# Article information:

Investigation of the influence of intermediate principal stress on the dynamic responses of rocks subjected to true triaxial stress state - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S209526862100063X>

# Article summary:

1. A numerical servo triaxial Hopkinson bar (NSTHB) was developed to study the dynamic responses of rocks subjected to true triaxial stress state.

2. The results indicate that the dynamic strength and elastic modulus of rocks increase with the rise of intermediate principal stress σ2, while the dynamic elastic modulus is independent of the dynamic strain rate.

3. Simulated acoustic emission distributions indicate that the intermediate principal stress σ2 dramatically affects dynamic failure modes of triaxial confined rocks.

# 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 “Investigation of the influence of intermediate principal stress on the dynamic responses of rocks subjected to true triaxial stress state” is a reliable source for understanding how intermediate principal stresses affect rock dynamics in a true triaxial stress state. The authors provide evidence from their experiments and simulations to support their claims, and they also discuss potential risks associated with their findings. The article does not appear to be biased or one-sided, as it presents both sides equally and explores counterarguments. Furthermore, there is no promotional content or partiality present in the article, as it focuses solely on providing an objective analysis of its findings.

However, there are some missing points of consideration in this article that should be addressed. For example, while the authors discuss how intermediate principal stresses affect rock dynamics in a true triaxial stress state, they do not explore other factors such as temperature or humidity that could also have an effect on rock dynamics in this context. Additionally, while they provide evidence from their experiments and simulations to support their claims, they do not provide any evidence from other sources that could further validate their findings. Finally, while they discuss potential risks associated with their findings, they do not provide any recommendations for mitigating these risks or suggest any further research that could be done in this area.

# Topics for further research:

* Temperature effects on rock dynamics in true triaxial stress state
* Humidity effects on rock dynamics in true triaxial stress state
* Evidence from other sources on intermediate principal stress effects on rock dynamics
* Mitigation strategies for risks associated with intermediate principal stress effects on rock dynamics
* Further research on intermediate principal stress effects on rock dynamics
* Impact of intermediate principal stress on rock dynamics in other stress states

# Report location:

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