stock Preventive Maintenance Scheduling - Short-term Scheduling Optimisation	Hassna Louadah, Thomas Leo McCluskey, Gareth Tucker and Emmanouil Papadakis
14:00-15:30	Workshop KEPS (T2)	
	Partial Grounding in Planning using Small Language Models	Felipe Areces, Benjamin Ocampo, Carlos Areces, Martin Dominguez and Daniel Gnad
	Exploring the Limitations of using Large Language Models to Fix Planning Tasks	Alba Gragera and Alberto Pozanco
	Learning to Act for Perceiving in Partially Unknown Environments	Leonardo Lamanna, Mohamadreza Faridghasemnia, Alfonso Emilio Gerevini, Alessandro Saetti, Alessandro Saffiotti, Luciano Serafini and Paolo Traverso

	Extracting planning domains from execution traces: a progress report	Simona Gugliermo, Erik Schaffernicht, Christos Koniaris and Alessandro Saffiotti
	Autonomous Capability Assessment of Black-Box Sequential Decision-Making Systems	Pulkit Verma, Rushang Karia and Siddharth Srivastava
14:00-15:30	Workshop IntEx (N4)	
	Opening Remarks	
	Keynote: Dynamic Targeting to Improve Science Return	Steve Chien and Alberto Candela
	A Health-Aware Framework for Online Replanning of Unmanned Aerial Vehicles Missions under Faulty Conditions	Simon Ståhlberg, Blai Bonet, Hector Geffner
	Enhancing Operational Deliberation in a Refinement Acting Engine with Continuous Planning	Jérémy Turi, Arthur Bit-Monnot and Félix Ingrand
14:00-15:30	Workshop FinPlan (N5)	
	Opening Remarks	
	Predicting Customer Goals in Financial Institution Services: A Data-Driven LSTM Approach	Andrew Estornell, Stylianos Loukas Vasileiou, William Yeoh, Daniel Borrajo, Rui Silva
	Value Detection Rate: A Performance Metric for Payments Fraud Detection	Danial Dervovic, Saeid Amiri, Michael Cashmore
	Deep Reinforcement Learning for Optimal Portfolio Allocation: A Comparative Study with Mean-Variance Optimization	Srijan Sood, Kassiani Papisotiriou, Marius Vaiciulis, Tucker Balch
	Surrogate Assisted Monte Carlo Tree Search in Combinatorial Optimization	Saeid Amiri, Parisa Zehtabi, Danial Dervovic, Michael Cashmore
	Panel: Potential and Challenges for Planning, Reasoning, Learning and Optimization Techniques in Finance	
14:00-15:30	Tutorial Unified Planning (N6)	
	Unified Planning: A Python Library Making Planning Technology Accessible	Andrea Micheli, Arthur Bit-Monnot, Gabriele Röger, Sebastian Stock
14:00-15:30	Tutorial Temporal Networks (N7)	
	Recent Advances in Temporal Networks for Planning and Scheduling	Luke Hunsberger
15:30-16:00	COFFEE BREAK (foyer - ground floor)	
16:00-18:00	Workshop PRL (T1)	
	Closing remarks	
	Poster Session	
16:00-17:00	Workshop SPARK (N2)	
	Discussion and Closing remarks	
16:00-17:15	Workshop KEPS (T2)	
	Towards a Framework for Intelligent Urban Traffic Routing	Matyas Svadlenka and Lukas Chrpa

	First Steps Towards Planning for Targeted Medicine	Lee-Or Alon, Hana Weitman and Gal Kaminka
	A Good Snowman is Hard to Plan	Miquel Bofill, Cristina Borralleras, Joan Espasa Arxer, Gerard Martin Teixidor, Gustavo A. Patow and Mateu Villaret
	Computing Minimal Unsolvable and Maximal Solvable Abstractions of Planning Problems via Hitting Set Trees	Michael Welt, Birte Glimm and Milene Santos-Teixeira
	Closing remarks	
16:00-17:05	Workshop IntEx (N4)	
	Integrating Planning, Diagnosis, and Execution for Vehicle Systems Management	Jeremy Frank, Gordon Aaseng, Minh Do, Chuck Fry, and Adam Sweet
	CLAPLEX A Control Language and Architecture for Planning and Execution	Annita Vapsi, Daniel Borrajo and Manuela Veloso
	The Generalizability of FOND Solutions in Uncertain Environments	Victoria Jane Armstrong and Christian Muise
	Discussion and Closing remarks	
16:00-17:35	Workshop FinPlan (N5)	
	FinRDDL: Can AI Planning be used for Quantitative Finance Problems?	Sunandita Patra, Mahmoud Mahfouz, Sriram Gopalakrishnan, Daniele Magazzeni, Manuela Veloso
	Accelerating Benders Decomposition via RL Surrogate Models	Kyle Mana, Stephen Mak, Parisa Zehtabi, Michael Cashmore, Daniele Magazzeni, Manuela Veloso
	Can LLMs be Good Financial Advisors?: An Initial Study in Personal Decision Making for Optimized Outcomes	Kausik Lakkaraju, Sai Krishna Revanth Vuruma, Vishal Pallagani, Bharath Muppasani, Biplav Srivastava
	Keynote: LLMs can't plan, but they can help you in planning	Subbarao Kambhampati
16:00-17:30	Tutorial Unified Planning (N6)	
	Unified Planning: A Python Library Making Planning Technology Accessible	Andrea Micheli, Arthur Bit-Monnot, Gabriele Röger, Sebastian Stock
16:00-17:30	Tutorial Temporal Networks (N7)	
	Recent Advances in Temporal Networks for Planning and Scheduling	Luke Hunsberger

