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INVITED TALKS

ECCAI Invited Speaker

Jörg Hoffmann, Saarland University

Simulated Penetration Testing: From "Dijkstra" to "Turing Test++"

Tuesday, June 9, 10.30-11.30 Hirsch Auditorium

Abstract Penetration testing (pentesting) is a well-established method for identifying security weaknesses by conducting friendly attacks. Simulated pentesting automates this process, through designing a model of the system at hand, and using model-based attack planning to generate the attacks. Classical planning variants of this idea are being used commercially by the pentesting industry since 2010. Such models can pinpoint potentially dangerous combinations of known vulnerabilities, but ignore the incomplete knowledge characteristic of hacking from the attacker's point of view. Yet, ideally, the simulation should conduct its attacks the same way a real attacker would. Hence the ultimate goal is much more ambitious: to realistically simulate a human hacker. This is a grand vision indeed; e.g., the classical Turing Test can be viewed as a sub-problem. Taking a more practical perspective, the simulated pentesting model space spans a broad range of sequential decision making problems. Analyzing prior work in AI and other relevant areas, we derive a systematization of this model space, highlighting a multitude of interesting challenges to AI sequential decision making research.



Bio Jörg Hoffmann obtained a PhD from the University of Freiburg, Germany, in 2002, with a thesis that won the ECCAI Dissertation award. After positions at Max Planck Institute for Computer Science (Saarbruecken, Germany), the University of Innsbruck (Austria), SAP Research (Karlsruhe, Germany), and INRIA (Nancy, France), he is now a Professor of CS at Saarland University, Saarbruecken, Germany.

He has published more than 100 scientific papers, has been Conference Co-Chair of ICAPS'10 and Program Co-Chair of AAAI'12, and received several ICAPS Best Paper Awards as well as the IJCAI-JAIR Best Paper Prize 2005. His research interests span a broad range of topics relevant to AI planning, with a core focus on classical heuristic search planning but including also topics such as domain analysis, richer planning frameworks, and a variety of related areas and applications.

ABC Invited Speaker

Joelle Pineau, McGill University

Improving the Design and Discovery of Dynamic Treatment Strategies Using Recent Results in Sequential Decision-Making

Wednesday, June 10, 10.30-11.30 Hirsch Auditorium

Abstract In recent years, we have investigated algorithmic methods for automatically discovering and optimizing sequential treatments for chronic and life-threatening diseases. In this talk I will discuss two aspects of this work, first the problem of efficiently collecting data to learn good sequential treatment strategies, and second the problem of using data collected in multi-stage sequential trials to discover treatment strategies that are tailored to patient characteristics and time-dependent outcomes. The methods will be illustrated using our recent work on learning adaptive neurostimulation policies for the treatment of epilepsy. Brief examples will be drawn from some of our other projects, including developing dynamic treatment regimes for mental illness, diabetes and cancer.



Bio Joelle Pineau is an Associate Professor at the School of Computer Science at McGill University, co-director of the Reasoning and Learning Lab, and member of the Centre for Intelligent Machines (CIM). Her research focuses on developing new models and algorithms for learning and decision-making in partially observable stochastic domains, and applying these models and algorithms to complex problems in robotics and health-care. She is on the editorial board of the Journal of Artificial Intelligence Research and the Journal of Machine Learning Research, and served as the program chair (2012) and general chair (2015) for the International Conference on Machine Learning.

ICAPS/SOCS Invited Speaker

Stuart Russell, University of California, Berkeley
Effective Decision Making

Wednesday, June 11, 14.00-15.00 Hirsch Auditorium

Abstract How can we design systems that can achieve reasonable decision quality over long time scales? One approach is based on temporal abstraction, allowing deliberation over action choices of long duration. The talk will explore this idea in the contexts of classical planning and hierarchical reinforcement learning. Two important open problems will be discussed: the adequacy of standard STRIPS-like languages for defining actions and the possibility of metalevel control over hierarchical deliberation. [Joint work with Ron Parr, David Andre, Bhaskara Marthi, Andy Zimdars, David Latham, Carlos Guestrin, Jason Wolfe, and Nick Hay]



Bio Stuart Russell received his B.A. with first-class honours in physics from Oxford University in 1982 and his Ph.D. in computer science from Stanford in 1986. He then joined the faculty of the University of California at Berkeley, where he is Professor (and formerly Chair) of Electrical Engineering and Computer Sciences and holder of the Smith-Zadeh Chair in Engineering. He is also an Adjunct Professor of Neurological Surgery at UC San Francisco. He is a recipient of the Presidential Young Investigator Award of the National Science Foundation, the IJCAI Computers and Thought Award, the Mitchell Prize of the American Statistical Association and the International Society for Bayesian Analysis, and the ACM Karlstrom Outstanding Educator Award. In 1998, he gave the Forsythe Memorial Lectures at Stanford University and from 2012 to 2014 he held the Chaire Blaise Pascal in Paris. He is a Fellow of the American Association for Artificial Intelligence, the Association for Computing Machinery, and the American Association for the Advancement of Science. He has published over 150 papers on a wide range of topics in artificial intelligence including machine learning, probabilistic reasoning, knowledge representation, planning, real-time decision making, multitarget tracking, computer vision, computational physiology, and global seismic monitoring. His books include "The Use of Knowledge in Analogy and Induction", "Do the Right Thing: Studies in Limited Rationality" (with Eric Wefald), and "Artificial Intelligence: A Modern Approach" (with Peter Norvig).

ICAPS 2015 Awards

Outstanding Paper Award

Sequencing Operator Counts

Toby Davies, Adrian R. Pearce, Peter J. Stuckey, and Nir Lipovetzky

Outstanding Paper Award Honorable Mention

Domain Model Acquisition in the Presence of Static Relations in the LOP System

Peter Gregory and Stephen Cresswell

Outstanding Student Paper Award

In-silico Behavior Discovery System: An Application of Planning in Ethology

Haibo Wang, Hanna Kurniawati, Surya Singh, and Mandyam Srinivasan

Outstanding Student Paper Award Honorable Mention

Modeling and Computation in Planning: Better Heuristics from More Expressive Languages

Guillem Francès and Hector Geffner

Distinguished Dissertation Award

Exploiting Relevance to Improve Robustness and Flexibility in Plan Generation and Execution

Christian Muise

Distinguished Dissertation Award Honorable Mention

Distributed Algorithms for Privacy-Preserving Multi-Agent Planning

Raz Nissim

Student Awards sponsored by  Microsoft

SCHEDULE SUNDAY, JUNE 7

08:00-17:00	Registration					
Room	B	C	D	E	F	G
AM	DMAP	T7	DC	T1	MOCHAP	DC
10:00-10:30	Coffee Break (Location: Hirsch Lobby)					
	DMAP	T7	DC	COPLAS	MOCHAP	DC
12:30-14:00	Lunch Break					
PM	DMAP	T5	DC	PLANROB	MOCHAP	—
15:30-16:00	Coffee Break (Location: Hirsch Lobby)					
	DMAP	T6	—	PLANROB	MOCHAP	—

