# Article information:

Low-Complexity Linear Equalization for OTFS Modulation | IEEE Journals & Magazine | IEEE Xplore  
<https://ieeexplore.ieee.org/document/8918014>

# Article summary:

1. This article proposes low-complexity linear equalizers for OTFS modulation that exploit the structure of the effective channel matrix in OTFS.

2. The proposed approach can provide low complexity initial solutions for local search techniques to achieve enhanced bit error performance.

3. The proposed MMSE and ZF equalizers do not rely on the traditional matrix inversion approach, instead they recognize a certain structure in the effective delay-Doppler channel matrix in OTFS modulation and exploit its properties to achieve significant complexity reduction.

# 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 overall reliable and trustworthy, as it provides a detailed description of the proposed low-complexity linear equalizers for OTFS modulation and their advantages over traditional matrix inversion approaches. It also provides evidence for its claims by citing relevant works from other authors, which adds to its credibility. Furthermore, it presents both sides of the argument equally by providing an overview of existing works related to OTFS modulation before introducing its own proposal.

However, there are some points that could be improved upon. For instance, while the article does mention possible risks associated with using non-linear equalizers following linear equalizers, it does not provide any details on how these risks can be mitigated or avoided altogether. Additionally, while it mentions that the proposed approach can provide low complexity initial solutions for local search techniques to achieve enhanced bit error performance, it does not provide any evidence or simulations to back up this claim. Finally, while it cites relevant works from other authors throughout the article, there is no discussion on how these works have influenced or impacted the current work presented in this article.

# Topics for further research:

* Mitigating risks associated with non-linear equalizers
* Simulation results for linear equalizers in OTFS modulation
* Impact of existing works on linear equalizers for OTFS modulation
* Local search techniques for enhanced bit error performance
* Low complexity linear equalizers for OTFS modulation
* Advantages of linear equalizers over matrix inversion approaches

# Report location:

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