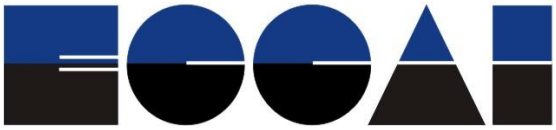
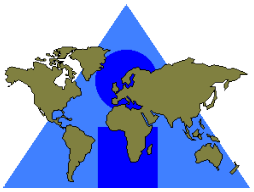
19th International Conference on Automated Planning and Scheduling

September 19-23, 2009
Thessaloniki, Greece

PROGRAM



David E. Smith



IJCAI Inc.

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Workshops Schedule

Outline

September 19th	September 20th
WS1, Amphitheater 12	WS3 (half day, morning), Amphitheater 12
WS2 (half day, morning), Amphitheater 11	WS5, Amphitheater 11
WS8, Amphitheater 10	WS6, Amphitheater 10
	WS7, Amphitheater 9
	WS9, Amphitheater 8
	WS10, Amphitheater 7

WS1: Planning and Plan Execution for Real-World Systems
co-chairs: Felix Ingrand and Frederic Py
WS2: COPLAS'09: Workshop on Constraint Satisfaction Techniques for Planning and Scheduling Problems
co-chairs: Miguel Salido and Roman Bartak
WS3: International Workshop on Intelligent Security
co-chairs: Mark Boddy and Stefan Edelkamp
WS5: Verification and Validation of Planning and Scheduling Systems
co-chairs: Saddek Bensalem, Klaus Havelund and Kim Larsen
WS6: Workshop on Planning and Learning
co-chairs: Amanda Coles, Andrew Coles, Sergio Jimenez Celorrio, Susana Fernandez Arregui and Tomas de la Rosa
WS7: SPARK: Scheduling and Planning Applications workshop
co-chairs: Luis Castillo, Gabriella Cortellessa and Neil Yorke-Smith
WS8: Workshop on Heuristics for Domain-independent Planning
co-chairs: Carmel Domshlak, Malte Helmert and Joerg Hoffmann
WS9: Bridging The Gap Between Task And Motion Planning
co-chairs: Maxim Likhachev, Bhaskara Marthi, Conor McGann and David E. Smith
WS10: Generalized Planning: Macros, Loops, Domain Control
co-chairs: *Christian Fritz, Sheila McIlraith, Siddharth Srivastava and Shlomo Zilberstein*

WS1: Planning and Plan Execution for Real-World Systems

September 19th, Amphitheater 12

08:55-09:00	**Welcome**
09:00-10:40	Session chair: Felix Ingrand Model-based, Hierarchical Control of a Mobile Manipulation Platform *C. McGann, E. Berger, J. Bohren, S. Chitta, B. Gerkey, S. Glaser, B. Marthi, W. Meeussen, T. Pratkanis, E. Marder-Eppstein & M. Wise* Planning and Plan-execution for Human-Robot Cooperative Task achievement *S. Alili, M. Warnier, M. Ali & R. Alami* Towards Continuous Activity Monitoring with Temporal Constraints *J. Ullberg, A. Loutfi & F. Pecora* An Integrated Planning and Learning Framework for Human-Robot Interaction *A. Kirsch, T. Kruse & L. Mösenlechner*
10:40-11:00	**Coffee Break**
11:00-12:40	Session chair: Rachid Alami Leaving Choices Open in Planner/Planner Integration *S. Joyeux & F. Kirchner*

WS1: Planning and Plan Execution for Real-World Systems (cont.)

September 19th, Amphitheater 12

11:00-12:40 (cont.)	Continuous mission plan adaptation for autonomous vehicles: balancing effort and reward *P. Patrón, D. M. Lane & Y. R. Petillot* Hybridisation of Constraint Solving with an Ant Colony Algorithm for On-Line Path Planning *C. Guettier, F. Lucas & P. Siarry* From Discrete Mission Schedule to Continuous Implicit Trajectory using Optimal Time Warping *F. Keith, N. Mansard, S. Miossec & A. Kheddar*
12:40-14:00	**Lunch Break**
14:00-15:40	Accelerated A* Trajectory Planning: Grid-based Path Planning Comparison *D. Šišlák, P. Volf & M. Pěchouček* Adapting an MDP planner to time-dependency: case study on a UAV coordination *E. Rachelson, P. Fabiani & F. Garcia* Anytime Planning in Hybrid Domains using regression, Froward Sampling and Local Backups *F. Teichteil-Königsbuch & G. Infantes* Acting in Partially Observable Environments When Achievement of the Goal Cannot be Guaranteed *A. Albore & H. Geffner*
15:40-16:00	**Coffee Break**
16:00-16:25	Combining Cognitive Vision, Knowledge-Level Planning with Sensing, end Execution Monitoring for Effective Robot Control *R. P.A. Petrick, D. Kraft, N. Krüger & M. Steedman*
16:25-17:30	Panel discussion/Round table: Planning and Plan Execution: Where are the real world applications and the success stories? *Panelists : Amedeo Cesta, Rachid Alami, Conor McGann, Derek Long, etc*

WS2: COPLAS'09: Workshop on Constraint Satisfaction Techniques for Planning and Scheduling Problems

September 19th, Amphitheater 11

08:50-09:00	**Welcome**
9:00-10:30	A generate-and-test approach for computing "optimal" plans in SAT-based planning *Enrico Giunchiglia and Marco Maratea* *Commentator: Andrew Coles* A Systematic and Complete Algorithm to Compute Higher Order Exclusion Relations *Ioannis Refanidis and Ilias Sekallariou* *Commentator: Enrico Giunchiglia* Incremental Constraint-Posting Algorithms in Interleaved Planning and Scheduling *Amanda Coles, Andrew Coles, Maria Fox and Derek Long* *Commentator: Andrew Davenportt*
10:30-11:00	**Coffee Break**
11:00-13:00	Constraint Programming Approach to a Bilevel Scheduling Problem *András Kovács and Tamás Kis* *Commentator: Angelo Oddi* Iterative-Sampling Search for Job Shop Scheduling with Setup Times *Angelo Oddi, Riccardo Rasconi, Amedeo Cesta and Stephen F. Smith* *Commentator: Ioannis Refanidis*

WS2: COPLAS'09: Workshop on Constraint Satisfaction Techniques for Planning and Scheduling Problems (cont.)
September 19th, Amphitheater 11

11:00-13:00 (cont.)	Solving scheduling problems using parallel message-passing based constraint programming *Feng Xie and Andrew Davenport* *Commentator: Ilias Sakellariou* On Scheduling Events and Tasks by an Intelligent Calendar Assistant *Ioannis Refanidis and Neil Yorke-Smith* *Commentator: András Kovács*

WS3: International Workshop on Intelligent Security
September 20th, Amphitheater 12