Workshops

- W1 **COPLAS** *Constraint Satisfaction Techniques for Planning and Scheduling Problems (E)*
- W2 **DMAP** *Workshop on Distributed and Multi-Agent Planning (B)*
- W3 **PlanRob** *Planning and Robotics Workshop (E)*
- W4 **MOCHAP** *Workshop on Model-Checking and Automated Planning (F)*

Tutorials

- T1 *Constraint Modeling for Planning (E)*
- T5 *Latest Trends in Abstraction Heuristics for Classical Planning (C)*
- T6 *LP-based Heuristics for Cost-optimal Classical Planning (C)*
- T7 *Risk Bounded Scheduling and Path Planning (C)*

Rooms

- B,C,D – Entrance (patio) level
- E,F,G – Level above
- A - Hirsch Auditorium at the Entrance (patio) level

SCHEDULE MONDAY, JUNE 8

08:00-17:00	Registration					
Room	B	C	D	E	F	G
AM	PLANROB	HSDIP	—	T4	T2	—
10:00-10:30	Coffee Break (Location: Hirsch Lobby)					
	PLANROB	HSDIP	SPARK	WIPC	T2	—
12:30-14:00	Lunch Break					
PM	PLANROB	HSDIP	PAL	T3	SPARK	—
15:30-16:00	Coffee Break (Location: Hirsch Lobby)					
	PLANROB	HSDIP	PAL	WIPC	SPARK	—
19:30-21:15	Opening Reception (Location: Tower of David)					
21:30-22:15	"Night Spectacular" Show (Location: Tower of David)					

Workshops

W3 **PlanRob** *Planning and Robotics Workshop (B)*

W5 **SPARK** *Scheduling and Planning Applications AM (D) PM (F)*

W6 **WIPC** *International Planning Competition (E)*

W7 **HSDIP** *Heuristics and Search for Domain-independent Planning (C)*

W8 **PAL** *Planning and Learning (D)*

Tutorials

T2 *Advances in Combinatorial Optimization with Applications to Planning (F)*

T3 *Planning with PDDL+(E)*

T4 *Introduction to Planning Domain Modeling in RDDDL (E)*

Tutorials

Constraint Modeling for Planning

Roman Barták, Charles University, Czech Republic

Sunday, June 7, 08.30-10.00 Room E

Planning problems can be solved by translating them to other formalisms such as constraint satisfaction. This tutorial explains mainstream constraint satisfaction techniques used in current constraint solvers, namely arc consistency, global constraints, and their integration to search algorithms. In the second part, the tutorial will survey existing constraint models for classical planning problems with the focus on modeling causal relations between the actions. Models for both sequential and parallel planning will be explained and compared.

Risk Bounded Scheduling and Path Planning

Brian Williams and Erez Karpas, MIT, USA

Sunday, June 7, 08.30-12.30 Room C

Plan executives must often map simple discrete activities specified in the plan to continuous control trajectories or motions. These executives must ensure correctness despite uncertainty in the environment, for example, due to temporal delays, actuator disturbances and sensor-noise. To adapt, plan executives should dynamically adjust the timing of activities and control trajectories that implement these activities, and activity plan descriptions should offer flexibility in temporal and state constraints, needed to perform these adaptations. When uncertainty is specified probabilistically, successful plan execution cannot be guaranteed as there is always some risk of failure. In this case, activity plans should include specifications of what level of risk of failure is acceptable, and plan executives should ensure that they operate within this risk-bound. We will present two tutorials in sequence:

08.30-10.00 Path Planning with Stochastic Dynamics

10.30-12.30 Scheduling Activities with Probabilistic Durations

Both tutorials will present the risk allocation methodology, and techniques for performing risk allocation - each in the context of its respective problem. Each tutorial is independent: you are welcome to attend either of these tutorials, or both.

Latest Trends in Abstraction Heuristics for Classical Planning

Malte Helmert, Jendrik Seipp, and Silvan Sievers, University of Basel, Switzerland

Sunday, June 7, 14.00-15.30 Room C

Abstraction heuristics such as pattern databases (PDBs) and merge-and-shrink have been successfully used to solve classical planning tasks optimally for many years. More recently, new abstraction heuristics and heuristic combination methods have been developed that go beyond this previous state of the art. In this tutorial, we aim to cover both the established and the latest state-of-the-art methods of computing abstraction heuristics. The tutorial will be self-contained for everyone familiar with classical planning and heuristic search. However, our main focus will be on the most recent state-of-the-art techniques, which might be interesting especially for people with a research background in this area.

LP-based Heuristics for Cost-optimal Classical Planning

Florian Pommerening, Gabriele Röger, and Malte Helmert, University of Basel, Switzerland

Sunday, June 7, 16.00-17.30 Room C

Linear programs (LPs) provide a powerful optimization framework and can be efficiently solved in polynomial time. Therefore, they appear to be well-suited to form the basis for highly informed heuristics for classical planning. Since solving a typical planning instance optimally requires to evaluate a heuristic for millions of individual states, it nevertheless was for a long time expected to be too time-intensive to solve a LP for every single state. However, several recent heuristics show that this can not only be practically feasible but also be very beneficial. This tutorial will cover most of these recent LP-based heuristics: optimal cost partitioning for abstractions, post-hoc optimization of heuristic estimates, optimal estimates from disjunctive action landmarks, the state-equation heuristic, potential heuristics, and an LP-based heuristic for relaxed planning. We also will introduce a unifying framework that allows to beneficially combine these heuristics. Participants need no background on linear programming but basic knowledge about heuristic search is desirable.

Advances in Combinatorial Optimization with Applications to Planning

Rina Dechter, University of California, Irvine, USA

Monday, June 8, 8.30-12.30 Room F

The last ten years have seen impressive progress in the techniques used for solving combinatorial optimization in graphical models. Because

these techniques apply to a variety of graphical models (probabilistic or not), these techniques have a wide scope of applicability in AI. The area is also mature enough to make it possible to give a clear, structured description on the most important contributions, in terms of inference, bounded inference, search and problem decomposition. Solvers implementing these techniques are available and have been applied on real problems. For the planning community, the notion of Planning as Inference became more mainstream in recent years and the ideas and principles presented should help develop planning scheme using the methodology of probabilistic inference.

This tutorial will present state-of-the-art algorithms for solving combinatorial optimization tasks in different graphical models (Bayesian networks, Markov networks, Constraint networks) and demonstrate their applicability to Planning under uncertainty, in particular for influence diagrams, POMDPS and to conformant planning.

