# Article information:

A novel path planning algorithm for mobile robot in dynamic environments using modified bat swarm optimization - Ajeil - 2021 - The Journal of Engineering - Wiley Online Library
<https://ietresearch.onlinelibrary.wiley.com/doi/full/10.1049/tje2.12009>

# Article summary:

1. Path planning is a well-known study-case in the robotic domain, with numerous solutions proposed since the late '60s.

2. Heuristic-based methods such as ANN, PSO, GA and hybridization between them have been proposed to surpass the shortcomings of existing algorithms.

3. Recent research has focused on path planning in dynamic environments, using techniques such as fuzzy logic controllers, artificial potential field and fuzzy neural networks.

# 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 provides an overview of path planning for mobile robots in dynamic environments, discussing various approaches that have been used to solve this problem. The article is generally reliable and trustworthy; it provides a comprehensive overview of the topic and cites relevant sources to support its claims. However, there are some areas where the article could be improved upon. For example, while it does discuss some of the risks associated with path planning in dynamic environments (e.g., collisions), it does not provide any detailed information on how these risks can be mitigated or avoided. Additionally, while the article does mention some potential counterarguments to its claims (e.g., that heuristic-based methods may not be effective), it does not explore these counterarguments in any detail or provide evidence to support its own claims. Furthermore, while the article does mention some potential benefits of using heuristic-based methods (e.g., their ability to yield satisfactory convergence), it does not provide any evidence or data to back up these claims or explore any potential drawbacks of using these methods (e.g., their high computational cost). Finally, while the article mentions some recent research into path planning in dynamic environments (e.g., using fuzzy logic controllers), it fails to mention other recent research into this area (e.g., using reinforcement learning). In conclusion, while overall this article is reliable and trustworthy, there are some areas where it could be improved upon by providing more detailed information and exploring counterarguments more thoroughly.

# Topics for further research:

* Mitigating risks in path planning for mobile robots
* Heuristic-based methods for path planning in dynamic environments
* Advantages and disadvantages of heuristic-based methods
* Fuzzy logic controllers for path planning
* Reinforcement learning for path planning
* Recent research in path planning for mobile robots

# Report location:

<https://www.fullpicture.app/item/2ca8671a47176a398c60641f151c83db>