

Solving Complex Trajectory Planning Problems using Mixed-Integer Programming

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Motivation

- How to determine the optimal overtaking trajectory?

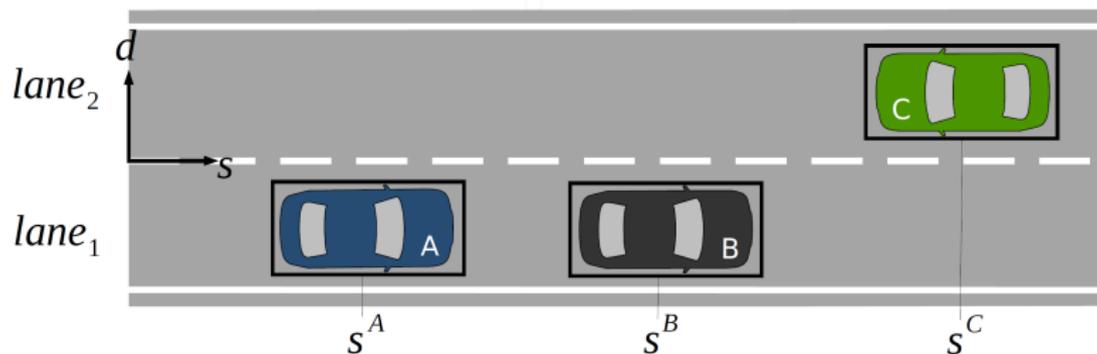


Figure: Non-convex optimization problem. Figure taken from [Schulz, 2017].

Topic

- Mixed-Integer Programming:
 - Allows one to solve non-convex optimization problems
 - Integer variables can be used to toggle certain constraints on/off
 - Efficient solving strategies exist

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 - Literature review on trajectory planning problems which use MIP
 - Describe MIP and its advantages/disadvantages
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⇒ Any questions? Interested? Feel free to contact me!
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