08:50-09:00	**Welcome**
09:00-10:30	Combining statistical network data, probabilistic neural networks and the computational power of GPUs for anomaly detection in computer networks *Sascha Bastke, Mathias Deml and Sebastian Schmidt* Model-based Intrusion Assessment in Common Lisp *Robert P. Goldman and Steven A. Harp* Cost-Optimal Symbolic Abduction for Improved Security *Stefan Edelkamp, Thomas Wagner and Peter Kissmann*
10:30-10:50	**Coffee Break**
10:50-11:50	Toward Using Plan Recognition for Intrusion Detection *Christopher W. Geib* An Intelligent Technique for Generating Minimal Attack Graph *Nirnay Ghosh and S. K. Ghosh*
11:50-12:00	**Stretch**
12:00-13:15	Early Warning and Intrusion Detection based on Combined AI Methods *Stefan Edelkamp, Carsten Elfers, Mirko Horstmann, Marcus-Sebastian Schroeder, Karsten Sohr and Thomas Wagner* **Invited Talk:** A Compilation Method for the Verification of Temporal-Epistemic Properties of Cryptographic Protocols *I. Boureanu, M. Cohen, and A. Lomuscio*
13:15-13:30	**Discussion**

WS5: Verification and Validation of Planning and Scheduling Systems
September 20th, Amphitheater 11

08:50-09:00	**Welcome**
09:00-10:30	Session chair: Lucas Dixon **Invited Talk:** Model-Based Verification and Validation for Procedure Authoring *Guillaume Brat (NASA Ames Research Center, California, USA)* *Paper by: Guillaume Brat, Dimitra Giannakopoulou, Michel Izygon, Emmy Alex, Lui Wang, Jeremy Frank, and Arthur Molin* On the Use of Planning Technology for Verification *Aws Albarghouthi, Jorge A. Baier, and Sheila A. McIlraith*

WS5: Verification and Validation of Planning and Scheduling Systems (cont.)

September 20th, Amphitheater 11

09:00-10:30 (cont.)	Verifying Flexible Timeline-Based Plans *Amedeo Cesta, Alberto Finzi, Simone Fratini, Andrea Orlandini, and Enrico Tronci*
10:30-11:00	**Coffee Break**
11:00-12:30	Session chair: Marco Roveri **Invited Talk:** Verification and Validation of a Deep Space Network Scheduling Application *Mark D. Johnston (Jet Propulsion Laboratory, California, USA)* *Paper by: Mark D. Johnston and Daniel Tran* Verified Planning by Deductive Synthesis in Intuitionistic Linear Logic *Lucas Dixon, Alan Smaill, and Alan Bundy* Finding Plans with Branches, Loops and Preconditions *Siddharth Srivastava, Neil Immerman, and Shlomo Zilberstein*
12:30-14:00	**Lunch Break**
14:00-15:30	Session chair: Andrea Orlandini **Invited Talk:** Planning Domains and Plans: Validation, Verification and Analysis *Derek Long (University of Strathclyde, Glasgow, UK)* *Paper by: Derek Long, Maria Fox, and Richard Howey* Verifying Equivalence of Procedures in Different Languages: Preliminary Results *David J. Musliner, Michael J. S. Pelican, and Peter J. Schlette* Plan Proximity: an Enhanced Metric for Plan Stability *Pedro Patrón and Alexandra Birch*
15:30-16:00	**Coffee Break**
16:00-17:30	Session chair: Derek Long **Invited Talk:** A Comprehensive Approach to On-Board Autonomy Verification and Validation *Marco Roveri (Ricerca Scientifica e Tecnologica, Trento, Italy)* *Paper by: Marco Bozzano, Alessandro Cimatti, Marco Roveri, and Andrei Tchaltsev* PDVer, a Tool to Verify PDDL Planning Domains *Franco Raimondi, Charles Pecheur, and Guillaume Brat* Open Discussion on Future Directions

WS6: Workshop on Planning and Learning

September 20th, Amphitheater 10

9:00-10:30	**Invited Talk:** Abstraction and Learning for Probabilistic Planning *Leslie Pack Kaelbling* Learning to Combine Admissible Heuristics Under Bounded Time *Carmel Domshlak, Erez Karpas and Shaul Markovitch*
10:30-11:00	**Coffee Break**
11:00-12:15	Learning Instance-Specific Macros *Maher Alhossaini and J. Christopher Beck* Learning action effects in partially observable domains *Kira Mourão, Ronald P. A. Petrick and Mark Steedman* Planning with the help of Statistical Relational Learning *Ingo Thon, Bernd Gutmann, Martijn van Otterlo, Niels Landwehr and Luc De Raedt*

WS6: Workshop on Planning and Learning (cont.)
September 20th, Amphitheater 10

12:15-14:00	**Lunch Break**

14:00-15:30	Exploiting N-gram Analysis to Predict Operator Sequences *Christian Muise, Sheila McIlraith, Jorge A. Baier and Michael Reimer* Three Relational Learning Approaches for Lookahead Heuristic Planning *Tomás de la Rosa, Sergio Jiménez, Rocío García-Durán, Fernando Fernández, Ángel García-Olaya,Daniel Borrajo* Learning Weighted Rule Sets for Forward Search Planning *Yuehua Xu, Alan Fern and Sungwook Yoon* Learning Divide-and-Evolve Parameter Configurations with Racing *Jacques Bibaï, Pierre Savéant, Marc Schoenauer and Vincent Vidal*

15:30-16:00	**Coffee Break**

16:00-17:30	Learning and Exploiting Configuration Knowledge for a Portfolio-based planner *Alfonso E. Gerevini, Alessandro Saetti and Mauro Vallati* Discussion Panel

WS7: SPARK: Scheduling and Planning Applications workshop
September 20th, Amphitheater 9

09:00-09:45	Scheduling in the Real World: Lessons Learnt *van der Krogt, Little, Simonis*
09:45-09:55	A Constraint-Based Approach for Plan Management in Intelligent Environments *Pecora, Cirillo*
09:55-10:05	Integrated maintenance scheduling for semiconductor manufacturing *Davenport*
10:05-10:15	Planning & Scheduling of Crude Oil Distribution in a Petroleum Plant *Vaquero, Sette, Silva, Beck*
10:15-10:30	Session commentaries and discussion

10:30-11:00	**Coffee Break**

11:00-11:22	Flight Trajectory Path Planning *Sislak, Volf, Pechoucek*
11:22-11:44	Recovering Plans from the Web *Addis, Armano, Borrajo*
11:44-12:06	Planning as Heuristic Search for Incremental Fault Diagnosis and Repair *Warnquist, Kvarnstrom, Doherty*
12:06-12:16	Distributed Intelligence System for Online Action-Taking in non Anticipated Situations in Nuclear Power Plants *Alamaniotis, Gao, Tsoukalas*
12:16-12:31	Session commentaries and discussion

12:31-14:00	**Lunch Break**

14:00-14:22	Mission Planning in a Dynamic Ocean Sensorweb *Thompson, Chien, Arrot, Balasuriya, Meisinger, Petillo, Schofield*
14:22-14:44	Solving Clustered Oversubscription Problems for Planning e-Courses *Fernandez, Borrajo*
14:44-15:06	Planning@SAP: An Application in Business Process Management *Hofmman, Weber, Kraft*
15:06-15:21	Session commentaries and discussion

15:21-16:00	**Coffee Break**

WS7: SPARK: Scheduling and Planning Applications workshop (cont.)

