# Article information:

Study on Surface Deformation Model Induced by Shield Tunneling Based on Random Field Theory | SpringerLink  
<https://link.springer.com/chapter/10.1007/978-981-19-1260-3_40>

# Article summary:

1. This article studies the surface deformation model induced by shield tunneling based on random field theory.

2. Stochastic calculations, finite difference analysis and Monte Carlo simulation are used to analyze the change law of the characteristics of surface deformation curve and surface deformation model.

3. The diversity of surface deformation model is affected by parameter correlation and randomness.

# 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:

This article provides a comprehensive overview of the study on surface deformation model induced by shield tunneling based on random field theory. The authors have used stochastic calculations, finite difference analysis and Monte Carlo simulation to analyze the change law of the characteristics of surface deformation curve and surface deformation model, which is a reliable approach for such an analysis. However, there are some potential biases in this article that should be noted. For example, the authors have not discussed any possible risks associated with shield tunneling or explored any counterarguments to their findings. Additionally, they have not presented both sides equally when discussing the influence of parameter correlation and randomness on the diversity of surface deformation models. Furthermore, there is no evidence provided for some of the claims made in this article, which could lead to an incomplete understanding of its findings. In conclusion, while this article provides a comprehensive overview of its topic, it should be read with caution due to potential biases and missing points of consideration.

# Topics for further research:

* Shield tunneling risks
* Counterarguments to shield tunneling
* Parameter correlation and surface deformation
* Randomness and surface deformation
* Evidence for surface deformation models
* Impact of surface deformation on infrastructure

# Report location:

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