# Article information:

LIE 47.4-6, p. 275-291 – Old City Publishing  
<https://www.oldcitypublishing.com/journals/lie-home/lie-issue-contents/lie-volume-47-number-4-6-2020/lie-47-4-6-p-275-291/>

# Article summary:

1. This study proposes a high precision, long-term, automatic online monitoring system for subgrade surface settlement imaging.

2. The proposed pose measurement system can solve the rotation angle error less than 0.09° and the relative angle error is 1.003% when the relative deflection angle is less than 2°.

3. The in situ testing results illustrated that the monitoring system corrected by the pose measurement system avoids the detection of non-real subgrade settlement and improves the measurement accuracy.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article provides a detailed description of a laser-based high precision monitoring system for railway subgrade settlement based on machine vision, as well as its key technologies and experimental results. The article is written in an objective manner and presents both sides of the argument equally, making it trustworthy and reliable overall. However, there are some potential biases that should be noted. For example, there is no mention of any possible risks associated with using this technology or any potential drawbacks to its implementation. Additionally, while the article does provide evidence for its claims, it could have included more evidence to further support its arguments and make them more convincing. Furthermore, while it does explore counterarguments to some extent, it could have done so in greater depth to provide a more comprehensive overview of all sides of the issue at hand.

# Topics for further research:

* Risks associated with laser-based monitoring systems
* Drawbacks of using machine vision for railway subgrade settlement
* Evidence for laser-based monitoring systems
* Counterarguments to laser-based monitoring systems
* Advantages of using machine vision for railway subgrade settlement
* Impact of laser-based monitoring systems on railway infrastructure

# Report location:

<https://www.fullpicture.app/item/731c18c300fa7a93921cef2a88977019>