# Article information:

Online adaptive parameter identification of an unmanned surface vehicle without persistency of excitation - ScienceDirect  
<https://eproxy.lib.tsinghua.edu.cn/https/7myu6CroLAXMrp7uaqvXiuvMGPPiXeQ7HH6xJD9b0MhzQe/science/article/pii/S0029801821015468>

# Article summary:

1. The proposed online adaptive parameter identification method does not rely on the persistence of excitation condition.

2. The prior information of USV model parameters is completely unknown and the method is able to adapt to parameter changes.

3. An extended state observer is used to monitor the total estimation errors caused by environmental disturbances and parameter estimation errors.

# 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 provides a detailed overview of an online adaptive parameter identification method for an unmanned surface vehicle (USV). The article presents a comprehensive description of the proposed method, including its advantages such as not relying on the persistence of excitation condition, being able to adapt to parameter changes, and using an extended state observer to monitor total estimation errors. However, there are some potential biases in the article that should be noted. For example, it does not explore any counterarguments or present both sides equally when discussing the advantages of the proposed method. Additionally, there is no mention of possible risks associated with using this method or any evidence provided for the claims made in the article. Furthermore, there is a lack of detail regarding how exactly this method works and what potential limitations it may have. In conclusion, while this article provides a thorough overview of an online adaptive parameter identification method for USVs, more research needs to be done in order to fully understand its trustworthiness and reliability.

# Topics for further research:

* Online adaptive parameter identification risks
* Persistence of excitation condition
* Extended state observer limitations
* Unmanned surface vehicle parameter estimation
* Counterarguments to online adaptive parameter identification
* Evidence for online adaptive parameter identification claims

# Report location:

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