September 20th, Amphitheater 9

16:00-16:22	Deploying RAXEM2: Planning Improvements in Daily Work Practice *Bernardi, Cesta, Cortellessa*
16:22-16:44	Evaluating Multi-Objective Evolutionary Scheduling Strategies for the James Webb Space Telescope *Giuliano, Johnston*
16:44-16:54	Planning Operations of the Earth Observing Satellite EO-1: Representing and reasoning with spacecraft operations constraints *Chien, Tran, Rabideau, Schaffer, Mandl, Frye*
16:54-17:04	Request-Driven Scheduling for NASA's Deep Space Network *Johnston, Tran, Arroyo, Page*
17:04-17:14	Session commentaries and discussion
17:14-17:34	OPEN DISCUSSION

WS8: Workshop on Heuristics for Domain-independent Planning

September 19th, Amphitheater 10

08:50-09:00	**Workshop Overview**
09:00-10:30	**Session I** Session chair: Carmel Domshlak Determinize, Solve, and Generalize: Classical Planning for MDP Heuristics *Andrey Kolobov, Mausam and Daniel Weld* Reachability Heuristics for Planning in Incomplete Domains *Jared Robertson and Daniel Bryce* Requirements on Heuristic Functions when Using A* in Domains with Transpositions *Nir Pochter and Jeffrey Rosenschein* Planning with h+ in Theory and Practice *Christoph Betz and Malte Helmert*
10:30-11:00	**Coffee Break**
11:00-12:30	**Session II** Session chair: Jörg Hoffmann Admissible Makespan Estimates for PDDL2.1 Temporal Planning *Patrik Haslum* Towards Search Control via Dependency Graphs in Europa2 *Sara Bernardini and David E. Smith* Improving relaxed-plan-based heuristics via simulated execution of relaxed-plans *Dunbo Cai, Minghao Yin and Jianan Wang* Combining Heuristic Estimators for Satisficing Planning *Gabriele Röger and Malte Helmert*
12:30-14:00	**Lunch Break**
14:00-15:30	**Workshop Panel** *Panelists: Daniel Bryce, Patrik Haslum, Carmel Domshlak*
15:30-16:00	**Coffee Break**
16:00-17:30	**Session III** Session chair: Malte Helmert Viewing Landmarks as Temporally Extended Goals *Letao Wang, Jorge Baier and Sheila McIlraith*

WS8: Workshop on Heuristics for Domain-independent Planning (cont.)
September 19th, Amphitheater 10

16:00-17:30 (cont.)	Abstractions += Landmarks *Carmel Domshlak, Michael Katz and Sagi Lefler* Path-based Heuristics (Preliminary Version) *Nir Lipovetzky and Hector Geffner* A Unified View of Cost-Based Heuristics *Raquel Fuentetaja, Daniel Borrajo and Carlos Linares López*

WS9: Bridging The Gap Between Task And Motion Planning
September 20th, Amphitheater 8

9:00-10:30	Session Chair: Jean-Claude Latombe **Invited Talk:** Representations and Algorithms for Integrated Task and Motion Planning *Tomas Lozano-Perez (MIT)* PDRRTs: Integrating Graph-Based and Cell-Based Planning *Ananth Ranganathan and Sven Koenig.*
10:30-11:00	**Coffee Break**
11:00-12:30	Session chair: Sven Koenig A Hybrid Assembly Task Planning System: Where Motion Planning Helps Symbolic Planning Find Good Solutions For Real-World Applications *Frederik Heger and Sanjiv Singh.* Taking Into Account Geometric Constraints for Task-oriented Motion Planning *Julien Guitton and Jean-Loup Farges* Integrating task and PRM motion planning: Dealing with many infeasible motion planning queries *Kris Hauser and Jean-Claude Latombe*
12:30-14:00	**Lunch Break**
14:00-15:30	Session chair: Felix Ingrand From Discrete Task Plans to Continuous Trajectories *Ozan Çaldıran, Kadir Haspalamutgil, Abdullah Ok, Can PALAZ, Esra Erdem and Volkan Patoglu* Integrating a Closed World Planner with an Open World Robot: A Case Study *Kartik Talamadupula, J. Benton, Paul Schermerhorn, Subbarao Kambhampati and Matthias Scheutz* Bridging the Gap with Angelic Semantics *Bhaskara Marthi, Stuart Russell and Jason Wolfe*
15:30-16:00	**Coffee Break**
16:00-17:30	Session chair: Ari Jonsson Autonomous UAV Surveillance in Complex Urban Environments *Eduard Semsch, Michal Jakob, Dušan Pavlíček, Michal Pěchouček and David Šišlák* A Comparison of Risk Sensitive Path Planning Methods for Aircraft Emergency Landing *Nicolas Meuleau, Christian Plaunt, David Smith and Tristan Smith* Robust Grasping via Relative Motions *Kaijen Hsiao, Tomas Lozano-Perez and Leslie Kaelbling*

WS10: Generalized Planning: Macros, Loops, Domain Control

September 20th, Amphitheater 7

08:50-09:00	**Opening Remarks**
09:00-10:00	**Invited Talk:** When Planning for Generalized Plans is a Must: The Case of Software Service Composition & Monitoring *Paolo Traverso*
10:00-10:30	On Pebble Motion on Graphs and Abstract Multi-robot Path Planning *Pavel Surynek*
10:30-11:00	**Coffee Break**
11:00-12:30	Session chair: Christian Fritz Beyond Classical Planning: Procedural Control Knowledge and Preferences in State-of-the-Art Planners Revisited *Jorge A. Baier, Christian Fritz, Meghyn Bienvenu, Sheila A. McIlraith* Solving High-Level Planning Programs *Giuseppe De Giacomo, Fabio Patrizi, Sebastian Sardina* Web Service Composition via the Customization of Golog Programs with User Preferences *Shirin Sohrabi, Nataliya Prokoshyna, and Sheila A. McIlraith*
12:30-14:00	**Lunch Break**
14:00-15:30	Session chair: Giuseppe De Giacomo Automatic Derivation of Memoryless Policies and Finite-State Controllers Using Classical Planners *Blai Bonet, Hector Palacios, Hector Geffner* Planning with Loops: Some New Results *Yuxiao Hu, Hector J. Levesque* Challenges in Finding Generalized Plans *Siddharth Srivastava, Neil Immerman, Shlomo Zilberstein*
15:30-16:00	**Coffee Break**
16:00-17:30	Session chair: Siddharth Srivastava Partial Observability, Quantification, and Iteration for Planning *Robert P. Goldman* P^2 : A Baseline Approach to Planning with Control Structures and Programs *Ronald P. A. Petrick* Deductive Formation of Recursive Workflows *Jeremy Forth, Richard Waldinger*

Tutorials Schedule

	September 19th	**September 20th**	
	Amphitheater 13	Amphitheater 13	Amphitheater 12
09:00 - 12:30	TUT3	TUT1	
14:00 - 17:30	TUT5	TUT2	TUT4

TUT1: Heuristics for Classical Planning (With Costs)

Emil Keyder and Blai Bonet

Abstract: One of the most effective approaches to classical planning is heuristic search. Here we will review a number of heuristics proposed for this problem, with a heavy focus on suboptimal solutions to the delete relaxation. Heuristics based on other relaxations or decompositions of the problem will also be discussed. We will try to motivate each heuristic in terms of a clear solution to a model resulting from a well-defined relaxation of the problem.

