# Article information:

ANALYSIS OF BAD DATA IN POWER SYSTEM STATE ESTIMATION UNDER NON-GAUSSIAN MEASUREMENT NOISE - ScienceDirect  
<https://www.sciencedirect.com.remotexs.ntu.edu.sg/science/article/pii/S0378779620302303>

# Article summary:

1. Power system state estimation is crucial for secure and economic operation, but bad data can affect accuracy.

2. Weighted least squares (WLS) method is commonly used, but robust estimators like least absolute value (LAV) are not widely adopted.

3. Non-Gaussian measurement noise can affect state estimation, and a proposed bad data analysis approach based on the largest normalized estimated residual test (LNERT) can successfully detect and correct 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:

作为一篇科技论文，该文章主要介绍了电力系统状态估计中错误数据的分析方法。然而，在阅读过程中，我们可以发现一些潜在的偏见和问题。

首先，文章提到了最常用的加权最小二乘法（WLS）方法，并指出该方法没有识别存在严重误差测量的鲁棒特性。然而，这种说法可能会忽略其他鲁棒估计器的存在，这些估计器具有自动丢弃存在于测量中的严重误差的能力。此外，文章未能提供足够的证据来支持其所述观点。

其次，文章提到了两种新方法来高效地分析错误数据。然而，在介绍这些方法时，作者并没有充分探讨它们是否适用于所有情况，并未考虑到可能存在的风险和局限性。

此外，在讨论测量误差时，文章只涉及到非高斯噪声，并未考虑其他类型的误差。这可能导致对实际情况缺乏全面理解。

最后，在整篇文章中，作者似乎没有平等地呈现双方观点，并未探索反驳或不同意见。此外，文章也缺乏对实际应用场景和操作条件的深入探讨。

因此，在评价该文章时需要注意其潜在偏见和不足之处，并谨慎对其结论进行推断和应用。

# Topics for further research:

* Other robust estimators for error detection in power system state estimation
* Limitations and risks of the proposed error analysis methods
* Consideration of other types of measurement errors beyond non-Gaussian noise
* Exploration of opposing viewpoints and alternative approaches
* Discussion of practical application scenarios and operating conditions
* Critical evaluation of the article's potential biases and shortcomings

# Report location:

<https://www.fullpicture.app/item/7bf6f2a6b54d590b93e160b33dd49da4>