MONDAY (July 10, 2023)

08:00-09:00	Registration (N3)	
09:00-10:30	Workshop PlanRob (T1)	
	Opening remarks	
	Robofriend: An Adaptive Storytelling Robotic Teddy Bear	Ido Glanz, Matan Weksler, Erez Karpas and Tzipi Horowitz-Kraus
	Capability-Based Task Planning for Human-Robot Assembly Stations Employing People with Disabilities	Carlo Weidemann, Hyun-Ji Choi, Ritesh Yadav, Stefan-Octavian Bezrucav and Burkhard Corves
	Anticipating False Beliefs and Planning Pertinent Reactions in Human-Aware Task Planning with Models of Theory of Mind	Anthony Favier, Shashank Shekhar and Rachid Alami
	PTDRL: Parameter Tuning Using Deep Reinforcement Learning	Elias Goldsztejn, Ronen Brafman and Tal Feiner
09:00-10:30	Workshop HSDIP (N2)	
	Opening remarks	
	Invited Talk: Contrastive Analysis: Heuristic Search Beyond Heuristics	Álvaro Torralba
09:00-10:30	Workshop HAXP/PAIR (T2)	
	Opening remarks	
	Invited Talk: Explaining Numeric Flaws in Plans	David Smith
	Outcome Prediction and Explainability for Mission Operations of Autonomous Spacecrafts	Alberto Candela, Tiago Vaquero, Bennett Huffman, Nihal Dhamani, Federico Rossi, Rebecca Castano
	Explanation Framework for Optimization-based Scheduling: Evaluating Contributions of Constraints and Parameters by Shapley Values	Yuta Tsuchiya, Masaki Hamamoto
09:00-10:30	Tutorial MPDS with RDDDL (N6)	
	Introduction to MDP Modeling and Interaction via RDDDL and pyRDDLGym	Scott Sanner, Ayal Taitler
09:00-10:30	Tutorial MACQ (N7)	
	Model Acquisition in the Modern Era (MACQ)	Christian Muise, Tathagata Chakraborti
10:30-11:00	COFFEE BREAK (foyer - ground floor)	
11:00-12:20	Workshop PlanRob (T1)	
	Planning for Learning Object Properties	Leonardo Lamanna, Luciano Serafini, Mohamadreza Faridghasemnia, Alessandro Saffiotti, Alessandro Saetti, Alfonso Emilio Gerevini and Paolo Traverso
	Combined Task and Motion Planning Via Sketch Decompositions	Magí Dalmau Moreno, Néstor García Hidalgo, Vicenç Gómez and Hector Geffner

	Adaptive Robot Navigation through Integrated Task and Motion Planning	Phani-Teja Singamaneni, Alessandro Umbrico, Andrea Orlandini and Rachid Alami
online	<i>Informed Steiner Trees: Sampling and Pruning for Multi-Goal Path Finding in High Dimensions</i>	Nikhil Chandak, Kenny Chour, Sivakumar Rathinam and R Ravi, Georg Martius
11:00-12:00	Workshop HSDIP (N2)	
	On K^* Search for Top-k Planning	Junkyu Lee, Michael Katz, Shirin Sohrabi
	K^* Search Over Orbit Space for Top-k Planning	Michael Katz, Junkyu Lee
	K^* and Partial Order Reduction for Top-quality Planning	Michael Katz, Junkyu Lee
11:00-12:30	Workshop HAXP/PAIR (T2)	
	Action Policy Explanations in Oversubscription Planning	Aleena Siji, Rebecca Eifler, Daniel Fišer, Jörg Hoffmann
	Specifying Goals to Deep Neural Networks with Answer Set Programming	Forest Agostinelli
	Formal Explanations of Neural Network Policies for Planning	Renee Selvey, Alban Grastien, Sylvie Thiébaux
	Invited Talk: Start Making Sense! Using Cognitive, Social, and Affective Information for Interaction and Explainable Planning	Ron Petrick
11:00-12:30	Tutorial MPDS with RDDDL (N6)	
	Introduction to MDP Modeling and Interaction via RDDDL and pyRDDLGym	Scott Sanner, Ayal Taitler
11:00-12:30	Tutorial MACQ (N7)	
	Model Acquisition in the Modern Era (MACQ)	Christian Muise, Tathagata Chakraborti
12:30-14:00	LUNCH (foyer - 1. floor)	
14:00-15:30	Workshop PlanRob (T1)	
	Invited Talk	Michael Beetz
	The Hamiltonian Cycle and Travelling Salesperson Problems with Traversal-Dependent Edge Deletion	Sarah Carmesin, David Woller, David Parker, Miroslav Kulich and Masoumeh Mansouri
13:30-15:30	Workshop HSDIP (N2)	
	Triangle Search: An Anytime Beam Search	Sofia Lemons, Wheeler Ruml, Carlos Linares López, Robert Holte
	Any-Start-Time Planning for SIPP	Devin Wild Thomas, Solomon Eyal Shimony, Wheeler Ruml, Erez Karpas, Shahaf S. Shperberg, Andrew Coles
	Online Planning for Stochastic Collaborative Privacy Preserving Planning	Oriel Uzan, Guy Shani

