

Artificial Intelligence and Optimization for Automated Planning and Scheduling

Nysret Musliu

*Vienna University of Technology (TU-WIEN), Vienna, Austria,
musliu@dbai.tuwien.ac.at*

A wide variety of areas are beset by planning and scheduling problems. Real-life problems in domains as diverse as health care, production, public transportation and education are frequently very challenging and their solutions impact the people involved as well as the efficiency and organizational cost of operations. The research in these areas has recently gained importance due to the need for complete automation in industrial applications. In addition, new domains provide challenging problems that cannot be optimally solved due to the tremendous size of the search space of possible solutions.

In this talk we will briefly introduce some challenging planning and scheduling problems that were investigated in the Christian Doppler Laboratory for Artificial Intelligence and Optimization for Planning and Scheduling in cooperation with the industry. We will also present main ideas of developed problem-solving techniques for this domain, based on synergies between artificial intelligence and optimization.