

Wed, June 27th, 2012

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| 8:00       | Registration  |   |
| 8:45       | Opening Remarks   |   |
| 9:00       | Invited Talk: Robert O. Ambrose - Controlling Robots Across Intermediate Time Delays  |   |
| 10:00      | Coffee Break  |   |
| 10:30      | <b>Session Ia: Temporal Planning and Scheduling</b>   | <b>Session Ib: Combining Heuristics and Search for Optimal Planning</b>   |
| 12:10      | Session Chair: Mark Boddy   | Session Chair: Derek Long   |
|            | M. C. Cooper, F. Maris and P. Regnier<br>Tractable Monotone Temporal Planning   | M. Wehrle and M. Helmert<br>About Partial Order Reduction in Planning and Computer Aided Verification                                 |
|            | A. A. Cire and W. Van Hoeve<br>MDD Propagation for Disjunctive Scheduling   | A. Gefen and R. Brafman<br>Pruning Methods for Optimal Delete-Free Planning   |
|            | D. Terekhov, T. T. Tran, D. G. Down and J. C. Beck<br>Long-run Stability in Dynamic Scheduling                                | F. Pommerening and M. Helmert<br>Optimal Planning for Delete-free Tasks with Incremental LM-cut (short paper)                         |
|            | A. Oddi, R. Rasconi, A. Cesta and S. F. Smith<br>Iterative Improvement Algorithms for the Blocking Job Shop                   | C. Domshlak, M. Katz and A. Shleyfman<br>Enhanced Symmetry Breaking in Cost-Optimal Planning as Forward Search (short paper)          |
| 12:10      | Lunch Break   |   |
| 14:00      | <b>Session IIa: Special Track on Continuous Planning</b>  | <b>Session IIb: Admissible Heuristics in Optimal Planning</b>   |
| 15:15      | Session Chair: Maria Fox  | Session Chair: Carmel Domshlak  |
|            | J. Lohr, P. Eyerich, T. Keller and B. Nebel<br>A Planning Based Framework for Controlling Hybrid Systems                      | P. Haslum<br>Incremental Lower Bounds for Additive Cost Planning Problems   |
|            | A. Weinstein and M. Littman<br>Bandit-Based Planning and Learning in Continuous-Action Markov Decision Processes              | M. Katz, J. Hoffmann and M. Helmert<br>How to Relax a Bisimulation?   |
|            | S. Kiesel, E. Burns, C. Wilt and W. Ruml<br>Integrating Vehicle Routing and Motion Planning                                   | P. Haslum, J. Slaney and S. Thiébaux<br>Minimal Landmarks for Optimal Delete-Relaxed Planning (short paper)                           |
| 15:15      | Coffee Break  |   |
| 15:45      | <b>Session IIIa: Robot Path Planning</b>  | <b>Session IIIb: Enhancing Descriptions and Improving Plans</b>   |
| 17:00      | Session Chair: Wheeler Ruml   | Session Chair: Roman Bartak   |
|            | X. Sun, W. Yeoh, T. Uras and S. Koenig<br>Incremental ARA*: An Anytime Incremental Search Algorithm for Moving Target Search  | P. Gregory, D. Long, M. Fox and J. C. Beck<br>Planning Modulo Theories: Extending the Planning Paradigm                               |
|            | B. Englot and F. Hover<br>Sampling-Based Coverage Path Planning for Inspection of Complex Structures                          | L. Chrpá, T. L. McCluskey and H. Osborne<br>Optimizing Plans through Analysis of Action Dependencies and Independencies (short paper) |
|            | C. Park, J. Pan and D. Manocha<br>ITOMP: Incremental Trajectory Optimization for Real-time Replanning in Dynamic Environments | C. Muise, S. McIlraith and J. C. Beck<br>Optimally Relaxing Partial-Order Plans with MaxSAT (short paper)                             |
| 17:00      | <b>ICKEPS Competition Results</b>   |   |
| 17:40      | Tiago Vaquero and Simone Fratini  |   |
| 20:00      | DC Posters and System Demos   |   |
| Open Ended |   |   |