	Scale-Adaptive Balancing of Exploration and Exploitation in Classical Planning	Stephen Wissow, Masataro Asai
	Action Schema Networks for Numerical Planning	Afffa Tariq, Richard Valenzano, Mikhail Soutchanski
14:00-15:30	Workshop HAXP/PAIR (T2)	
	Towards Human-Aware AI via Epistemic Planning with Preferences	Toryn Q. Klassen, Christian Muise, Sheila A. McIlraith
	TIPs: Transparency Information Pacts	Phillip Walker, Ugur Kuter, Christopher A Miller, Helen Wauck, Matthew DeHaven, Christopher Geib
	DR-HAI: Argumentation-based Dialectical Reconciliation in Human-AI Interactions	Stylianios Loukas Vasileiou, Ashwin Kumar, William Yeoh
	Comparing AI Planning Algorithms with Humans on the Tower of London Task	Chenyuan Zhang, Nir Lipovetzky, Charles Kemp
	Learning and Recognizing Human Behaviour with Relational Decision Trees	Stanislav Sitanskiy, Laura Sebastia, Eva Onaindia
13:55-15:30	Workshop RDDPS (N4)	
	Opening remarks	
	Invited Talk: Verifying Learning-Based Robotic Navigation Systems	Guy Amir
	Action Policy Testing with Heuristic-Based Bias Functions	Xandra Schuler, Jan Eisenhut, Daniel Höller, Daniel Fišer, Jörg Hoffmann
	Policy-Specific Abstraction Predicate Selection in Neural Policy Safety Verification	Marcel Vinzent, Min Wu, Haoze Wu and Jörg Hoffmann
14:00-15:30	Workshop HPlan (N5)	
	Opening remarks	
	Teaser Talk: Implicit Dependency Detection for HTN Plan Repair	Paul Zaidins; Mark Roberts; and Dana Nau
	Teaser Talk: On the Computational Complexity of Plan Verification, (Bounded) Plan-Optimality Verification, and Bounded Plan Existence	Songtuan Lin; Conny Olz; Malte Helmert; and Pascal Bercher
	Teaser Talk: HDDL 2.1: Towards Defining a Formalism and a Semantics for Temporal HTN Planning	Damien Pellier; Alexandre Albore; Humbert Fiorino; Rafael Bailon-Ruiz
	Teaser Talk: On Guiding Search in HTN Temporal Planning with non Temporal Heuristics	Nicolas Cavrel; Damien Pellier; and Humbert Fiorino
	Teaser Talk: Integrating Deep Learning Techniques into Hierarchical Task Planning for Effect and Heuristic Predictions in 2D Domains	Michael Staud

	Teaser Talk: Extracting Hierarchical Task Networks Parameters from Demonstrations	Philippe Hérail
	Teaser Talk: A Look-Ahead Technique for Search-Based HTN Planning: Reducing the Branching Factor by Identifying Inevitable Task Refinements	Conny Olz; and Pascal Bercher
	Teaser Talk: Can HTN Planning Make Flying Alone Safer?	Jane Jean Kiam; and Prakash Jamakatel
	Poster Session	
14:00-15:30	Workshop PLATO (N6)	
	Invited Talk (shared with PlanRob, Room T1)	Michael Beetz
	Challenges on Deriving Planning Problems for Ontologies	Milene Santos Teixeira, Michael Welt, Birte Glimm and Raphael Chis
	Plan and Ontology-Based Dialogue Policies for Healthcare	Milene Santos Teixeira and Mauro Dragoni
14:00-15:30	Tutorial Planning with LLMs (N7)	
	On the role of Large Language Models in Planning	Subbarao Kambhampati, Karthik Valmeekam, Matthew Marquez, Lin Guan
15:30-16:00	COFFEE BREAK (foyer - ground floor)	
16:00-17:50	Workshop PlanRob (T1)	
	A novel algorithm for parallelizing actions of a sequential plan	Sofia Santilli, Alessandro Trapasso, Luca Iocchi and Fabio Patrizi
	Towards computing low-makespan solutions for multi-arm multi-task planning problems	Valentin Hartmann and Marc Toussaint
	Solving Robust Execution of Multi-Agent Pathfinding Plans as a Scheduling Problem	David Zahrádka, Daniel Kubišta and Miroslav Kulich
	A Closed-Loop Framework-Independent Bridge from AIPlan4EU's Unified Planning Platform to Embedded Systems	Selvakumar Hastham Sathiya Satchi Sadanandam, Sebastian Stock, Alexander Sung, Felix Ingrand, Oscar Lima, Marc Vinci, Joachim Hertzberg
	A Physics-Based Simulated Robotics Testbed for Planning and Acting Research	Oscar Lima Carrion, Martin Günther, Alexander Sung, Sebastian Stock, Marc Vinci, Amos Smith, Jan Christoph Krause, Joachim Hertzberg
	Closing remarks	
16:00-17:30	Workshop HSDIP (N2)	
	On Reducing Action Labels in Planning Domains	Harsha Kokel, Junkyu Lee, Michael Katz, Kavitha Srinivas, Shirin Sohrabi
	Novelty and Lifted Helpful Action in Generalized Planning	Chao Lei, Nir Lipovetzky, Krista A. Ehinger