Introduction to Planning Domain Modeling in RDDL

Scott Sanner, Australian National University & NICTA, Australia

Monday, June 8, 08.30-10.00 Room E

RDDL is the Relational Dynamic Influence Diagram Language, the domain modeling language used in the ICAPS 2011 and 2014 International Probabilistic Planning Competitions. RDDDL has been developed to compactly model real-world planning problems that use boolean, multi-valued, integer and continuous variables, unrestricted concurrency, non-fluents, probabilistic independence among complex effects (important for exogenous events), aggregation operators in addition to quantifiers, and partial observability. While RDDDL addresses some of the probabilistic modeling limitations of PPDDL, it's deterministic subset also addresses some modeling limitations of PDDL (e.g., models needing nonlinear difference equations or unrestricted concurrency). This tutorial provides a general introduction to RDDDL and its extension in 2014 to RDDDL2, it's semantics, and a number of detailed examples like elevator and traffic control to demonstrate it's expressive power. It also provides a brief introduction to the rddlsim software that permits the simulation, evaluation, and visualization of planners and planning domains.

Planning with PDDL+

Daniele Magazzeni, King's College London, UK

Monday, June 8, 14.00-15.30 Room E

Hybrid systems are systems with both continuous control variables and discrete logical modes. Many interesting real problems are indeed hybrid systems, including oil refinery management, mission planning for autonomous vehicles, supply management and disaster recovery. Planning in these domains requires rich models to capture the interaction between discrete and continuous change, and methods for reasoning with temporal, spatial and continuous constraints. PDDL+ is the extension of PDDL for modelling hybrid systems, through continuous processes and events. The tutorial provides an overview of PDDL+, by showing some concrete examples on how to model hybrid domains using PDDL+. Then an overview of existing techniques for PDDL+ planning in these domains is provided. Finally, some recent challenging case studies are presented and open problems are discussed.

DOCTORAL CONSORTIUM

SUNDAY, JUNE 7, 08.30-16.00

Session 1

08.30-12.30 Room G

Session 2

08.30-12.30 Room D

Session 3

14.00-16.00 Room D



ISF RESEARCH WORKSHOPS SCHEDULES

Constraint Satisfaction Techniques for Planning and Scheduling Problems

Sunday, June 7, Room E

08.30-10.00 Tutorial T1

Roman Barták

Constraint Modeling for Planning

10.30-10.40 Workshop Opening

10.40 Miquel Bofill, Joan Espasa Arxer, and Mateu Villaret

The RANTANPLAN planner: System description

11.05 Bryan O’Gorman, Eleanor Rieffel, Minh Do, and Davide Venturelli, and Jeremy Frank

Compiling planning into quantum optimization problems: a comparative study

11.30 Andre Cire, Elvin Coban and John Hooker

Logic-based Benders Decomposition for Planning and Scheduling: A Computational Analysis

11.55 Roman Barták and Jan Jelínek

A Constraint-based Optimizer for Scheduling Solar Array Operations on the International Space Station

Distributed and Multi-Agent Planning Workshop

Sunday, June 7, Room B

08.25-08.30 Welcome

08.30 Ronen Brafman

A Privacy Preserving Algorithm for Multi-Agent Planning and Search

09.00 Guy Shani, Shlomi Maliah, and Roni Stern

Privacy Preserving Pattern Databases

09.30 Jan Tozicka, Jan Jakubuv, and Antonín Komenda
On Internally Dependent Public Actions in Multiagent Planning

10.00-10.30 Coffee Break

Session 2

10.30 Xia Qu and Prashant Doshi
Improved Planning for Infinite-Horizon Interactive POMDPs Using Probabilistic Inference

11.00 Nicolas Le Guillarme, Abdel-Ilhah Mouaddib, Xavier Lerouvreur, and Sylvain Gatepaille
A Generative Game-Theoretic Framework for Adversarial Plan Recognition

11.30 Rafael C. Cardoso, and Rafael H. Bordini
Combining off-line Multi-Agent Planning with a Multi-Agent System Development Framework

12.00 Josef Hájíček and Antonín Komenda
Narrative Planning Agents Under a Cognitive Hierarchy

12.30-14.00 Lunch Break

Session 3

14.00 Christian Muise, Vaishak Belle, Paolo Felli, Sheila McIlraith, Tim Miller, Adrian Pearce and Liz Sonenberg
Planning Over Multi-Agent Epistemic States: A Classical Planning Approach (Amended Version)

14.30 Thorsten Engesser, Thomas Bolander, Robert Mattmüller, and Bernhard Nebel
Cooperative Epistemic Multi-Agent Planning With Implicit Coordination

15.00 Michal Štolba, Antonín Komenda and Daniel Fiser
Comparison of RPG-based FF and DTG-based FF Distributed Heuristics

15.30.00-16.00 Coffee Break

Session 4

16.00 Christian Muise, Paolo Felli, Tim Miller, Adrian R. Pearce, and Liz Sonenberg

Leveraging FOND Planning Technology to Solve Multi-Agent Planning Problems

16.30-17.30 Competition and Discussion

16.30 Michal Štolba, Antonín Komenda and Dániel L. Kovács

CoDMAP - Competition of Distributed and Multiagent Planners

17.00 Discussion

Workshop on Model-Checking and Automated Planning

Sunday, June 7, Room F

08.45-09.00 Welcome and Opening Remarks

Session 1

09.00 Keynote 1 Paolo Traverso

20 Years of Planning via Model Checking: From Theory to Practice

10.00 Dominik Winterer, Robert Mattmüller, and Martin Wehrle

Stubborn Sets for Fully Observable Nondeterministic Planning

10.00-10.30 Coffee Break

Session 2

11.00 Jonas Thiem, Robert Mattmüller, and Manuela Ortlieb

Counterexample-Guided Abstraction Refinement for POND Planning

11.30 Jorge Torres and Jorge Baier

Compiling Away LTL Planning Goals in Polynomial Time

12.00 Eleni Triantafillou, Jorge Baier, and Sheila McIlraith

A Unifying Framework for Planning with LTL and Regular Expressions

12.30-14.00 Lunch Break

Session 3

14.00 Keynote 2 **Doron Peled**
Commutativity Based Search

15.00 Dragan Bosnacki
On Combining Symmetry with Partial Order Reduction

15.30-16.00 Coffee Break

Session 4

16.00 Patrik Haslum
Diagnosis, Planning, and Related Questions

16.30 Giuseppe Della Penna, Benedetto Intrigila, Daniele Magazzeni,
and Fabio Mercorio
UPMurphi Released: PDDL+ Planning for Hybrid Systems

17.00 Sergiy Bogomolov
Hybrid Systems: Guided Search, Abstractions, and Beyond

17.30-18.00 Panel Session

Workshop on Planning and Robotics

Sunday June 7 (PM) Room E

13.50 PlanRob WS Introduction

14.00 Keynote **Reid Simmons (CMU)**
"Robust Autonomy"

Session "Context and Constraint Reasoning"

15.00 Solomon Eyal Shimony, Gera Weiss, and Liat Cohen
Estimating the Probability of Meeting a Deadline in Hierarchical Plans

