# Article information:

Applied Sciences | Free Full-Text | Research on Frost Heaving Distribution of Seepage Stratum in Tunnel Construction Using Horizontal Freezing Technique  
<https://www.mdpi.com/2076-3417/12/22/11696>

# Article summary:

1. This article discusses research on the frost heaving distribution of seepage strata in tunnel construction using horizontal freezing technique.

2. It examines the development law of frozen walls under seepage conditions in saturated gravel formations, and proposes a prediction method with porosity as a variable using the finite difference method.

3. It also establishes an optimized prediction method for ground surface frost heaving during the freezing construction of a subway tunnel using AGF based on stochastic medium theory.

# 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 is generally reliable and trustworthy, as it provides evidence to support its claims through model tests, field measurements, numerical simulations, and other methods. The authors have also provided references to back up their findings and conclusions. However, there are some potential biases that should be noted. For example, the article does not explore any counterarguments or present both sides equally; instead, it focuses solely on the advantages of AGF and its potential applications in geotechnical engineering construction. Additionally, there is no mention of possible risks associated with this technique or any other alternatives that could be used instead. Furthermore, some of the claims made are unsupported by evidence or data; for instance, when discussing the evolution process of frost heaving force under thermo–mechanical coupling, no data is provided to back up this claim. In conclusion, while this article is generally reliable and trustworthy overall, there are some potential biases that should be taken into consideration when reading it.

# Topics for further research:

* Alternatives to AGF in geotechnical engineering
* Risks associated with AGF
* Thermo-mechanical coupling in frost heaving
* Evidence for frost heaving force
* Advantages of AGF in geotechnical engineering
* Numerical simulations of AGF in geotechnical engineering

# Report location:

<https://www.fullpicture.app/item/5c3ffe39c53d2304d53195a5eab30c9b>