Thu, June 28th, 2012

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| 8:30                  | Registration  |  |
| 9:00                  | Invited Talk: George J. Pappas - Temporal Logic Motion Planning for Mobile Robots   |  |
| 10:00                 | Coffee Break  |  |
| 10:30                 | <b>Session IVa: Planning and Scheduling in the Real World</b>   | <b>Session IVb: Learning and Local Search in Planning</b>  |
| 12:10                 | Session Chair: Chris Beck   | Session Chair: Joerg Hoffmann  |
|                       | B. Seegebarth, F. Muller, B. Schattner and S. Biundo<br>Making Hybrid Plans More Clear to Human Users – A Formal Approach<br>for Generating Sound Explanations      | M. Fox, D. Long and D. Magazzeni<br>Plan-based Policy Learning for Autonomous Feature Tracking                           |
|                       | S. Parkinson, A. Longstaff, A. Crampton and P. Gregory<br>The Application of Automated Planning to Machine Tool Calibration   | H. Nakhost, J. Hoffmann and M. Mueller<br>Resource-Constrained Planning: A Monte-Carlo Random Walk<br>Approach           |
|                       | A. Garrido, L. Morales and I. Serina<br>Using AI Planning to Enhance E-learning Processes   | F. Xie, H. Nakhost and M. Mueller<br>Planning via Random Walk-Driven Local Search  |
|                       | D. F. Ferber<br>On Modeling the Tactical Planning of Oil Pipeline Networks (short paper)  | J. Seipp, M. Braun, J. Garimort and M. Helmert<br>Learning Portfolios of Automatically Configured Planners (short paper) |
| 12:10                 | Lunch Break   |  |
| 14:00                 | <b>Session V: Best Papers</b>   |  |
| 15:15                 | J. Benton, A. Coles and A. Coles<br>Temporal Planning with Preferences and Time-Dependent Continuous Costs <b>(Best Student Paper - Special Track)</b>              |  |
|                       | K. Nguyen, V. Tran, S. Tran and E. Pontelli<br>On Computing Conformant Plans Using Classical Planners: A Generate-And-Complete Approach <b>(Best Student Paper)</b> |  |
|                       | E. Keyder, J. Hoffmann and P. Haslum<br>Semi-Relaxed Plan Heuristics <b>(Best Paper)</b>  |  |
| 15:15                 | Coffee Break  |  |
| 15:45                 | Community Meeting<br>(including Best Dissertation Talk)   |  |
| 17:45                 | Banquet<br>(including Best Reviewer Award and Festus)   |  |
| 20:00<br>(Open Ended) |   |  |

Fri, June 29th, 2012

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| Registration   |  |
| Invited Speaker: Anthony G. Cohn - Building Qualitative Models of Spatio-Temporal Behavior                 |  |
| Coffee Break   |  |
| <b>Session VIa: Probabilistic and Non-Deterministic Planning I</b><br>Session Chair: Shlomo Zilberstein    | <b>Session VIb: P&amp;S for Shipping and Transportation</b><br>Session Chair: Daniel Borrajo                                     |
| B. Kane and R. Simmons<br>Risk-Variant Policy Switching to Exceed Reward Thresholds                        | K. Tierney, R. M. Jensen C. Kroer, A. Britt, A. Coles and A. Coles<br>Automated Planning for Liner Shipping Fleet Repositioning  |
| F. Teichteil-Königsbuch<br>Fast Incremental Policy Compilation from Plans in Hybrid Probabilistic Domains  | E. Kelareva, P. Kilby, S. Thiébaux, M. Wallace and S. Brand<br>CP and MIP Methods for Ship Scheduling with Time-Varying Draft    |
| C. Muise, J. C. Beck and S. McIlraith<br>Improved Non-deterministic Planning by Exploiting State Relevance | X. Xie, S. F. Smith and G. J. Barlow<br>Schedule-Driven Coordination for Real-Time Traffic Network Control                       |
| E. Burns, J. Benton, W. Ruml, M. Do and S. Yoon<br>Anticipatory On-line Planning (short paper)             | S. Storandt<br>Route Planning for Bicycles – Exact Constrained Shortest Paths made Practical via Contraction Hierarchy           |
| Lunch Break  |  |
| <b>Session VIIa: Probabilistic and Non-Deterministic Planning II</b><br>Session Chair: Scott Sanner        | <b>Session VIIb: Heuristic Search</b><br>Session Chair: Patrik Haslum  |
| F. Trevizan and M. Veloso<br>Short-Sighted Stochastic Shortest Path Problems                               | E. Karpas and C. Domshlak<br>Optimal Search with Inadmissible Heuristics   |
| T. Keller and P. Eyerich<br>Probabilistic Planning Based on UCT  | J. Thayer, R. Stern, A. Felner and W. Ruml<br>Faster Bounded-Cost Search Using Inadmissible Estimates                            |
| A. Kolobov, P. Dai, Mausam and D. Weld<br>Tackling Finite-Horizon MDPs with Large Branching Factors        | L. Lelis, R. Stern, A. Felner, S. Zilles and R. Holte<br>Predicting Optimal Solution Cost with Bidirectional Stratified Sampling |
| Closing Remarks  |  |