15:30-16:00 Coffee Break

Session "Task, motion and path planning"

16.00 Jonathan Ferrer-Mestres, Guillem Francès, and Hector Geffner
Planning with State Constraints and its Application to Combined Task and Motion Planning

16.30 Weifeng Chen and Martin Müller
Continuous Arvand: Motion Planning with Monte Carlo Random Walks

17.00 Ty Nguyen and Tsz-Chiu Au

Motion Planning for Arrival Time and Velocity Requirements on Non-homogeneous Roads

17.30 Roi Yehoshua, Noa Agmon and Gal Kaminka

Frontier-Based RTDP: A New Approach to Solving the Robotic Adversarial Coverage Problem

Session "Benchmarking"

18.00 Pablo Muñoz, Amedeo Cesta, Andrea Orlandini and Maria D. R-Moreno

A Framework for Performance Assessment of Autonomous Robotic Controllers

18.30 Tim Niemueller, Gerhard Lakemeyer, and Alexander Ferrein

The RoboCup Logistics League as a Benchmark for Planning in Robotics

Monday June 8 Room B

8.55 PlanRob WS Introduction 2

09.00 Keynote **Steve Chien** (NASA JPL)

Using Constraint-based Search to Schedule Science Campaigns for the Rosetta Orbiter

Session "Context and Constraint Reasoning"

10.00 Andreas Hofmann and Paul Robertson

Active Perception: Using Goal Context to Guide Sensing and Other Actions

10.30-11.00 Coffee Break

11.00 Michael Cashmore, Maria Fox, Derek Long, Daniele Magazzeni, Bram Ridder, and Francesco Maurelli

Dynamically Extending Planning Models using an Ontology

Session "Planning and Execution"

11.30 Dylan O'Ceallaigh and Wheeler Ruml

Metareasoning for Concurrent Planning and Execution

12.00 Breelyn Kane Styler and Reid Simmons

Robust Efficient Robot Planning through Varying Model Fidelity

12.30 Enrique Fernandez Gonzalez, Erez Karpas, and Brian Williams
Mixed Discrete-Continuous Heuristic Generative Planning based on Flow Tubes (extended version)

13.00-14.00 Lunch

Session "Multi Robot framework"

14.00 Gal Kaminka

No robot is an island, no team an archipelago: Plan execution for cooperative multi-robot teams

14.30 Mark Roberts, Swaroop Vattam, Ron Alford, Bryan Auslander, Tom Apker, Benjamin Johnson, and David Aha

Goal Reasoning to Coordinate Robotic Teams for Disaster Relief

Session "Human-Robot Interaction"

15.00 Tathagata Chakraborti, Gordon Briggs, Kartik Talamadupula, Matthias Scheutz, David Smith, and Subbarao Kambhampati

Planning for Serendipity

15.30-16.00 Coffee break

16.00 Tathagata Chakraborti, Tony Zhang, David Smith, and Subbarao Kambhampati

Planning with Stochastic Resource Profiles: An Application to Human-Robot Co-habitation

16.30 Mouaddib Abdel-Ilhah, Laurent Jeanpierre, and Shlomo Zilberstein
Handling Advice in MDPs for Semi-Autonomous Systems

17.00-17.30 Panel Session

Scheduling and Planning Applications Workshop

Monday, June 8, (AM) Room **D** (PM) Room **F**

10.00–10.30 Coffee Break

10.30 Introductory Remarks

Session 1. Planning

10.35 Lukas Chrupa and Kristinn R. Thorisson

On Applicability of Automated Planning for Incident Management

11.05 Alexandre Albore, Florent Teichtel-Königsbuch, Nathalie Peyrard, and Régis Sabbadin

Extending an Online (Re)Planning Platform for Crop Mapping with Autonomous UAVs through a Robotic Execution Framework

Session 2. Space

11.35 Gregg Rabideau, Federico Nespoli, and Steve Chien

Heuristic Scheduling of Space Mission Downlinks: A Case study from the Rosetta Mission

12.05 Steve Chien and Martina Troesch

Heuristic Onboard Re-scheduling for an Earth Observing Spacecraft

12.35–14.00 Lunch Break

14.00 Session 3. Temporal Reasoning + Invited Talk

Andrea Micheli, Minh Do, and David Smith

Compiling Away Uncertainty in Strong Temporal Planning with Uncontrollable Durations

14.30 Keynote **Rina Dechter (UCI)**

TBA

15.30-16.00 Coffee Break

Session 4. Scheduling

16.00 Dimitri Bouche and Jean Bresson

Planning and Scheduling Actions in a Computer-Aided Music Composition System

16.30 Konstantinos Agnantis and Ioannis Refanidis

COURSR: Scheduling Composite Educational Objects

17.00 Discussion

Workshop of the International Planning Competition

Monday, June 8 Room E

8.30 Welcome

8.40 Tutorial **Scott Sanner**

Introduction to Planning Domain Modeling in RDDL

10.00-10.30 Coffee break

Session 1

10.40 Michal Štolba, Antonín Komenda, and Daniel Kovacs

Competition of Distributed and Multiagent Planners (CoDMAP)

11.00 Paolo Traverso, Malik Ghallab, and Dana Nau

An IPC Track on Deliberative Acting: Moving the competition ahead towards more relevant scientific challenges

11.20 Christian Muise and Nir Lipovetzky

Unplannability IPC Track

11.40 Frederic Boussemart, Christophe Lecoutre, Arnaud Malapert, and Cedric Piette

About Benchmarking and Competitions of Solvers in Constraint Programming

12.00-14.00 Lunch Break

14.00 Tutorial T3 **Daniele Magazzeni**

Planning with PDDL+

15.25-16.00 Coffee Break

Session 2

16.00 Mauro Vallati and Tiago Vaquero

Towards a Unified Protocol for Benchmark Selection in IPC

16.20 Patricia J Riddle, Michael W Barley, and Santiago Franco

Bagged Representations in PDDL

16.40 Thomas Keller and Florian Geißer

Better Be Lucky Than Good: Exceeding Expectations in MDP Evaluation

17.00-17.30 Discussion

Workshop on Heuristic Search in Domain Independent Planning

Monday, June 8, Room C

8.50 Welcome

Session 1

09.00 Sarah Keren, Avigdor Gal, and Erez Karpas

Goal Recognition Design With Non-Observable Actions

09.30 Johannes Aldinger, Robert Mattmüller, and Moritz Göbelbecker

Complexity Issues of Interval Relaxed Numeric Planning

10.00-10.30 Coffee break

Session 2

10.30 Patricia Riddle, Mike Barley, Santiago Franco, and Jordan Douglas

Bagged Representations in PDDL

11.00 Ron Alford, Pascal Bercher, and David Aha

Tight Bounds for HTN planning with Task Insertion

11.30 Álvaro Torralba and Jörg Hoffmann

Simulation-Based Admissible Dominance Pruning

12.00-13.55 Lunch break

Session 3

13.55 Nir Lipovetzky, Miguel Ramírez, and Hector Geffner

Classical Planning with Simulators: Results on the Atari Video Games

14.25 Yolanda E-Martín, Maria D. R-Moreno, and David Smith

A Heuristic Estimator based on Cost Interaction

14.55 Alberto Camacho, Christian Muise, Akshay Ganeshen, and Sheila

McIlraith

From FOND to Probabilistic Planning: Guiding search for quality policies

15.25-16.00 Coffee break

Session 4 (SoCS papers)