TUT2: Petri Nets and Their Relation to Planning

Sarah Hickmott, Blai Bonet, Patrik Haslum, Sylvie Thiebaux and Stefan Edelkamp

Abstract: This tutorial presents Petri nets, a formalism for modelling discrete dynamical systems widely used in automated verification (model checking), along with some basic algorithmic tools for the analysis of Petri nets. The focus is on the relation between Petri nets and modelling formalisms used in planning, and the exchange of algorithmic techniques between the two fields.

TUT3: Real-Time Planning in Dynamic and Partially-Known Domains

Maxim Likhachev and Sven Koenig

Abstract: The tutorial gives an overview of approaches to real-time planning in dynamic and partially-known domains, all of which gain drastic efficiency by planning with a series of A* variants. The tutorial explains the approaches, presents analytical results about their runtimes and plan qualities and demonstrates their application to various problems in AI and robotics, including symbolic planning and motion planning for high degree-of-freedom robot arms, outdoor ground robots and air robots.

TUT4: Representing, Eliciting, and Reasoning with Preferences

Carmel Domshlak (tutorial created by Ronen I. Brafman and Carmel Domshlak)

Abstract: When we design an agent that automatically shops on the web or controls a rover on Mars, we don't want it to buy any item or conduct any experiment. We want it to buy the best available item and conduct the most useful experiment. In short, we want it to act optimally, or at least to strive doing so. But acting well on behalf of a user requires understanding of that user's goals and preferences. How can an agent obtain this information efficiently when acting on behalf of a lay user? How can this be done with a minimal effort on the part of the user? How does one represent preference information compactly and reasons with it effectively? These questions drive the research conducted in the area of preference modeling, elicitation, representation, and reasoning techniques. The tutorial will survey some of the major developments in this area, discussing the problems of decision-making under certainty and uncertainty, and explaining some practical applications of each of these settings and their characteristics. Much emphasis will be placed on graphical models of preference and models of qualitative preferences that are especially suitable for lay users, as well as on algorithmic techniques for preference elicitation and reasoning. We will also try to connect between various knowledge-representation tools for preference handling, and their suitability to be used within action planning techniques.

TUT5: Practical Planning & Scheduling

Ari Jonsson, Steve Chien and Mark Johnston

Abstract: Automated planning & scheduling technology has shown considerable promise in a number of domains including space mission operations, production management, and vehicle fleet operations. In this tutorial we will provide insights into a number of techniques that have been successfully deployed to real world applications, with a bias towards space applications. These techniques include committed and local search for planning, constraint-based planning in various forms, constraint reasoning and mathematical programming. The tutorial will focus on answering the following questions: What is automated planning & scheduling technology? How does it work in practice? What requirements do applications place on planning & scheduling tools? What limitations are encountered and how are they overcome? Who have used such technology and what were their experiences?

Doctoral Consortium Schedule

Saturday, September 19th

09:00-09:30	**Introduction** *Amphitheater 9*
09:30-10:30	Themed-cluster working groups. Each student will have 15 minutes for oral presentation. *Amphitheaters 9, 8, 7, 5 and 4 for clusters 1, 2, 3, 4 and 5 respectively*
10:30-11:00	**Coffee Break**
11:00-12:30	Themed-cluster working groups - **mentoring activity** *Amphitheaters 9, 8, 7, 5 and 4 for clusters 1, 2, 3, 4 and 5 respectively*
12:30-14:00	**Lunch Break**
14:00-14:30	**Invited talk:** How to write a research paper (and not to die trying it). *Subbarao Kambhampati* *Amphitheater 9*
14:30-15:30	Themed-cluster working groups. Preparation of a roadmap for the final global debriefing *Amphitheaters 9, 8, 7, 5 and 4 for clusters 1, 2, 3, 4 and 5 respectively*
15:30-16:00	**Coffee Break**
16:00-17:30	Final global debriefing (all DC students). Each working group will have 15 minutes for oral presentation *Amphitheater 9*
17:30-18:00	Conclusions *Amphitheater 9*

ICKEPS Schedule

Sunday, September 20th

Amphitheater 4, University of Macedonia

09:00-09:15	**Opening**
09:15-09:40	LOCM: A tool for acquiring planning domain models from action traces *Stephen Cresswell*
09:40-10:05	On Compiling Data Mining Tasks to PDDL *Susana Fernández, Fernando Fernández, Alexis Sánchez, Tomás de la Rosa, Javier Ortiz, Daniel Borrajo, David Manzano*
10:05-10:30	Modeling E-Learning Activities in Automated Planning *Antonio Garrido, Eva Onaindia, Lluvia Morales , Luis Castillo, Susana Fernández, Daniel Borrajo*
10:30-11:00	**Coffee Break**
11:00-11:25	JABBAH: A Java Application Framework for the Translation Between Business Process Models and HTN *Arturo González-Ferrer, Juan Fernández-Olivares, Luis Castillo*
11:25-11:50	PORSCE II: Using Planning for Semantic Web Service Composition *Ourania Hatzi, Georgios Meditskos, Dimitris Vrakas, Nick Bassiliades, Dimosthenis Anagnostopoulos, Ioannis Vlahavas*
11:50-12:15	Augmenting Instructable Computing with Planning Technology *Clayton T. Morrison, Daniel Bryce, Ian R. Fasel, Antons Rebguns*
12:15-12:40	From Requirements and Analysis to PDDL in itSIMPLE3.0 *Tiago Stegun Vaquero, José Reinaldo Silva, Marcelo Ferreira, Flavio Tonidandel, J. Christopher Beck*
12:40-14:00	**Lunch Break**
14:00-16:00	**Demo Session** Hall 434, 4th floor, Building C/D

Sunday, September 20th, PM

20:00-23:00	Welcome Reception *Museum of Byzantine Culture*

Monday, September 21st, AM

08:50-09:00	**Opening**
09:00-10:00	**Invited Talk** (Hall: Aristotelis I) Session chair: Alfonso Gerevini Towards Self-Driving Cars *Sebastian Thrun*

