# Article information:

Influence of topography on the impact mechanism of dry granular flow: A DEM study - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S003259102201097X>

# Article summary:

1. This study investigates the influence of topography on the impact mechanism of dry granular flow.

2. Three models are defined: slope pileup impact, continuous impact, and mixed impact.

3. The maximum and final impact forces follow a logarithmic law with the terrain index.

# 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 “Influence of topography on the impact mechanism of dry granular flow: A DEM study” is a well-researched and comprehensive piece that provides an in-depth analysis of the effects of topography on the impact mechanism of dry granular flow. The authors have used both physical experiments and numerical simulations to investigate this phenomenon, which adds to its trustworthiness and reliability. Furthermore, they have provided detailed explanations for their findings, which makes it easier for readers to understand their results.

However, there are some potential biases in the article that should be noted. For example, while the authors have discussed various mitigation structures such as rigid and flexible barriers, slit dams, and dual-barrier systems, they have not explored any counterarguments or risks associated with these structures. Additionally, while they have discussed various numerical methods used to investigate granular flows such as smooth particle hydrodynamics (SPH), material point method (MPM), and discrete element method (DEM), they have not presented any evidence for why DEM is more widely used than other methods or what advantages it has over them.

In conclusion, this article is generally reliable but could benefit from further exploration into counterarguments and risks associated with mitigation structures as well as providing evidence for why DEM is more widely used than other numerical methods for investigating granular flows.

# Topics for further research:

* Mitigation structures risks
* Advantages of DEM over other numerical methods
* Counterarguments to mitigation structures
* Granular flow numerical simulations
* Rigid and flexible barriers for granular flow
* Dual-barrier systems for granular flow

# Report location:

<https://www.fullpicture.app/item/8ea4c17b524251ddb4be610bb66ff0db>