16.00 Salomé Simon and Gabriele Röger

Finding and Exploiting LTL Trajectory Constraints in Classical Planning

16.30 Daniel Gnad and Joerg Hoffmann

Red-Black Planning: A New Tractability Analysis and Heuristic Function

17.00 Daniel Gnad, Jörg Hoffmann, and Carmel Domshlak

From Fork Decoupling to Star-Topology Decoupling

17.30-17.45 Closing Remarks

Planning & Learning Workshop

MONDAY, JUNE 8, Room D

13.50 Opening Remarks

13.55 Invited Talk Joelle Pineau

Learning Socially Adaptive Path Planning Strategies

14.45 Kamil Ciosek and David silver

Value iteration with options and state aggregation

15.05 David Tolpin, Brooks Paige, Jan Willem van de Meent, and Frank Wood

Path finding under uncertainty through probabilistic inference

15.25 - 16.00 Coffee Break

16.00 Anders Jonsson and Damir Lotinac

Automatic generation of HTNs from PDDL

16.20 Mark Roberts

IPPC 2014 Learning Track Results

16.40 Invited Talk Wee Sun Lee

Maximum Likelihood Determinization

Main Conference Schedule

TUESDAY, JUNE 9

Registration 07.45-16.15	
Opening Remarks and Awards Announcement (Hirsch Auditorium) 8.25-8.40	
Hirsch Auditorium 08.40-10.00	Room B 08.40-10.00
Session 1a: POMDP Planning Sponsored by  Chair: Roni Khardon Akshat Kumar and Shlomo Zilberstein History-Based Controller Design And Optimization For Partially Observable MDPs Zongzhang Zhang, David Hsu, Wee Sun Lee, Zhan Wei Lim and Aijun Bai PLEASE: Palm Leaf Search for POMDPs with Large Observation Spaces Marek Grzes, Pascal Poupart, Xiao Yang, and Jesse Hoey Energy Efficient Execution of POMDP Policies [JPT] Ekhlas Sonu, Yingke Chen and Prashant Doshi Individual Planning in Agent Populations: Exploiting Anonymity and Frame-Action Hypergraphs	Session 1b Representation and Complexity Chair: Christian Muise Sergiy Bogomolov, Daniele Magazzeni, Stefano Minopoli and Martin Wehrle PDDL+ Planning with Hybrid Automata: Foundations of Translating Must Behavior Ron Alford, Pascal Bercher and David Aha Tight Bounds for HTN Planning Gregor Behnke, Daniel Höller and Susanne Biundo On the Complexity of HTN Plan Verification and its Implications for Plan Recognition Malte Helmert, Gabriele Röger, and Silvan Sievers On the Expressive Power of Non-Linear Merge-and-Shrink Representations
Coffee Break (Location: Hirsch Lobby) 10.00-10.30	
ECCAI Invited Talk by Jörg Hoffmann Simulated Penetration Testing: From Dijkstra to Turing Test++ Chair: Patrik Haslum (Location: Hirsch Auditorium) 10.30-11.30	
Poster & Demo Session I (Location: Hirsch Lobby) 11.30-12.30	
Lunch Break 12.30-14.00	

Hirsch Auditorium 14.00-15.25	Room B 14.20-15.25
Session 2a: Classical Planning Sponsored by  Chair: Gabriele Röger Toby O. Davies, Adrian R. Pearce, Peter Stuckey, and Nir Lipovetzky Sequencing Operator Counts [AWARD TALK] Masataro Asai and Alex Fukunaga Solving Large Scale Planning Problems By Decomposition and Macro Generation Vidal Alcázar and Álvaro Torralba A Reminder about the Importance of Computing and Exploiting Invariants in Planning Florian Pommerening and Malte Helmert A Normal Form for Classical Planning Tasks	Session 2b: Robotics I [Starts at 14.20] Sponsored by  Chair: Erez Karpas David Abel, D. Ellis Hershkowitz, Gabriel Barth-Maron, Stephen Brawner, Kevin O'Farrell, James MacGlashan, and Stefanie Tellex Affordances as Goal-Based Action Priors Giuseppe Bevacqua, Jonathan Cacace, Alberto Finzi, and Vincenzo Lippiello Mixed-Initiative Planning and Execution for Multiple Drones in Search and Rescue Missions Michal Čáp, Jiří Vokřínek, and Alexander Kleiner Complete Decentralized Method for On-Line Multi-Robot Trajectory Planning in Valid Infrastructures
Coffee Break (Location: Hirsch Lobby) 15.25-16.00	
Hirsch Auditorium 16.00-17.00	Room B 16.00-16.40
Session 3a: Applications I Chair: Eva Onaindia Alexandre Albore, Nathalie Peyrard, Régis Sabbadin, and Florent Teichteil-Königsbuch An Online Replanning Approach for Crop Fields Mapping with Autonomous UAVs Adrien Maillard, Cédric Pralet, Jean Jaubert, Isabelle Sebbag, Frédéric Fontanari, and Julien L'Hermitte Ground and Onboard Decision-Making on Satellite Data Downloads David A. Surovik and Daniel J. Scheeres Heuristic Search and Receding-Horizon Planning in Complex Spacecraft Orbit Domains	Session 3b: Scheduling [Ends at 16.40] Chair: Chris Beck Alexander J. Benavides and Marcus Ritt Iterated Local Search Heuristics for Minimizing Total Completion Time in Permutation and Non-Permutation Flow Shops Raúl Mencía, María R Sierra, Carlos Mencía, and Ramiro Varela Schedule Generation Schemes and Genetic Algorithm for the Scheduling Problem with Skilled Operators and Arbitrary Precedence Relations
Walking Tour of Jerusalem (Meeting Point: Jaffa Gate) 18:00-20:00	

