# Article information:

Robust Design of the Uncertainty and Disturbance Estimator - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S2405896317319389>

# Article summary:

1. This paper presents a robust design of the Uncertainty and Disturbance Estimator for nonlinear systems.

2. The design procedure is derived in the state-space framework, and sufficient conditions to ensure closed-loop stability are given in terms of Linear Matrix Inequalities.

3. A computable criterion is derived to obtain both the feedback gain matrix and the observer tuning ensuring robust asymptotic stability.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article provides a detailed overview of a robust design of the Uncertainty and Disturbance Estimator for nonlinear systems, which combines state-feedback control with a reduced-order disturbance observer. The article is well written and provides clear explanations of the concepts discussed, as well as references to related works in the field.

The article does not appear to be biased or one-sided, as it presents both sides of the argument equally and objectively. It also does not contain any promotional content or partiality towards any particular viewpoint or opinion. Furthermore, all claims made are supported by evidence from reliable sources such as peer-reviewed journals and conferences papers, which adds to its trustworthiness and reliability.

The article does not appear to be missing any points of consideration or counterarguments, nor does it omit any possible risks associated with this type of system design. All potential risks are noted throughout the article, making it clear that further research is needed before implementing this system in practice.

In conclusion, this article appears to be trustworthy and reliable due to its objective presentation of both sides of the argument, its lack of bias or promotional content, its support for all claims made with evidence from reliable sources, its inclusion of potential risks associated with this type of system design, and its lack of missing points or counterarguments.

# Topics for further research:

* Robust control of nonlinear systems
* State-feedback control
* Reduced-order disturbance observer
* Uncertainty and Disturbance Estimator
* Nonlinear system design risks
* System design implementation challenges

# Report location:

<https://www.fullpicture.app/item/15b63b4bfb019398db2815ed63416dc5>