# Article information:

Integrated Waveform Design Scheme Based on Underwater Detection and Communication | IEEE Conference Publication | IEEE Xplore  
<https://ieeexplore.ieee.org/document/9984531>

# Article summary:

1. This paper presents a new integrated waveform design scheme for underwater detection and communication.

2. The scheme ensures that the waveform has both communication and detection performance by modulating the communication base-band signal into the form of a detection signal.

3. The simulation results show the effectiveness of the proposed waveform design method.

# 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 is generally reliable, as it provides evidence to support its claims in the form of simulations and analysis of ambiguity functions, azimuth estimation, and detection probability. However, there are some potential biases in the article that should be noted. For example, the article does not explore any counterarguments or alternative approaches to designing an integrated waveform for underwater detection and communication. Additionally, there is no discussion of possible risks associated with using this type of waveform design scheme, such as interference from other signals or environmental factors that could affect its performance. Furthermore, while the article does provide evidence to support its claims, it does not present both sides equally; instead, it focuses primarily on supporting its own argument without exploring any opposing views or perspectives. Finally, there is some promotional content in the article which could be seen as biased towards promoting the proposed waveform design scheme over other alternatives.

# Topics for further research:

* Alternative approaches to underwater detection and communication
* Risks associated with integrated waveform design
* Interference from other signals in underwater environments
* Environmental factors affecting waveform performance
* Counterarguments to integrated waveform design
* Comparison of integrated waveform design to other approaches

# Report location:

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