10:00-10:30	**Coffee Break**

10:30-12:15	**Session 1: Robot Planning** (Hall: Aristotelis I) Session chair: Felix Ingrand A Human-Aware Robot Task Planner *Marcello Cirillo, Lars Karlsson, Alessandro Saffiotti* Using Physics- and Sensor-Based Simulation for High-Fidelity Temporal Projection of Realistic Robot Behavior *Lorenz Mösenlechner, Michael Beetz* Information-Theoretic Approach to Efficient Adaptive Path Planning for Mobile Robotic Environmental Sensing *Kian Hsiang Low, John M. Dolan, Pradeep Khosla* Navigation Planning in Probabilistic Roadmaps with Uncertainty *Michael Kneebone, Richard Dearden*

10:30-12:15	**Session 2: Search for Planning and Scheduling** (Hall: Aristotelis II) Session chair: Joerg Hoffmann Suboptimal and Anytime Heuristic Search on Multi-Core Machines *Ethan Burns, Seth Lemons, Wheeler Ruml, Rong Zhou* Thinking Ahead in Real-Time Search *Dana Nau, Ugur Kuter, Emre Sefer* Structural-Pattern Databases *Michael Katz, Carmel Domshlak* Preferred Operators and Deferred Evaluation in Satisficing Planning *Silvia Richter, Malte Helmert*

12:15-13:45	**Lunch Break**

Monday, September 21st, PM

13:45-15:30	**Session 3: Distributed and Multiagent Planning & Scheduling** (Hall: Aristotelis I) Session chair: Sven Koenig Fast Distributed Multi-Agent Plan Execution with Dynamic Task Assignment and Scheduling *Julie A. Shah, Patrick R. Conrad, Brian C. Williams* Multi-Agent Online Planning with Communication *Feng Wu, Shlomo Zilberstein, Xiaoping Chen* Exploiting Coordination Locales in Distributed POMDPs via Social Model Shaping *Pradeep Varakantham, Jun-young Kwak, Matthew Taylor, Janusz Marecki, Paul Scerri, Milind Tambe* Incremental Policy Generation for Finite-Horizon DEC-POMDPs *Chistopher Amato, Jilles Steeve Dibangoye, Shlomo Zilberstein*

13:45-15:30	**Session 4: Heuristics and Search Space Analysis** (Hall: Aristotelis II) Session chair: David Smith Improving Planning Performance Using Low-Conflict Relaxed Plans *Jorge A. Baier, Adi Botea* Inference and Decomposition in Planning Using Causal Consistent Chains *Nir Lipovetzky, Hector Geffner* Extending the Use of Inference in Temporal Planning as Forwards Search *Amanda Coles, Andrew Coles, Maria Fox, Derek Long* Using the Context-Enhanced Additive Heuristic for Temporal and Numeric Planning *Patrick Eyerich, Robert Mattmüller, Gabriele Röger*

15:30-16:45	**Doctoral Consortium Papers Session** (presented as posters, coffee break included) (Hall: Aristotelis I) Session co-chairs: Antonio Garrido and Eva Onaindia

16:45-18:30	**Applications Showcase Session** (Hall: Aristotelis I) Session chair: Mark Giuliano DSE: The DSN Scheduling Engine, A Request-Driven Scheduler for NASA's Deep Space Network *Mark D. Johnston, Daniel Tran, Belinda Arroyo, Chris Page* Interactive Gantt Viewer with Automated Schedule Repair *Roman Barták, Tomáš Skalický* The APSI framework: a Planning and Scheduling Software Development Environment *Amedeo Cesta, Gabriella Cortellessa, Simone Fratini, Angelo Oddi, Riccardo Rasconi* Planning in a Smart Home: Visualization and Simulation *Alexander Lazovik, Eirini Kaldeli, Elena Lazovik, Marco Aiello* MissionTool: Space Mission Planning in a Public Outreach and Educational Application *Derek Long* A Mission Planning System for Underwater Gliders *David R. Thompson, Steve Chien, Matthew Arrott Arjuna Balasuriya, Yi Chao, Peggy Li, Michael Meisinger, Stephanie Petillo, Oscar Schofield* PANDORA - Program for the Advancement of Non Directed Operating Robotic Agents *Antaris Stefanos, Doulgeri Zoe, Nikolaidis Georgios, Papadopoulos Charalampos, Papanikas Georgios, Papazoglou Anestis, Petridis Vasileios, Petrou Loukas, Serenis Charalampos, Skolarikis Michalis, Tsalidis Paraskevas, Tsardoulias Emmanouil, Zolotas Christoforos*

18:30-19:00	**Open Session – Talk with the demonstrators one on one**

Tuesday, September 22nd, AM

09:00-10:00	**Invited Talk (**Hall: Aristotelis I) Session chair: Amedeo Cesta Scheduling in Dynamic, Uncertain Environments: Closing the Loop with Execution *Stephen F. Smith*

10:00-10:30	**Coffee Break**

10:30-12:15	**Session 5: Planning Utilization** (Hall: Aristotelis I) Session chair: Sheila McIlraith Continuous Orchestration of Web Services via Planning *Piergiorgio Bertoli, Raman Kazhamiakin, Massimo Paolucci, Marco Pistore, Heorhi Raik, Matthias Wagner* Composition of Partially Observable Services Exporting their Behaviour *Giuseppe De Giacomo, Riccardo De Masellis, Fabio Patrizi* An Optimal Temporally Expressive Planner: Initial Results and Application to P2P Network Optimization *Ruoyun Huang, Yixin Chen, Weixiong Zhang* Pervasive Model Adaptation: The Integration of Planning and Information Gathering in Dynamic Production Systems *Juan Liu, Lukas Kuhn, Johan de Kleer*

10:30-12:15	**Session 6: Planning & Scheduling under Uncertainty** (Hall: Aristotelis II) Session chair: Daniel Bryce Improved Local Search for Job Shop Scheduling with Uncertain Durations *Inés González-Rodríguez, Camino R. Vela, Jorge Puente, Alejandro Hernández-Arauzo* A Decision-Theoretic Approach to Dynamic Sensor Selection in Camera Networks *Matthijs T. J. Spaan, Pedro U. Lima* Efficient Solutions to Factored MDPs with Imprecise Transition Probabilities *Karina Valdivia Delgado, Scott Sanner, Leliane Nunes de Barros, Fabio G. Cozman* Focused Topological Value Iteration *Peng Dai, Mausam, Daniel S. Weld*

12:15-13:45	**Lunch Break**

Tuesday, September 22nd, PM

13:45-15:30	**Best Papers Session** (Hall: Aristotelis I) Session chair: Alfonso Gerevini Landmarks, Critical Paths and Abstractions: What's the Difference Anyway? *Malte Helmert, Carmel Domshlak* (Best paper) Scalable, Parallel Best-First Search for Optimal Sequential Planning *Akihiro Kishimoto, Alex Fukunaga, Adi Botea* (Best paper) Lower Bounding Klondike Solitaire with Monte-Carlo Planning *Ronald Bjarnason, Alan Fern, Prasad Tadepalli* (Best student paper) Reachability Heuristics for Scaling Planning Under Uncertainty *Daniel Bryce* (Best dissertation presentation)
15:30-16:00	**Coffee Break**
16:00-16:30	**ICKEPS Results Presentation** (Hall: Aristotelis I) *Roman Barták, Simone Fratini, Lee McCluskey*
16:30-18:00	**ICAPS Community Meeting** (Hall: Aristotelis I) Session Chair: Enrico Giunchiglia, ICAPS Inc. President
20:00-23:00	**Social Dinner** Hotel Macedonia Palace (Veranda or Alexandros Hall, depending on the weather)

