# Article information:

Parallel and diagonal parking in nonholonomic autonomous vehicles - ScienceDirect  
<https://www.sciencedirect.com/science/article/abs/pii/S0952197601000045?casa_token=3lABIrL7MMgAAAAA%3AsI52WVjpwnHARFnSP9xBNgaIgNXgHOTPmr3sQMJ1MD0J6tq4ag5xPzwZP8rb5vKAD8Am_sMI>

# Article summary:

1. The article discusses the problem of nonholonomic motion in autonomous vehicles when it comes to parallel and diagonal parking.

2. The proposed method involves considering geometric constraints to design a restricted manoeuvre for a collision-free path, without the need for recursive algorithms.

3. Fuzzy logic is used to select the best starting point for parking based on the environment, and the method has been implemented in an autonomous vehicle called ROMEO-3R.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Parallel and diagonal parking in nonholonomic autonomous vehicles" presents a method for generating manoeuvres for nonholonomic wheeled vehicles to park in parallel or diagonal spaces. The authors provide a detailed explanation of the method, which involves considering geometric constraints and using heuristic considerations to plan a restricted manoeuvre that results in a collision-free path. They also propose the use of fuzzy logic to select the best starting point for the manoeuvre based on environmental factors.

Overall, the article is well-written and provides valuable insights into the challenges of parking nonholonomic autonomous vehicles. However, there are some potential biases and limitations that should be considered.

One potential bias is that the authors focus primarily on their proposed method and do not explore alternative approaches in depth. While they briefly mention other methods, such as recursive algorithms and circle/straight line segment manoeuvres, they do not provide a comprehensive comparison of these methods or discuss their relative strengths and weaknesses.

Another limitation is that the article does not address some important practical considerations related to autonomous vehicle parking. For example, it does not discuss issues related to sensor accuracy or reliability, which could impact the effectiveness of the proposed method in real-world scenarios. Additionally, it does not consider factors such as pedestrian traffic or other obstacles that could affect parking manoeuvres.

The article also contains some unsupported claims, such as when the authors state that their proposed method is less restrictive than other methods. While they provide some evidence to support this claim, it is unclear whether their approach would be effective in all possible parking scenarios.

Finally, while the authors acknowledge potential risks associated with autonomous vehicle parking (such as collisions), they do not fully explore counterarguments or present both sides equally. For example, they do not discuss concerns about privacy or security related to autonomous vehicle technology.

In conclusion, while "Parallel and diagonal parking in nonholonomic autonomous vehicles" provides valuable insights into an important topic, readers should be aware of potential biases and limitations in the article. Further research is needed to fully explore the challenges and opportunities associated with autonomous vehicle parking.

# Topics for further research:

* Sensor accuracy and reliability in autonomous vehicle parking
* Pedestrian traffic and obstacles in autonomous vehicle parking
* Comparison of alternative methods for autonomous vehicle parking
* Effectiveness of proposed method in various parking scenarios
* Privacy and security concerns related to autonomous vehicle technology
* Risks and benefits of autonomous vehicle parking

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