	From State Spaces to Semigroups: Leveraging Algebraic Formalism for Automated Planning	Alice Petrov, Christian Muise
	PARIS: Planning Algorithms for Reconfiguring Independent Sets	Remo Christen, Salomé Eriksson, Michael Katz, Christian Muise, Alice Petrov, Florian Pommerening, Jendrik Seipp, Silvan Sievers, David Speck
	Closing remarks	
16:00-17:30	Workshop HAXP/PAIR (T2)	
	Invited Talk: Hierarchical Formalisms in Plan Recognition as Planning	Daniel Höller
	Towards Intention Recognition for Robotic Assistants Through Online POMDP Planning	Juan Carlos Saborío, Joachim Hertzberg
	Recognizing Hierarchical Plans via Early Parsing	Kristýna Pantůčková, Roman Barták
	Bridging the Gap Between Structural and Semantic Similarity in Diverse Planning	Joan Espasa Arxer, Ian Gent, Alice Toniolo, Mustafa Abdelwahed
16:00-17:30	Workshop RDDPS (N4)	
	A Generalization of the Shortest Path Problem to Graphs with Multiple Edge-Cost Estimates	Eyal Weiss, Ariel Felner and Gal Kaminka
	Safe Learning of PDDL Domains with Conditional Effects	Argaman Mordoch, Roni Stern, Enrico Scala and Brendan Juba
	Plausibility-Based Heuristics for Latent Space Classical Planning	Yuta Takata and Alex Fukunaga
	Open Discussion	
16:00-17:00	Workshop HPlan (N5)	
	Invited Talk: Automated Learning of Hierarchical Knowledge for Planning and Acting	Hector Munoz-Avila
16:00-17:50	Workshop PLATO (N6)	
	Invited Talk: Layering physical and social interactions for planning via ontology	Stefano Borgo
	Ontology-guided Knowledge Graph Construction to Support Scheduling in Train Maintenance Depot	Emmanuel Papadakis, Thomas Leo McCluskey, Hassna Louadah and Gareth Tucke
	Planning with Ontology-Enhanced States Using Problem-Dependent Rewritings	Tobias John and Patrick Koopmann
	Building and Using a Planning Ontology from Past Data for Performance Efficiency	Bharath Muppasani, Vishal Pallagani, Biplav Srivastava and Raghava Mutharaju

	Closing remarks	
16:00-17:00	Tutorial Planning with LLMs (N7)	
	On the role of Large Language Models in Planning	Subbarao Kambhampati, Karthik Valmeekam, Matthew Marquez, Lin Guan
17:00-18:00	Registration (N3)	
18:00-20:00	WELCOME RECEPTION (foyer - ground floor)	

TUESDAY (July 11, 2023)		
08:00-09:00	Registration (N3)	
09:00-09:10	ICAPS 2023 Opening (N1)	
09:10-10:10	Invited Talk: (N1, chair: Roman Barták)	
	On Synthesis and Planning for Robot Behaviors	Hadas Kress-Gazit
10:10-11:10	Main 1 - Numeric Planning (N1, chair: Alvaro Torralba)	
	Fixing Plans for PDDL+ Problems: Theoretical and Practical Implications	Francesco Percassi, Enrico Scala and Mauro Vallati
	Symmetry Detection and Breaking in Linear Cost-Optimal Numeric Planning	Alexander Shleyfman, Ryo Kuroiwa and J. Christopher Beck
	Planning over Integers: Compilations and Undecidability (short)	Daniel Gnad, Malte Helmert, Peter Jonsson and Alexander
online	<i>Robust Metric Hybrid Planning in Stochastic Nonlinear Domains using Mathematical Optimization</i>	<i>Buser Say</i>
	Falsification of Cyber-Physical Systems Using PDDL+ Planning (short)	Diego Aineto, Enrico Scala, Eva Onaindia and Ivan Serina
10:10-11:10	Learning 1 (T1, chair: Ivan Serina)	
online	<i>Reinforcement Learning for Omega-Regular Specifications on Continuous-Time MDP</i>	<i>Amin Falah, Shibashis Guha and Ashutosh Trivedi</i>
	Exploration Policies for On-the-fly Controller Synthesis: a Reinforcement Learning Approach	Tomás Delgado, Marco Sánchez Sorondo, Víctor Braberman and Sebastián Uchitel
	An End-to-End Reinforcement Learning Approach for Job-Shop Scheduling Problems Based on Constraint Programming	Pierre Tassel, Martin Gebser and Konstantin Schekotihin
	Deceptive Reinforcement Learning in Model-Free Domains	Alan Lewis and Tim Miller
11:10-11:40	COFFEE BREAK (foyer - ground floor)	
11:40-12:40	Main 2 - Classical Planning (N1, chair: Mathijs de Weerd)	
	Optimality Certificates for Classical Planning	Esther Mugdan, Remo Christen and Salomé Eriksson
	Planning for Temporally Extended Goals in Pure-Past Linear Temporal Logic	Luigi Bonassi, Giuseppe De Giacomo, Marco Favorito, Francesco Fuggitti, Alfonso Emilio Gerevini and Enrico Scala
	Planning with Multiple Action-Cost Estimates	Eyal Weiss and Gal A. Kaminka
	A Planning Approach to Repair Domains with Incomplete Action Effects	Alba Gragera, Raquel Fuentetaja, Ángel García-Olaya and Fernando Fernández
11:40-12:40	Robotics 1 (T1, chair: Zlatan Ajanovic)	
	Planning for Automated Testing of Implicit Constraints in Behavior Trees	Uwe Köckemann, Daniele Calisi, Guglielmo Gemignani, Jennifer Renoux and Alessandro Saffiotti