Wednesday, September 23rd, AM

09:00-10:00	**ECCAI Invited Talk** (Hall: Aristotelis I) Session Chair: Ioannis Refanidis Planning with Continuous Change *Maria Fox*
10:00-10:30	**Coffee Break**
10:30-12:15	**Short Papers Session** (presented as posters) (Hall: Aristotelis I) Session chair: Amedeo Cesta Integrating Planning and Scheduling in a CP Framework: A Transition-Based Approach *Debdeep Banerjee* Ant Search Strategies for Planning Optimization *M. Baioletti, A. Milani, V. Poggioni, F. Rossi* Acquisition of Object-Centred Domain Models from Planning Examples *S. N. Cresswell, T. L. McCluskey, M. M. West* Multi-Goal Planning for an Autonomous Blasthole Drill *Pantelis Elinas* Computing Robust Plans in Continuous Domains *Christian Fritz, Sheila McIlraith* An Automatically Configurable Portfolio-Based Planner with Macro-Actions: PbP *Alfonso E. Gerevini, Alessandro Saetti, Mauro Vallati* $h_m(P) = h_1(P_m)$: Alternative Characterisations of the Generalisation from h_{max} to h_m *Patrik Haslum* Path-Adaptive A* for Incremental Heuristic Search in Unknown Terrain *Carlos Hernández, Pedro Meseguer, Xiaoxun Sun, Sven Koenig* Extended Goals for Composing Services *Eirini Kaldeli, Alexander Lazovik, Marco Aiello* From Discrete Mission Schedule to Continuous Implicit Trajectory Using Optimal Time Warping *François Keith, Nicolas Mansard, Sylvain Miossec, Abderrahmane Kheddar* Learning User Plan Preferences Obfuscated by Feasibility Constraints *Nan Li, William Cushing, Subbarao Kambhampati, Sungwook Yoon* Exploiting N-Gram Analysis to Predict Operator Sequences *Christian Muise, Sheila McIlraith, Jorge A. Baier, Michael Reimer* Solving Resource-Constrained Project Scheduling Problems with Time-Windows Using Iterative Improvement Algorithms *Angelo Oddi, Riccardo Rasconi* Using Distance Estimates in Heuristic Search *Jordan T. Thayer, Wheeler Ruml*
12:15-13:45	**Lunch Break**

Wednesday, September 23rd, PM

13:45-15:30	**Session 7: Methodologies, Tools & Languages** (Hall: Aristotelis I) Session chair: Derek Long UPMurphi: A Tool for Universal Planning on PDDL+ Problems *Giuseppe Della Penna, Daniele Magazzeni, Fabio Mercorio* A Semantics for HTN Methods *Robert P. Goldman* Semantic Attachments for Domain-Independent Planning Systems *Christian Dornhege, Patrick Eyerich, Thomas Keller, Sebastian Trüg, Michael Brenner, Bernhard Nebel* Minimal Sufficient Explanations for Factored Markov Decision Processes *Omar Zia Khan, Pascal Poupart, James P. Black*

13:45-15:30	**Session 8: Classical and Parallel Planning** (Hall: Aristotelis II) Session chair: Carmel Domshlak Enhancing the Context-Enhanced Additive Heuristic with Precedence Constraints *Dunbo Cai, Jörg Hoffmann, Malte Helmert* The Influence of *k*-Dependence on the Complexity of Planning *Omer Giménez, Anders Jonsson* Optimality Properties of Planning Via Petri Net Unfolding: A Formal Analysis *Sarah Hickmott, Sebastian Sardina* SAT-Based Parallel Planning Using a Split Representation of Actions *Nathan Robinson, Charles Gretton, Duc-Nghia Pham, Abdul Sattar*

15:30-16:00	**Coffee Break**

16:00-17:15	**Session 9: Constraint Reasoning for P&S** (Hall: Aristotelis I) Session chair: Angelo Oddi Flexible Execution of Plans with Choice *Patrick R. Conrad, Julie A. Shah, Brian C. Williams* Just-in-Time Scheduling with Constraint Programming *Jean-Noël Monette, Yves Deville, Pascal Van Hentenryck* Forward Constraint-Based Algorithms for Anytime Planning *Cédric Pralet, Gérard Verfaillie*

16:00-17:15	**Session 10: Conformant/Contingent Planning** (Hall: Aristotelis II) Session chair: Piergiorgio Bertoli Automatic Derivation of Memoryless Policies and Finite-State Controllers Using Classical Planners *Blai Bonet, Héctor Palacios, Héctor Geffner* A Conformant Planner with Explicit Disjunctive Representation of Belief States *Son Thanh To, Enrico Pontelli, Tran Cao Son* Dynamic Controllability of Temporally-Flexible Reactive Programs *Robert Effinger, Brian Williams, Gerard Kelly, Michael Sheehy*

17:15-17:30	**Closing remarks**

Invited Speakers

Maria Fox Planning with Continuous Change

Wednesday, September 23rd , 9:00 – 10:00, Hall: Aristotelis I

Abstract. Continuous change occurs in almost all interesting real problems, including oil refinery management, logistics planning, mission planning for autonomous vehicles, experiment design, financial planning and energy demand and supply management. Most research communities that are concerned with action and change: the qualitative reasoning, formal verification, controls, optimisation and knowledge representation communities - also recognise the importance of continuous processes and their impact on predicting and controlling dynamic systems. In the planning community the problem of reasoning about continuous change and its implications has been explored in autonomous vehicle mission-planning using hybrid model-based reasoning and stochastic and hierarchical modelling, and in process plant management using non-linear constraint modelling. However, despite the development of planning domain modelling languages, such as PDDL+ and Opt, domains featuring autonomous processes and exogenous events have not yet been developed as benchmarks for domain-independent planning. The speaker will present some features of planning problems that distinguish them from typical problems in optimisation and control and discuss progress and open problems in planning with continuous change.

Short bio. Maria Fox is Professor of Computer Science at the University of Strathclyde. Her research includes contributions to planning domain modelling and automated static domain analysis, domain modelling languages and their formal semantics, planning for temporal and metric domains, continuous planning, plan validation and plan execution monitoring. She co-developed PDDL2.1, the temporal and metric version of PDDL, and was a co-organiser of the 3rd IPC which precipitated many new developments in temporal planning. She is an Associate Editor of Artificial Intelligence and a member of the advisory board of JAIR, having served over several years as both an editorial board member and an Associate Editor. She has also served on the programme committees of many conferences including ICAPS and IJCAI, both in PC member and Area Chair capacity and she co-chaired ICAPS-07. She has helped to build an internationally known planning group at Strathclyde, where she has also been Department Head since 2007.

