

Model Combinators in the Scheduling Domain

Laurent Michel, University of Connecticut, ldm@engr.uconn.edu
Daniel Fontaine, University of Connecticut, daniel.fontaine@gmail.com

Recent work in model combinators, as well projects like G12 and SIMPL, have achieved significant progress in automating the generation of complex and hybrid solvers from high-level model specifications. This talk expands previous work on model combinators into the scheduling domain. This is of particular interest as recent work has shown that both Constraint Programming (CP) and Mixed-Integer Programming (MIP) perform well on scheduling problems providing different capabilities and trade-offs. The ability to construct hybrid scheduling solvers to leverage the strength of both technologies as well as multiple problem encodings through high-level model combinators provides new opportunities for scheduling solvers.