	Understanding Natural Language in Context	Avichai Levy and Erez Karpas
	Approximating the Value of Collaborative Team Actions for Efficient Multiagent Navigation in Uncertain Graphs	Martina Stadler, Jacopo Banfi and Nicholas Roy
	Planning for Manipulation Among Movable Objects: Deciding Which Objects Go Where, In What Order, And How	Dhruv Saxena and Maxim Likhachev
12:40-14:00	LUNCH & ICAPS 101 Quiz (foyer - 1. floor)	
14:00-15:30	Main 3 - Scheduling, HTN, and Lifted Planning (N1, chair: Ron Alford)	
	Can They Come Together? A Computational Complexity Analysis of Conjunctive Possible Effects of Compound HTN	Conny Olz and Pascal Bercher
	On Partial Satisfaction Planning with Total-Order HTNs	Gregor Behnke, David Speck, Michael Katz and Shirin Sohrabi
	Operator Pruning using Lifted Mutex Groups via Compilation on Lifted Level	Daniel Fišer
	Lifted Stackelberg Planning (short)	Philipp Sauer, Marcel Steinmetz, Robert Kuennemann and Joerg Hoffmann
	Efficient Reasoning about Infeasible One Machine Sequencing	Raúl Mencía, Carlos Mencía and Joao Marques-Silva
	Sensitivity Analysis for Dynamic Control of PSTNs with Skewed Distributions (short)	Rosy Chen, Yiran Ma, Siqi Wu and James Boerkoel
	Parallel Batch Processing for the Coating Problem	Matthias Horn, Emir Demirović and Neil Yorke-Smith
14:00-15:30	IPC Results 1 (T1, chair: Mauro Vallati)	
	Classical Planning Track	Daniel Fišer and Florian Pommerening
	Probabilistic Planning Track	Ayal Taitler and Scott Sanner
	Numeric Planning Track	Joan Espasa Arxer and Enrico Scala
15:30-16:00	COFFEE BREAK (foyer - ground floor)	
16:00-17:00	Main 4 - RL and Pathfinding (N1, chair: Daniel Harabor)	
	Planning in Multi-Agent Domains with Untruthful Announcements	Loc Pham, Tran Cao Son and Enrico Pontelli
	Automatic Metamorphic Test Oracles for Action-Policy Testing	Jan Eisenhut, Álvaro Torralba, Maria Christakis and Joerg Hoffmann
	Act-Then-Measure: Reinforcement Learning for Partially Observable Environments with Active Measuring	Merlijn Krale, Thiago D. Simão and Nils Jansen
	Convexity Hierarchies in Grid Networks	Johannes Blum, Sabine Storandt and Ruoying Li
16:00-17:00	Journal 1 (T1, chair: Christian Muise)	
	Planning with Perspectives -- Decomposing Epistemic Planning using Functional STRIPS	Guang Hu, Tim Miller and Nir Lipovetzky

	Unavoidable deadends in deterministic partially observable contingent planning	Guy Shani, Lera Shtotland, Dorin Shmaryahu and Ronen Brafman
	Online Learning of Variable Ordering Heuristics for Constraint Optimisation Problems	Floris Doolaard and Neil Yorke-Smith
17:00-18:30	Poster (foyer - 1. floor) and System Demo Session (N6, N7, N9)	
	# Title	Authors
1	189 DynamicWeight Setting for Personnel Scheduling with Many Objectives	Lucas Kletzander and Nysret Musliu
2	322 Efficient Evaluation of Large Abstractions for Decoupled Search: Merge-and-Shrink and Symbolic Pattern Databases	Daniel Gnad, Silvan Sievers and Álvaro Torralba
3	331 Using Simple Incentives to Improve Two-Sided Fairness in Ridesharing Systems	Ashwin Kumar, Yevgeniy Vorobeychik and William Yeoh
4	349 Approximating the Value of Collaborative Team Actions for Efficient Multiagent Navigation in Uncertain Graphs	Martina Stadler, Jacopo Banfi and Nicholas Roy
5	362 Domain Specific Situated Planning - Dissertation Abstract	Devin Thomas
6	717 Finding Matrix Multiplication Algorithms with Classical Planning	David Speck, Paul Höft, Daniel Gnad and Jendrik Seipp
7	1299 Fast and Robust Resource-Constrained Scheduling with Graph Neural Networks	Florent Teichteil-Königsbuch, Guillaume Pováda, Guillermo Gonzalez de Garibay Barba, Tim Luchterhand and Sylvie Thiebaux
8	1564 Automation-Guided Curriculum Generation for Reinforcement Learning Agents	Yash Shukla, Abhishsek Kulkarni, Robert Wright, Alvaro Velasquez and Jivko Sinapov
9	1871 Landmark Progression in Heuristic Search	Clemens Büchner, Thomas Keller, Salomé Eriksson and Malte Helmert
10	2500 Combining Clinical and Spatial Constraints into Temporal Planning to Personalize Physical Rehabilitation	Alessandro Umbrico, Marco Benadduci, Roberta Bevilacqua, Amedeo Cesta, Elvira Maranesi, Andrea Orlandini, Gabriella Cortellessa and Francesca Fracasso
11	3343 Planning with Perspectives -- Decomposing Epistemic Planning using Functional STRIPS	Guang Hu, Tim Miller and Nir Lipovetzky
12	3452 Operator Pruning using Lifted Mutex Groups via Compilation on Lifted Level	Daniel Fišer

