# Article information:

A comprehensive study on the functionally graded piezoelectric energy harvesting from vibrations of a graded beam under travelling multi-oscillators - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0307904X18304426?via%3Dihub>

# Article summary:

1. The magnitude of voltage increases when the power index n increases and when time lags between each moving oscillator decreases.

2. The produced power increases with decrease of time lag and decreases with an increase in the natural frequency of oscillator.

3. A comprehensive parameter study is done to find the effects of material distribution, mass ratio, velocity, damping ratio, spring constant of the oscillators as well as time lags between each moving vehicles on the harvested energy.

# 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 “A Comprehensive Study on the Functionally Graded Piezoelectric Energy Harvesting from Vibrations of a Graded Beam Under Travelling Multi-Oscillators” provides a detailed overview of how piezoelectric energy harvesting can be used to convert mechanical vibrations into electrical energy. The article is written in a clear and concise manner and provides a comprehensive overview of the topic at hand. It also presents a thorough parameter study to determine the effects of various parameters on harvested energy.

The article does not appear to have any biases or one-sided reporting, as it presents both sides equally and does not make any unsupported claims or missing points of consideration. Furthermore, it provides evidence for all its claims and explores counterarguments where necessary. There is no promotional content present in the article either, nor does it appear to be partial in any way. Additionally, possible risks are noted throughout the article where applicable.

In conclusion, this article appears to be trustworthy and reliable due to its clear writing style, comprehensive overviews, evidence-based claims, exploration of counterarguments and lack of bias or promotional content.

# Topics for further research:

* Piezoelectric energy harvesting
* Vibration energy harvesting
* Functionally graded materials
* Travelling multi-oscillators
* Parameter study for energy harvesting
* Piezoelectric energy harvesting applications

# Report location:

<https://www.fullpicture.app/item/4157299d8e2454f0b1317f74b24c6007>