# Article information:

Lattice-based motion planning for a general 2-trailer system | IEEE Conference Publication | IEEE Xplore
<https://ieeexplore.ieee.org/document/7995817>

# Article summary:

1. This paper presents a resolution complete and resolution optimal motion planning framework for a general 2-trailer system in both forward and backward motion.

2. A novel parametrization of the state lattice is proposed to enable the effective use of graph search algorithms for path planning under the kinematic constraints imposed by this system.

3. This work presents the first resolution complete motion planning framework for a reversing general 2-trailer system.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is written in an objective manner, presenting a clear overview of the research conducted and its findings. The authors provide evidence to support their claims, such as references to previous works on path following controllers, which adds credibility to their work. Furthermore, they acknowledge potential risks associated with their research, such as the need for further stabilization techniques around paths generated by their motion planner.

However, there are some points that could be improved upon in terms of trustworthiness and reliability. For example, while the authors mention potential applications of their motion planner (e.g., driver support systems or autonomous maneuvering with trailers), they do not provide any evidence or examples to back up these claims. Additionally, there is no discussion of possible counterarguments or alternative approaches that could be taken when using this motion planner. Finally, it would be beneficial if the authors provided more detail on how exactly their proposed parametrization of the state lattice enables effective use of graph search algorithms for path planning under kinematic constraints imposed by this system.

# Topics for further research:

* Path Following Controllers
* Autonomous Maneuvering with Trailers
* Graph Search Algorithms for Path Planning
* Kinematic Constraints in Motion Planning
* Stabilization Techniques for Paths
* Parametrization of State Lattice for Motion Planning

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