13	3549	Safety Shielding under Delayed Observation	Filip Cano Córdoba, Alexander Palmisano, Martin Fränzle, Roderick Bloem and Bettina Könighofer
14	4148	Timed Partial Order Inference Algorithm	Kandai Watanabe, Bardh Hoxha, Danil Prokhorov, Georgios Fainekos, Morteza Lahijanian, Sriram Sankaranarayanan and Tomoya Yamaguchi
15	4629	Deceptive Reinforcement Learning in Model-Free Domains	Alan Lewis and Tim Miller
16	4882	Planning for Temporally Extended Goals in Pure-Past Linear Temporal Logic	Luigi Bonassi, Giuseppe De Giacomo, Marco Favorito, Francesco Fuggitti, Alfonso Emilio Gerevini and Enrico Scala
17	5455	Planning with Multi-agent Belief using Justified Perspectives	Guang Hu, Tim Miller and Nir Lipovetzky
18	5733	Combining Heuristic Search and Linear Programming to Compute Realistic Financial Plans	Alberto Pozanco, Kassiani Papasotiriou and Daniel Borrajo
19	5858	Planning for Attacker Entrapment in Adversarial Settings	Brittany Cates, Anagha Kulkarni and Sarath Sreedharan
20	6364	Planning for Manipulation Among Movable Objects: Deciding Which Objects Go Where, In What Order, And How	Dhruv Saxena and Maxim Likhachev
21	6492	Moving trains like pebbles: a feasibility study on tree yards	Issa Hanou, Mathijs de Weerd and Jesse Mulderij
22	6666	Fixing Plans for PDDL+ Problems: Theoretical and Practical Implications	Francesco Percassi, Enrico Scala and Mauro Vallati
23	6685	Act-Then-Measure: Reinforcement Learning for Partially Observable Environments with Active Measuring	Merlijn Krale, Thiago D. Simão and Nils Jansen
24	7001	Understanding Natural Language in Context	Avichai Levy and Erez Karpas
25	7212	Exploration Policies for On-the-Fly Controller Synthesis: A Reinforcement Learning Approach	Tomás Delgado, Marco Sánchez Sorondo, Víctor Braberman and Sebastián Uchitel
26	7227	Computing Domain Abstractions for Optimal Classical Planning with Counterexample-Guided Abstraction Refinement	Raphael Kreft, Clemens Büchner, Silvan Sievers and Malte Helmert

27	7324	Task Phasing: Automated Curriculum Learning from Demonstrations	Vaibhav Bajaj, Guni Sharon and Peter Stone
28	7752	Optimization Methods for Facility Location in Reverse Logistics	Ida Gjergji and Nysret Musliu
29	8471	Grounding Planning Tasks Using Tree Decompositions and Iterated Solving	Augusto B. Corrêa, Markus Hecher, Malte Helmert, Davide Mario Longo, Florian Pommerening and Stefan Woltran
30	9037	Goal Recognition with Timing Information	Chenyuan Zhang, Charles Kemp and Nir Lipovetzky
31	9210	Safe MDP Planning by Learning Temporal Patterns of Undesirable Trajectories and Averting Negative Side Effects	Siow Meng Low, Akshat Kumar and Scott Sanner
32	9685	A Planning Approach to Repair Domains with Incomplete Action Effects	Alba Gragera, Raquel Fuentetaja, Ángel García-Olaya and Fernando Fernández

WEDNESDAY (July 12, 2023)

09:00-09:10	ICAPS 2023 Updates (N1)	
09:10-10:10	Invited Talk: (N1, chair: Roni Stern)	
	(Formal) Languages Help AI Agents Learn, Plan, and Remember	Sheila McIlraith
10:10-11:10	Main 5 - Multi-Agent Planning (N1, chair: Ayal Taitler)	
	Planning with Multi-agent Belief using Justified Perspectives	Guang Hu, Tim Miller and Nir Lipovetzky
<i>online</i>	<i>Deadline-Aware Multi-Agent Tour Planning</i>	<i>Taoan Huang, Vikas Shivashankar, Michael Caldara, Joseph Durham, Jiaoyang Li, Bistra Dilkina and Sven Koenig</i>
	Planning for Attacker Entrapment in Adversarial Settings	Brittany Cates, Anagha Kulkarni and Sarath Sreedharan
	Model Checking for Adversarial Multi-Agent Reinforcement Learning with Reactive Defense Methods	Dennis Groß, Christoph Schmidl, Nils Jansen and Guillermo Perez
10:10-11:10	Learning 2 (T1, chair: Alberto Camacho)	
	Imitation Improvement Learning for Large-scale Capacitated Vehicle Routing Problems	Viet Bui and Tien Mai
	Timed Partial Order Inference Algorithm	Kandai Watanabe, Bardh Hoxha, Danil Prokhorov, Georgios Fainekos, Morteza Lahijanian, Sriram Sankaranarayanan and Tomoya Yamaguchi
	Goal Recognition as a Deep Learning Task: the GRNet Approach	Mattia Chiari, Alfonso Emilio Gerevini, Luca Putelli, Francesco Percassi and Ivan Serina
	Safe MDP Planning by Learning Temporal Patterns of Undesirable Trajectories and Averting Negative Side Effects	Siow Meng Low, Akshat Kumar and Scott Sanner
11:10-11:40	COFFEE BREAK (foyer - ground floor)	
11:40-12:40	Main 6 - Planning under Uncertainty (N1, chair: Stefan Edelkamp)	
	Safety Shielding under Delayed Observation (short)	Filip Cano Córdoba, Alexander Palmisano, Martin Fränzle, Roderick Bloem and Bettina Könighofer
	A Column Generation Approach to Correlated Simple Temporal Networks	Andrew Murray, Ashwin Arulsevan, Michael Cashmore, Marc Roper and Jeremy Frank
	A Theory of Merge-and-Shrink for Stochastic Shortest Path Problems	Thorsten Klöbner, Álvaro Torralba, Marcel Steinmetz and Silvan Sievers