Stephen F. Smith Scheduling in Dynamic, Uncertain Environments: Closing the Loop with Execution

Tuesday, September 22nd , 9:00 – 10:00, Hall: Aristotelis I

Abstract. Advances in sensing and web technologies now provide unprecedented ability to obtain and maintain up-to-date, real-time information on the location and status of materials and resources over time. In application areas as diverse as transportation planning, supply network management, disaster response and traffic control, it is now truly possible to base planning and scheduling decisions on actual execution state. The perceived benefit of this approach, largely unrealized at this point, is that it offers the possibility to better cope with the uncertainty inherent in large-scale, multi-agent execution environments, leading to more responsive and ultimately more effective organizational performance. This talk considers the prospects for a new class of execution-driven scheduling models. These models start from the premise that scheduling is a dynamic optimization under uncertainty problem, where new goals arrive continuously and must be weighed against current commitments, where the constraints associated with scheduled activities are uncertain, and where the resources required to execute activities are unreliable.
Execution-driven scheduling models must also deal with the communication and coordination constraints of multiple executing agents, which frequently force or encourage distribution of problem solving effort. I will summarize threads of ongoing research in building robust schedules, managing change in dynamic over-subscribed domains, learning and exploiting models of uncertain scheduling constraints, and coordinating distributed scheduling agents; all of which contribute directly to the realization of execution-driven scheduling models. I'll attempt to characterize where the field stands with respect to this overarching goal, and what principal challenges remain.

Short Bio. Stephen Smith is a Research Professor in the Robotics Institute at Carnegie Mellon University, where he heads the Intelligent Coordination and Logistics Laboratory. His research focuses broadly on the theory and practice of next-generation technologies for complex planning, scheduling and coordination problems. He pioneered the development and use of constraint-based search models and heuristics for solving scheduling problems, and he has led

the development of innovative planning and scheduling systems for a number of complex applications. He has published over 215 technical articles on these subjects. He is Associate Editor of the Journal of Scheduling, was a founding member of the ICAPS executive council (2002-2008), and currently serves on the executive council of the International Society of Interdisciplinary Scheduling. In 2005, he received the Allen Newell Medal for Research Excellence, awarded annually by the CMU School of Computer Science. In 2007, he was elected a Fellow of AAAI.

Sebastian Thrun Towards Self-Driving Cars

Monday, September 21st, 9:00 – 10:00, Hall: Aristotelis I

Abstract. Cars kill over a million people every year. The speaker will report on progress to make cars safer, more convenient, and more efficient (gas, space, utilization), through robotic technology. Building on AI advances that led the Stanford Racing Team to victory in the DARPA Grand Challenge and second place finish in the Urban Challenge, Stanford has developed advanced mapping, localization, car tracking, control, and planning methods, which enable cars to navigate in dense urban and highway environments. The speaker will survey the latest research in this area, and speculate about possible ways to get this technology into every car.

Short bio. Sebastian Thrun is a professor of computer science and electrical engineering at Stanford, where he directs the Stanford AI Lab. Thrun has published 11 books, over 300 scientific articles. Thrun is probably best known for his pioneering work on probabilistic robotics, and the victory of his team in the DARPA Grand Challenge. Thrun is a fellow of the AAAI, ECCAI, WTN, and member of the National Academy of Engineering and the German Academy of Sciences. Popular Science included Thrun in their "Brilliant Ten", Fobes Magazine as one of seven "E-Gang" members, Scientific American in their list of 50 world technology and policy leaders, and Wired awarded Thrun's robot Stanley the top spot in the most influential robots of all times. Thrun also serves as a Principal Engineer at Google where he was instrumental in the creation of Street View. Finally, he is a senior advisor to Charles River Ventures, an early stage venture capital firm.

AWARDS

ICAPS-2009 Best papers

Landmarks, Critical Paths and Abstractions: What's the Difference Anyway?
Malte Helmert, Carmel Domshlak

Scalable, Parallel Best-First Search for Optimal Sequential Planning
Akihiro Kishimoto, Alex Fukunaga, Adi Botea

ICAPS-2009 Best Student Paper

Lower Bounding Klondike Solitaire with Monte-Carlo Planning
Ronald Bjarnason, Alan Fern, Prasad Tadepalli

ICAPS-2009 Best Doctoral Consortium Papers

Learning to Combine Admissible Heuristics Under Bounded Time
Erez Karpas

Integrating Paradigms for Approximate Probabilistic Planning
Andrey Kolobov

ICAPS Influential Papers 2009

Winners

Planning as Heuristic Search: New Results
Blai Bonet and Hector Geffner
ECP 1999

A Heuristic Estimator for Means-Ends Analysis in Planning
Drew McDermott
AIPS 1996

Honorable Mention

UMCP: A Sound and Complete Procedure for Hierarchical Task-Network Planning
Kutluhan Erol, James Hendler and Dana Nau
AIPS 1994

ICAPS Outstanding Dissertations 2009

Winner

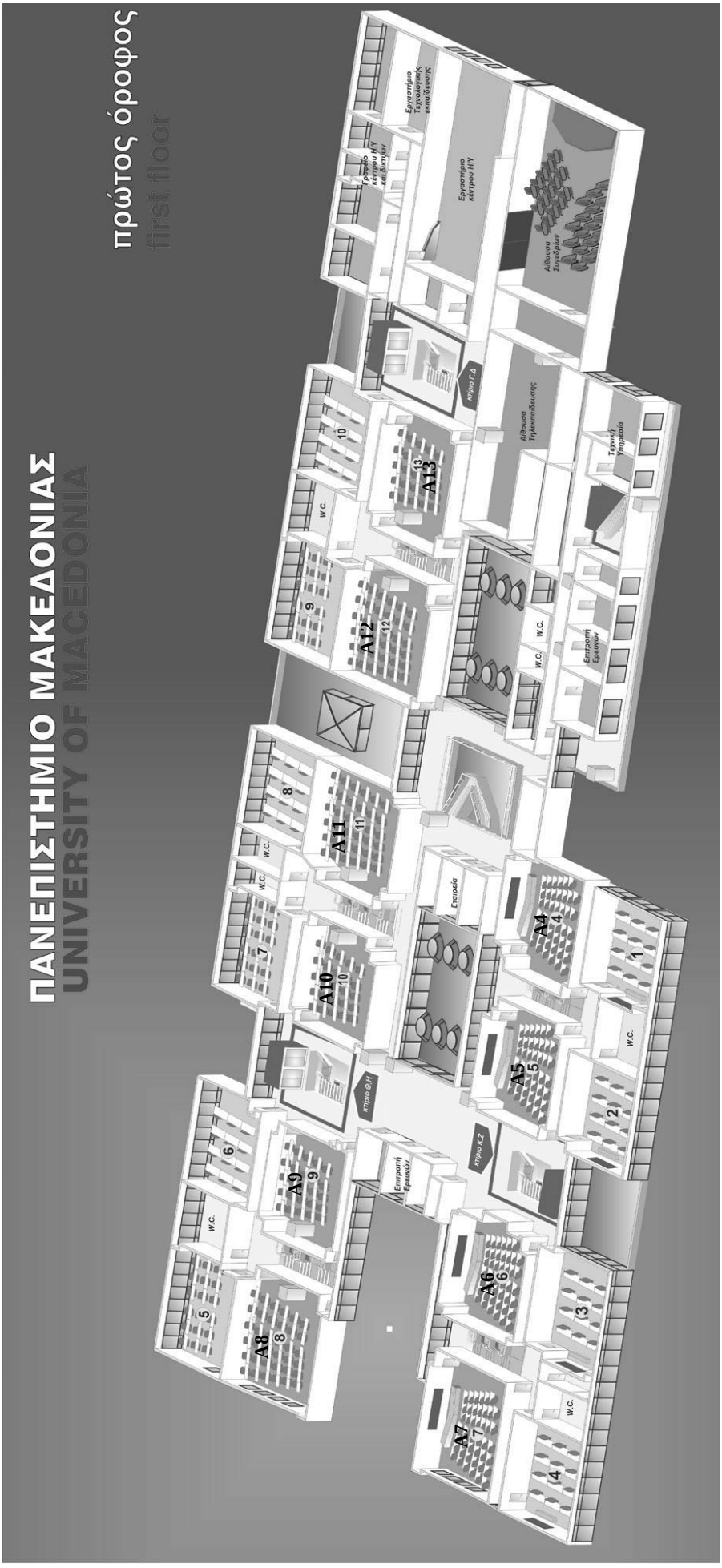
Scalable Planning under Uncertainty
Daniel Bryce

