# Article information:

Beampattern synthesis for active RIS-assisted radar with sidelobe level minimization - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0165168422004649?via%3Dihub>

# Article summary:

1. The reconfigurable intelligent surface (RIS) is a novel and promising technology that has been gaining attention in communications, localization and sensing applications due to its special electromagnetic wave control capabilities.

2. RISs have been investigated for various radar scenarios, such as monostatic, bistatic, and MIMO radars.

3. This article proposes a beampattern synthesis method for active RIS-assisted radar with sidelobe level minimization using the alternating direction method of multipliers (ADMM).

# 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:

This article provides an overview of the potential applications of RISs in radar scenarios and presents a proposed beampattern synthesis method for active RIS-assisted radar with sidelobe level minimization using the alternating direction method of multipliers (ADMM). The article is well written and provides a clear explanation of the proposed method. However, there are some potential biases that should be noted. For example, the article does not explore any counterarguments or alternative methods to the proposed approach. Additionally, it does not provide any evidence to support its claims or discuss any possible risks associated with the proposed approach. Furthermore, it does not present both sides equally or consider any missing points of consideration when discussing the potential applications of RISs in radar scenarios. Finally, there is no mention of promotional content or partiality in this article. In conclusion, while this article provides an interesting overview of RISs in radar scenarios and presents a proposed beampattern synthesis method for active RIS-assisted radar with sidelobe level minimization using ADMM, it could benefit from exploring counterarguments and alternative methods as well as providing evidence to support its claims and discussing possible risks associated with the proposed approach.

# Topics for further research:

* Alternative methods for RIS-assisted radar
* Risks associated with RIS-assisted radar
* Evidence for RIS-assisted radar applications
* Counterarguments to RIS-assisted radar
* Partiality in RIS-assisted radar
* Promotional content for RIS-assisted radar

# Report location:

<https://www.fullpicture.app/item/bed72c284f985d690dbc82230ccddaf3>