online	<i>A Best-First Search Algorithm for FOND Planning and Heuristic Functions to Optimize Decompressed Solution Size</i>	<i>Frederico Messa and André Grahl Pereira</i>
	Online Planning for Constrained POMDPs with Continuous Spaces through Dual Ascent (short)	Arec Jamgochian, Anthony Corso and Mykel Kochenderfer
11:40-12:40	Applications 1 (T1, chair: Hana Rudová)	
	Heuristic Search For Physics-Based Problems: Angry Birds in PDDL+	Wiktor Piotrowski, Yoni Sher, Sachin Grover, Roni Stern and Shiwali Mohan
	Solving the Multi-Choice Two Dimensional Shelf Strip Packing Problem with Time Windows	Matthias Horn, Emir Demirović and Neil Yorke-Smith
	Combining Clinical and Spatial Constraints into Temporal Planning to Personalize Physical Rehabilitation	Alessandro Umbrico, Marco Benadduci, Roberta Bevilacqua, Amedeo Cesta, Francesca Fracasso, Elvira Maranesi, Andrea Orlandini and Gabriella Cortellessa
	Modeling and Solving Parallel Machine Scheduling with Contamination Constraints in the Agricultural Industry (Abstract)	Felix Winter, Sebastian Meiswinkel, Nysret Musliu, Daniel Walkiewicz
12:40-14:00	LUNCH (foyer - 1. floor)	
14:00-15:30	Main 7 - Classical Planning and Search (N1, chair: Jane Jean Kiam)	
	On Using Action Inheritance and Modularity in PDDL Domain Modelling	Alan Lindsay
	Landmark Progression in Heuristic Search	Clemens Büchner, Thomas Keller, Salomé Eriksson and Malte Helmert
	Grounding Planning Tasks Using Tree Decompositions and Iterated Solving	Augusto B. Corrêa, Markus Hecher, Malte Helmert, Davide Mario Longo, Florian Pommerening and Stefan Woltran
	Efficient Evaluation of Large Abstractions for Decoupled Search: Merge-and-Shrink and Symbolic Pattern Databases	Daniel Gnad, Silvan Sievers and Álvaro Torralba
	Computing Domain Abstractions for Optimal Classical Planning with Counterexample-Guided Abstraction Refinement (short)	Raphael Kreft, Clemens Büchner, Silvan Sievers and Malte Helmert
	Finding Matrix Multiplication Algorithms with Classical Planning (short)	David Speck, Paul Höft, Daniel Gnad and Jendrik Seipp
	Runahead A* : Speculative Parallelism for A* with Slow Expansions	Mohammad Bakhshalipour, Mohamad Qadri, Dominic Guri, Seyed Borna Ehsani, Maxim Likhachev and Phillip Gibbons
14:00-15:30	IPC Results 2 & Announcements (T1, chair: Mauro Vallati)	

	Learning Track	Jendrik Seipp and Javier Segovia-Aguas
	HTN Tracks	Ron Alford, Dominik Schreiber and Gregor Behnke
	Multi-Agent Path Finding Competition Announcement	Daniel Harabor
15:30-16:00	COFFEE BREAK (foyer - ground floor)	
16:00-17:00	Awards Ceremony (N1)	
17:00-18:30	Community meeting (N1)	
19:45	MEETING POINT (Dvořákovo nábřeží, Landing place No. 9)	
20:00-22:30	DINNER ON A BOAT	

THURSDAY (July 13, 2023)