Honorable Mentions

Learning and Solving Partially Observable Markov Decision Processes
Guy Shani

External Memory Algorithms for State Space Exploration in Model Checking and Action Planning
Shahid Jabbar

Integer Programming Approaches for Automated Planning
Menkes van den Briel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Αίθουσα Πληροφόρησης
Εργαστήριο Τεχνολογιών εκπαίδευσης
Εργαστήριο κέντρου Η/Υ
Τμήμα κέντρου Η/Υ και δικτύων
Τεχνική Υπηρεσία
Επιτροπή Ερευνών

ICAPS-2009 SATELLITE EVENTS AT A GLANCE

Room	Saturday 19		Sunday 20	
Amphitheater 4			9:00 – 16:00 ICKEPS	
Amphitheater 7			8:50 – 17:30 WS10	
Amphitheater 8			9:00 – 17:30 WS9	
Amphitheater 9	9:00 – 18:00 DC		9:00 – 17:30 WS7	
Amphitheater 10	8:50 – 17:30 WS8		9:00 – 17:30 WS6	
Amphitheater 11	9:00 – 13:00 WS2		8:50 – 17:30 WS5	
Amphitheater 12	8:55 – 17:30 WS1		8:50 – 13:30 WS3	14:00 – 17:30 TUT4
Amphitheater 13	9:00 – 12:30 TUT3	14:00 – 17:30 TUT5	9:00 – 12:30 TUT1	14:00 – 17:30 TUT2

Workshops

WS1. Planning and Plan Execution for Real-World Systems	Amphitheater 12
WS2. Constraint Satisfaction Techniques for Planning and Scheduling Problems	Amphitheater 11
WS3. Intelligent Security	Amphitheater 12
WS5. Verification and Validation of Planning and Scheduling Systems	Amphitheater 11
WS6. Planning and Learning	Amphitheater 10
WS7. Scheduling and Planning Applications	Amphitheater 9
WS8. Heuristics for Domain-independent Planning	Amphitheater 10
WS9. Bridging the Gap Between Task and Motion Planning	Amphitheater 8
WS10. Generalized Planning: Macros, Loops, Domain Control	Amphitheater 7

Tutorials

TUT1. Heuristics for Classical Planning (With Costs)	Amphitheater 13
TUT2. Petri Nets and Their Relation to Planning	Amphitheater 13
TUT3. Real-Time Planning in Dynamic and Partially-Known Domains	Amphitheater 13
TUT4. Representing, Eliciting, and Reasoning with Preferences	Amphitheater 12
TUT5. Practical Planning & Scheduling	Amphitheater 13

ICKEPS	Amphitheater 4
DC	Amphitheaters 9, 8, 7, 5 & 4

ICAPS-2009 MAIN CONFERENCE AT A GLANCE

Welcome Reception is on Sunday, September 20th, from 20:00 to 23:00, at the Museum of Byzantine Culture

Time	Monday 21st		Time	Tuesday 22nd		Time	Wednesday 23rd	
08:50-09:00	**Opening**							
09:00-10:00	**Invited Talk:** *Sebastian Thrun* Hall: Aristotelis I		09:00-10:00	**Invited Talk:** *Stephen F. Smith* Hall: Aristotelis I		09:00-10:00	**Invited Talk:** *Maria Fox* *European Coordinating Committee for Artificial Intelligence* (*ECCAI*) *Invited Speaker* Hall: Aristotelis I	
10:00-10:30	**Coffee break**		10:00-10:30	**Coffee break**		10:00-10:30	**Coffee break**	
10:30-12:15	**Robot Planning** Hall: Aristotelis I	**Search for Planning and Scheduling** Hall: Aristotelis II	10:30-12:15	**Planning Utilization** Hall: Aristotelis I	**Planning & Scheduling under Uncertainty** Hall: Aristotelis II	10:30-12:15	**Short Papers Session** (presented as posters) Hall: Aristotelis I	
12:15-13:45	**Lunch Break**		12:15-13:45	**Lunch Break**		12:15-13:45	**Lunch Break**	
13:45-15:30	**Distributed and Multiagent Planning & Scheduling** Hall: Aristotelis I	**Heuristics and Search Space Analysis** Hall: Aristotelis II	13:45-15:30	**Best Papers Session** Hall: Aristotelis I		13:45-15:30	**Methodologies, Tools & Languages** Hall: Aristotelis I	**Classical and Parallel Planning** Hall: Aristotelis II
15:30-16:45	**Doctoral Consortium Papers Session** (presented as posters, coffee break included) Hall: Aristotelis I		15:30-16:00	**Coffee break**		15:30-16:00	**Coffee break**	
			16:00-16:30	**ICKEPS Results Presentation** Hall: Aristotelis I		16:00-17:15	**Constraint Reasoning for P&S** Hall: Aristotelis I	**Conformant/Contingent Planning** Hall: Aristotelis II
			16:30-18:00	**ICAPS Community Meeting** Hall: Aristotelis I				
16:45-18:30	**Applications Showcase** Hall: Aristotelis I					17:15-17:30	**Closing remarks**	
			20:00-23:00	**Social Dinner** Hotel Macedonia Palace (Veranda or Alexandros Hall, depending on the weather)				