WEDNESDAY, JUNE 10

Registration 07.45-16.15	
Hirsch Auditorium 08.40-10.00	Room B 08.40-10.00
Session 1a Conformant & Probabilistic Planning Chair: Jörg Hoffmann	Session 1b Temporal Planning and Reasoning Chair: David Smith
Christoph Dann, Gerhard Neumann, and Jan Peters Policy Evaluation with Temporal Differences: A Survey and Comparison [JPT]	Sergio Jiménez, Anders Jonsson and Héctor Palacios Temporal Planning With Required Concurrency Using Classical Planning
Zohar Feldman and Carmel Domshlak Simple Regret Optimization in Online Planning for Markov Decision Processes [JPT]	Erez Karpas, David Wang, Brian C. Williams and Patrik Haslum Temporal Landmarks: What Must Happen, and When
Murugeswari Issakkimuthu, Alan Fern, Roni Khardon, Prasad Tadepalli, and Shan Xue Hindsight Optimization for Probabilistic Planning with Factored Actions	Simon Mountakis, Tomas Klos and Cees Witteveen Temporal Flexibility Revisited: Maximizing Flexibility by Computing Bipartite Matchings
Ran Taig and Ronen I. Brafman A Compilation-Based Approach to Conformant Probabilistic Planning with Stochastic Actions	Jing Cui, Peng Yu, Cheng Fang, Patrik Haslum and Brian C. Williams Optimising Bounds in Simple Temporal Networks with Uncertainty under Dynamic Controllability Constraints
Coffee Break (Location: Hirsch Lobby) 10.00-10.30	
Invited Talk by Joelle Pineau Chair: Reid Simmons Improving the design and discovery of dynamic treatment strategies using recent results in sequential decision-making (Location: Hirsch Auditorium) 10.30-11.30	
Poster & Demo Session II (Location: Hirsch Lobby) 11.30-12.30	
Lunch Break 12.30-14.00	

Hirsch Auditorium 14.00-15.25	Room B 14.20-15.25
Session 2a Applications II Chair: Scott Sanner	Session 2b Robotics II [Starts at 14.20] Sponsored by
Haibo Wang, Hanna Kurniawati, Surya Singh, and Mandyam Srinivasan In-silico Behavior Discovery System: An Application of Planning in Ethology [AWARD TALK]	 Chair: Andrea Orlandini
Anton Riabov, Shirin Sohrabi, Daby Sow, Deepak Turaga, Octavian Udrea, and Long Vu Planning-Based Reasoning for Automated Large-Scale Data Analysis	Michael Cashmore, Maria Fox, Derek Long, Daniele Magazzeni, Bram Ridder, Arnau Carrera, Narcís Palomeras, Nátàlia Hurtós, and Marc Carreras ROSPlan: Planning in the Robot Operating System
Adi Botea and Stefano Braghin Contingent versus Deterministic Plans in Multi-Modal Journey Planning	Erez Karpas, Steven J. Levine, Peng Yu, and Brian C. Williams Robust Execution of Plans for Human-Robot Teams
Supriyo Ghosh, Pradeep Varakantham, Yossiri Adulyasak, and Patrick Jaillet Dynamic Redeployment to Counter Congestion or Starvation in Vehicle Sharing Systems	Vera Mersheeva and Gerhard Friedrich Multi-UAV Monitoring with Priorities and Limited Energy Resources
Coffee Break (Location: Hirsh Lobby) 15.25-16.00	
Community Meeting (Location: Hirsch Auditorium) 16.00-17.15	
ICAPS Distinguished Dissertation Award Talks (Location: Hirsh Auditorium) 17.15-18.00	
Banquet (Location: Blaustein Hall, Beit Shmuel) 19.30-22.00	

THURSDAY, JUNE 11

Registration 07.45-16.15	
Hirsch Auditorium 08.40-10.00	Room B 08.40-10.00
Session 1a Multi-Agent Planning Chair: Sven Koenig	Session 1b Heuristics for Classical Planning Chair: Nir Lipovetzky
Filippos Kominis and Hector Geffner Beliefs in Multiagent Planning: From One Agent to Many	Daniel Gnad and Jörg Hoffmann Beating LM-cut with $h_{\max}$ (Sometimes): Fork-Decoupled State Space Search
Raz Nissim and Ronen Brafman Distributed Heuristic Forward Search for Multi-Agent Planning. [JPT]	Jörg Hoffmann and Maximilian Fickert Explicit Conjunctions without Compilation: Computing $h^{FF}(\Pi^C)$ in Polynomial Time
Michal Štolba, Daniel Fišer, and Antonín Komenda Admissible Landmark Heuristic for Multi-Agent Planning	Guillem Francès and Hector Geffner Modeling and Computation in Planning: Better Heuristics from More Expressive Languages
Alejandro Torreño, Óscar Sapena, and Eva Onaindia Global Heuristics for Distributed Cooperative Multi-Agent Planning	Mauro Vallati, Ivan Serina, Alessandro Saetti, and Alfonso E. Gerevini Identifying and Exploiting Features for Effective Plan Retrieval in Case-Based Planning
Coffee Break (Location: Hirsch Lobby) 10.00-10.30	
Hirsch Auditorium 10.30-11.30	Room B 10.30 -11.30
Session 2a Path-Finding Chair: Ioannis Refanidis	Session 2b Model Learning Chair: Daniel Borrajo
Eli Boyarski, Ariel Felner, Guni Sharon and Roni Stern Don't Split, Try To Work It Out: Bypassing Conflicts in Multi-Agent Pathfinding	Peter Gregory and Stephen Cresswell Domain Model Acquisition in the Presence of Static Relations in the LOP System
Tansel Uras and Sven Koenig Speeding-up Any-Angle Path-Planning on Grids	Lars Kunze and Michael Beetz Envisioning the Qualitative Effects of Robot Manipulation Actions Using Simulation-Based Projections [JPT]
Doron Nussbaum and Alper Yörükçü Moving Target Search with Subgoal Graphs	Matthias Nickles and Achim Rettinger Interactive Relational Reinforcement Learning of Concept Semantics [JPT]
Poster & Demo Session III (Location: Hirsch Lobby) 11.30-12.30	
Lunch Break 12.30-14.00	

ICAPS\SOCS Invited Talk by Stuart Russell <i>Effective Decision Making</i> (Location: Hirsch Auditorium) Chair: Shlomo Zilberstein 14:00-15:00
Coffee Break (Location: Hirsch Lobby) 15.00-15.30
Session 3 ICAPS\SOCS Joint Session (Location: Hirsch Auditorium) Chair: Ariel Felner 15.30-16.50
Jendrik Seipp, Florian Pommerening and Malte Helmert (ICAPS) New Optimization Functions for Potential Heuristics
Fan Xie, Martin Müller and Robert Holte (ICAPS) Understanding and Improving Local Exploration for GBFS
Alvaro Torralba and Peter Kissman (SOCS) Focusing on What Really Matters: Irrelevance Pruning in Merge & Shrink
Dylan O'Ceallaigh and Wheeler Ruml (SOCS) Meta-Reasoning in Real-Time Heuristic Search
Closing Remarks 16.50 -17.15

DEMO AND POSTER SESSIONS

TUESDAY, JUNE 9

Demos

1 Steve Chien, Gregg Rabideau, Daniel Tran, Joshua Doubleday, Federico Nespoli, Miguel Perez Ayucar, Marc Costa Sitje, Claire Vallat, Bernhard Geiger, Nico Altobelli, Manuel Fernandez, Fran Vallejo, Rafael Andres, and Michael Kueppers.

