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Proceedings of the 4th Workshop on Planning and Plan Execution for Real-World Systems

*Edited by
Felix Ingrand and Frederic Py*

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Preface

Early approaches to robot control were based on the Sense-Plan-Act (SPA) paradigm with planning as the core of a control-loop. Using this paradigm, real-world applications merging deliberative and reactive decision have made remarkable strides in the last few years. These systems have evolved from the classical concept of three-layered control running off-board, to demonstrate dynamic control of a multitude of platforms using onboard and hybrid mixed-initiative techniques. In the meantime, automated planning techniques have evolved substantially in the areas of modeling, reasoning methods, and search algorithms. Together these advances open up new possibilities for how planning technology can be applied in execution, but also reveal new concerns like the interaction between different decisional components or the possible conflict between decision and environmental reality. The goal of this workshop is to integrate practical experience in fielded autonomous systems with theoretical and empirical results in automated planning to stimulate new perspectives on the roles and requirements for planning in execution.

The 13 accepted papers span over a wide area in the field. Many papers deal with real robots and provide advanced autonomy capabilities: integrated planning/execution systems; human/robot task achievement systems; learning planning actions models or recognizing human activities. Other papers are also studying the relationship between path planning/motion planning and task planning. MDP papers are also well represented and a session will be dedicated to them.

– *Felix Ingrand and Frederic Py*
Workshop co-Chairs

Organization

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