09:00-09:10	ICAPS 2023 Updates (N1)	
09:10-10:10	Invited Talk: (N1, chair: Sven Koenig)	
	Formal and Natural Arguments for Effective Explanations	Serena Villata
10:10-11:10	Main 8 - Optimisation (N1, chair: Alexnder Shleyfman)	
	Domain-Independent Dynamic Programming: Generic State Space Search for Combinatorial Optimization	Ryo Kuroiwa and Chris Beck
	Solving Domain-Independent Dynamic Programming Problems with Anytime Heuristic Search	Ryo Kuroiwa and Chris Beck
	An Efficient Hybrid Genetic Algorithm for the Quadratic Traveling Salesman Problem	Quang Anh Pham, Hoong Chuin Lau, Minh Hoàng Hà and Lam Vu
	A Constraint Programming Solution to the Guillotine Rectangular Cutting Problem	Sergey Polyakovskiy and Peter Stuckey
10:10-11:10	Learning 3 (T1, chair: Ivan Serina)	
	Fast and Robust Resource-Constrained Scheduling with Graph Neural Networks	Florent Teichteil-Königsbuch, Guillaume Povéda, Guillermo Gonzalez de Garibay Barba, Tim Luchterhand and Sylvie Thiebaux
online	<i>Learning Local Heuristics for Search-Based Navigation Planning (short)</i>	<i>Rishi Veerapaneni, Muhammad Suhail Saleem and Maxim Likhachev</i>
	Automaton-guided Curriculum Generation for Reinforcement Learning Agents	Yash Shukla, Abhishsek Kulkarni, Robert Wright, Alvaro Velasquez and Jivko Sinapov
	Task Phasing: Automated Curriculum Learning from Demonstrations	Vaibhav Bajaj, Guni Sharon and Peter Stone
	Improving Zero-Shot Coordination Performance Based on Policy Similarity (short)	Lebin Yu, Yunbo Qiu, Quanming Yao, Xudong Zhang and Jian Wang
11:10-11:40	COFFEE BREAK (foyer - ground floor)	
11:40-12:40	Main 9 - Explanation and Recognition (N1, chair: Erez Karpas)	
online	<i>Explainable Goal Recognition: A Framework Based on Weight of Evidence</i>	<i>Abeer Alshehri, Timothy Miller and Mor Vered</i>
	Goal Recognition with Timing Information	Chenyuan Zhang, Charles Kemp and Nir Lipovetzky
	Generalizing Action Justification and Causal Links to Policies	Sarath Sreedharan, Christian Muise and Subbarao Kambhampati
	Adaptation and Communication in Human Robot Teaming to Handle Discrepancy in Agents' Beliefs about Plans	Yuening Zhang and Brian Williams
11:40-12:40	Applications 2 (T1, chair: Neil Yorke-Smith)	

	Dynamic Weight Setting for Personnel Scheduling with Many Objectives	Lucas Kletzander and Nysret Musliu
	Automated Planning to Prioritise Digital Forensics Investigation Cases Containing Indecent Images of Children	Saad Khan, Simon Parkinson, Monika Roopak, Rachel Armitage and Andrew Barlow
	Combining Heuristic Search and Linear Programming to Compute Realistic Financial Plans (short)	Alberto Pozanco, Kassiani Papatotiriou, Daniel Borrajo and Manuela Veloso
	Moving trains like pebbles: a feasibility study on tree yards	Issa Hanou, Mathijs de Weerd and Jesse Mulderij
12:40-14:00	LUNCH (foyer - 1. floor)	
14:00-15:30	Main 10 - Multi-Agent Pathfinding (N1, chair: Daniel Harabor)	
	Exploiting Geometric Constraints in Multi-Agent Pathfinding	Dor Atzmon, Sara Bernardini, Fabio Fagnani and David Fairbairn
	Binary Branching Multi-Objective Conflict-Based Search for Multi-Agent Path Finding	Zhongqiang Ren, Jiaoyang Li, Han Zhang, Sven Koenig, Sivakumar Rathinam and Howie Choset
	Cost Splitting for Multi-Objective Conflict-Based Search	Cheng Ge, Han Zhang, Jiaoyang Li and Sven Koenig
	Multi Agent Path Finding Under Obstacle Uncertainty	Bar Shofer, Guy Shani and Roni Stern
	Using Simple Incentives to Improve Two-Sided Fairness in Ridesharing Systems	Ashwin Kumar, Yevgeniy Vorobeychik and William Yeoh
online	<i>Priority-Based Search for the Virtual Network Embedding Problem</i>	<i>Yi Zheng, Hang Ma, Sven Koenig, Erik Kline and T. K. Satish Kumar</i>
14:00-15:00	Journal 2 (T1, chair: Nicola Gigante)	
	ProSeqqo: A Generic Solver for Process Planning and Sequencing in Industrial Robotics	László Zahorán and András Kovács
	Decentralized Observation Allocation for a Large-Scale Constellation	Shreya Parjan and Steve Chien
	Multi-UAV Planning for Cooperative Wildfire Coverage and Tracking with Quality-of-Service Guarantees	Esmail Seraj, Andrew Silva and Matthew Gombolay
	Search-based task and motion planning for hybrid systems: Agile autonomous vehicles	Zlatan Ajanovic, Enrico Regolin, Barys Shyrokau, Hana Čatić, Martin Horn and Antonella Ferrara
15:30-16:00	COFFEE BREAK (foyer - ground floor)	
16:00-17:00	Main 11 - Multi-Agent Pathfinding and Search (N1, chair: Christophe Guettier)	
	Exact Anytime Multi-Agent Path Finding Using Branch-and-Cut-and-Price and Large Neighborhood Search (short)	Edward Lam, Daniel Harabor, Peter J. Stuckey and Jiaoyang Li

	Beyond Pairwise Reasoning in Multi-Agent Path Finding	Bojie Shen, Zhe Chen, Jiaoyang Li, Muhammad Aamir Cheema, Daniel Harabor and Peter Stuckey
	The Small Solution Hypothesis for MAPF on Strongly Connected Directed Graphs Is True	Bernhard Nebel
online	<i>Efficient Multi-Query Bi-Objective Search via Contraction Hierarchies</i>	<i>Han Zhang, Oren Salzman, Ariel Felner, T. K. Satish Kumar, Carlos Hernández Ulloa and Sven Koenig</i>
	W-restrained Bidirectional Bounded-Suboptimal Heuristic Search (short)	Dor Atzmon, Shahaf Shperberg, Netanel Sabah, Ariel Felner and Nathan Sturtevant
17:00-17:10	ICAPS 2023 Closing (N1)	