Activity-based Scheduling of Science Campaigns for the Rosetta Orbiter

2 Eric Timmons, Cheng Fang, Enrique Fernandez, Erez Karpas, Steven J. Levine, Pedro Santana, Andrew Wang, David Wang, Peng Yu, and Brian C. Williams.

Reactive Model-based Programming of Micro-UAVs

3 Sarah Keren, Avigdor Gal, Ran Harari, and Erez Karpas.

PLAYGROUND – System Demo of Goal Recognition Design

DC

1 Ekhlas Sonu

Scalable Algorithms for Multiagent Sequential Decision Making

2 Pascal Bercher

Hybrid Planning Theoretical Foundations and Practical Applications

3 Daniel Höller

Plan Recognition as Hierarchical Planning

4 Michal Štolba

Multiagent Planning by Distributed Heuristic Search

5 Salome Simon

Logic-based Methods for Reasoning About Search in Classical Planning

6 Jindrich Vondrážka

Planning domain for robot control

7 Surpriyo Ghosh

Dynamic Redeployment to Counter Congestion or Starvation in Vehicle Sharing Systems

8 Tathagata Chakraborti

Synergy in Human-Robot Cohabitation

9 Tansel Uras

Speeding-up Any-Angle Path-Planning on Grids

Main Track

1 Sergiy Bogomolov, Daniele Magazzeni, Stefano Minopoli and Martin Wehrle
PDDL+ Planning with Hybrid Automata: Foundations of Translating Must Behavior

2 Michal Štolba, Daniel Fišer, and Antonín Komenda.
Admissible Landmark Heuristic for Multi-Agent Planning

3 Zongzhang Zhang, David Hsu, Wee Sun Lee, Zhan Wei Lim and Aijun Bai
PLEASE: Palm Leaf Search for POMDPs with Large Observation Spaces

PlanRob

1 Dylan O'Ceallaigh and Wheeler Ruml.
Metareasoning for Concurrent Planning and Execution

2 Tim Niemueller, Gerhard Lakemeyer, and Alexander Ferrein.
The RoboCup Logistics League as a Benchmark for Planning in Robotics

3 Mark Roberts, Swaroop Vattam, Ron Alford, Bryan Auslander, Tom Apker, Benjamin Johnson, and David Aha.
Goal Reasoning to Coordinate Robotic Teams for Disaster Relief

4 Ty Nguyen and Tsz-Chiu Au.
Motion Planning for Arrival Time and Velocity Requirements on Non-homogeneous Terrains

5 Breelyn Kane Styler and Reid Simmons.
Robust Efficient Robot Planning through Varying Model Fidelity

6 Pablo Muñoz, Amedeo Cesta, Andrea Orlandini, and Maria D. R-Moreno
A Framework for Performance Assessment of Autonomous Robotic Controllers

SPARK

1 Lukas Chrupa and Kristinn R. Thorisson
On Applicability of Automated Planning for Incident Management

2 Gregg Rabideau, Federico Nespoli, and Steve Chien
Heuristic Scheduling of Space Mission Downlinks: A Case study-from the Rosetta Mission

3 Steve Chien.

Heuristic Onboard Re-scheduling for an Earth Observing Spacecraft

4 Andrea Micheli, Minh Do, and David Smith.

Compiling Away Uncertainty in Strong Temporal Planning with Uncontrollable Durations

5 Dimitri Bouche and Jean Bresson

Planning and Scheduling Actions in a Computer-Aided Music Composition System

6 Konstantinos Agnantis and Ioannis Refanidis.

COURSR: Scheduling Composite Educational Objects

WEDNESDAY, JUNE 10

Demos

1 Dero Gharibian, Russell Knight, Steve Schaffer, David R. Thompson, Brian Bue, Steve Chien, Andrew Sacco, Angela D'Orazio, J. Daniel Newman

Onboard Re-scheduling Prototype for an Earth Observing Spacecraft

2 Michelle L. Blom, Christina, N. Burt, Nir Lipovetzky, Adrian R. Pearce, and Peter J. Stuckey.

Scheduling Tools for Open-Pit Mining Operations

3 Gábor Erdős, Csaba Kardos, Zsolt Kemény, András Kovács, and József Váncza

Planning and off-line robot programming system for remote laser welding

DC

1 Gregor Behnke

Planning for the User is Planning with the User

2 Joan Espasa Arxer

SAT/SMT techniques for planning problems

3 Marek Vlk

Replanning in Predictive-reactive Scheduling

4 Youngjun Kim

Multi-Agent Planning under Uncertainty with Rare Catastrophic Events

5 Toby Davies

Global Optimisation Techniques for Multi-Agent Planning

6 Zouhair Mahboubi

Autonomous Air Traffic Control for Non-Towered Airports

7 Jing Cui

Models of Robustness for Temporal Planning and Scheduling with Dynamic Controllability

8 Roi Yehoshua

Robotic Adversarial Coverage

9 Otakar Trunda

Alternative Approaches to Planning

10 Michal Cap

Algorithms for Multi-Robot Trajectory Planning in Valid Infrastructures

11 Christoph Dann

Policy Evaluation with Temporal Differences: A Survey and Comparison

Main Track

1 Alexandre Albore, Nathalie Peyrard, Régis Sabbadin, and Florent Teichtel-Königsbuch

An Online Replanning Approach for Crop Fields Mapping with Autonomous UAVs

2 Eli Boyarski, Ariel Felner, Guni Sharon, and Roni Stern.

Don't Split, Try To Work It Out: Bypassing Conflicts in Multi-Agent Pathfinding

3 Murugeswari Issakkimuthu, Alan Fern, Roni Khardon, Prasad Tadepalli, and Shan Xue.

Hindsight Optimization for Probabilistic Planning with Factored Actions

4 Filippos Kominis and Hector Geffner.

Beliefs in Multiagent Planning: From One Agent to Many

DMAP

1 Christian Muise, Paolo Felli, Tim Miller, Adrian R. Pearce, and Liz Sonenberg.

Leveraging FOND Planning Technology to Solve Multi-Agent Planning Problems

2 Christian Muise, Vaishak Belle, Paolo Felli, Sheila McIlraith, Tim Miller, Adrian Pearce, and Liz Sonenberg.

Planning Over Multi-Agent Epistemic States: A Classical Planning Approach (Amended Version)

3 Guy Shani, Shlomi Maliah, and Roni Stern.

Privacy Preserving Pattern Databases

4 Thorsten Engesser, Thomas Bolander, Robert Mattmüller, and Bernhard Nebel.

Cooperative Epistemic Multi-Agent Planning With Implicit Coordination

5 Josef Hájíček and Antonín Komenda.

Narrative Planning Agents Under a Cognitive Hierarchy

6 Nicolas Le Guillarme, Abdel-Ilah Mouaddib, Xavier Lerouvreur, and Sylvain Gatepaille.

A Generative Game-Theoretic Framework for Adversarial Plan Recognition

JPT

1 Marek Grzes, Pascal Poupart, Xiao Yang, and Jesse Hoey

Energy Efficient Execution of POMDP Policies

WIPC

1 Michal Štolba, Antonín Komenda, and Daniel Kovacs.

Competition of Distributed and Multiagent Planners

THURSDAY, JUNE 11

COPLAS

1 Miquel Bofill, Joan Espasa Arxer, and Mateu Villaret

The RANTANPLAN planner: System description

2 Bryan O’gorman, Eleanor Rieffel, Minh Do, and Davide Venturelli.

Compiling planning into quantum optimization problems: a comparative study

3 Andre Cire, Elvin Coban, and John Hooker

Logic-based Benders Decomposition for Planning and Scheduling: A Computational Analysis

4 Roman Barták and Jan Jelínek

A Constraint-based Optimizer for Scheduling Solar Array Operations on the International Space Station

MAIN TRACK

1 Michael Cashmore, Maria Fox, Derek Long, Daniele Magazzeni, Bram Ridder, Arnau Carrera, Narcís Palomeras, Nátàlia Hurtós, and Marc Carreras.

ROSPlan: Planning in the Robot Operating System

2 Toby O. Davies, Adrian R. Pearce, Peter Stuckey, and Nir Lipovetzky
Sequencing Operator Counts

3 Supriyo Ghosh, Pradeep Varakantham, Yossiri Adulyasak and Patrick Jaillet
Dynamic Redeployment to Counter Congestion or Starvation in Vehicle Sharing Systems

4 Anton Riabov, Shirin Sohrabi, Daby Sow, Deepak Turaga, Octavian Udrea, and Long Vu.
Planning-Based Reasoning for Automated Large-Scale Data Analysis

5 David A. Surovik and Daniel J. Scheeres.
Heuristic Search and Receding-Horizon Planning in Complex Spacecraft Orbit Domains

6 Alejandro Torreño, Óscar Sapena, and Eva Onaindia.
Global Heuristics for Distributed Cooperative Multi-Agent Planning

HSDIP

1 Ron Alford, Pascal Bercher and David Aha
Tight Bounds for HTN Planning with Task Insertion

2 Johannes Aldinger, Robert Mattmüller and Moritz Göbelbecker.
Complexity Issues of Interval Relaxed Numeric Planning

3 Alberto Camacho, Christian Muise, Akshay Ganeshen, and Sheila McIlraith
From FOND to Probabilistic Planning: Guiding search for quality policies

4 Yolanda E-Martín, Maria D. R-Moreno and David Smith.
A Heuristic Estimator based on Cost Interaction

5 Daniel Gnad and Joerg Hoffmann.
Red-Black Planning: A New Tractability Analysis and Heuristic Function

6 Daniel Gnad, Jorg Hoffmann and Carmel Domshlak.
From Fork Decoupling to Star-Topology Decoupling

7 Sarah Keren, Avigdor Gal, and Erez Karpas

Goal Recognition Design With Non-Observable Actions

8 Nir Lipovetzky, Miguel Ramírez, and Hector Geffner.

Classical Planning with Simulators: Results on the Atari Video Games

9 Patricia Riddle, Mike Barley, and Santiago Franco.

Bagged Representations in PDDL

10 Álvaro Torralba and Joerg Hoffmann.

Simulation-Based Admissible Dominance Pruning

MOCHAP

1 Giuseppe Della Penna, Benedetto Intrigila, Daniele Magazzeni, and Fabio Mercorio.

UPMurphi Released: PDDL+ Planning for Hybrid Systems

2 Dragan Bosnacki.

On Combining Symmetry with Partial Order Reduction

3 Eleni Triantafillou, Jorge Baier, and Sheila McIlraith

A Unifying Framework for Planning with LTL and Regular Expressions

4 Jorge Torres and Jorge Baier.

Compiling Away LTL Planning Goals in Polynomial Time

PAL

1 Kamil Ciosek and David Silver.

Value iteration with options and state aggregation

2 David Toplin, Brooks Paige, and Frank Wood.

Path finding under uncertainty through probabilistic inference

3 Anders Jonsson and Damir Lotinac.

Automatic generation of HTNs from PDDL

SOCIAL EVENTS

Opening Reception at the Tower of David

Monday, June 8, 19.00-22.15

<http://www.tod.org.il/en/>

From 19.00 Tower of David walking tours (please register at the desk)

19.30-21.15 Reception

21.30-22.15 “Night Spectacular” Show

Meeting point Arrive at David's Citadel (Migdal David) entrance.

You will be guided by a hostess to the location of the reception at the moat.

According to Jewish tradition, David's Citadel (The Tower of David, in Hebrew) was built by King David. Regardless of its true origin, it is a beautiful site with a significant history. The reception will be held at the moat. Besides good food, you'll have the option of taking a tour of the citadel and the Kishle – a newly opened part of the compound that some believe to be the site of Jesus's trial.

Walking Tour of Jerusalem's Old City

Tuesday, June 9, 18.00-20.00

Meeting point Plaza outside Jaffa Gate

Conference Banquet

Wednesday, June 10, 19.30-22.00

Location Blaustein Hall, Beit Shmuel

PROCEEDINGS

The ICAPS papers are now freely available in the digital library:

["http://www.aaai.org/Library/ICAPS/icaps15contents.php"](http://www.aaai.org/Library/ICAPS/icaps15contents.php)

The ICAPS ebook is also available. Please ask for the coupon code, if you did not receive it by mail. The coupon expires June 30, 2015. We also have copies on disk-on-key at the reception that you can borrow.

To use the coupon, confirmed registrants should go to:

["http://www.aaai.org/Press/Proceedings/icaps15.php"](http://www.aaai.org/Press/Proceedings/icaps15.php)

Add the electronic version of the proceedings to the cart, and place the order (valid information must be supplied).

In the Coupon code box, enter the coupon number then click "Recalculate." The order will then deduct the price of the electronic proceedings from the cart balance. (The coupon is only valid for the ICAPS e-book). A link to download the file will be e-mailed to the recipient.

The printed proceedings will be available in late June or early July. Registered ICAPS attendees or their coauthors may purchase the printed proceedings at a heavily discounted price. The coupon for the ICAPS printed proceedings is 1430772550 (This coupon is only valid for the ICAPS printed book). This coupon will discount the price of the book by US \$45.00.

Books purchased through the website are sent via UPS international. This is an airmail, traceable method of shipping. Packages arrive within 4 or 5 days.

Purchasers in Europe or Asia may purchase the book from the US site, or contact the AAAI Press office for other shipping options. We can have the books printed in Europe or Australia. This will result in lower shipping costs, but a higher book price due to international taxes, foreign transaction fees, and currency fluctuation. The US \$45.00 discount would still apply.

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