# Article information:

A numerical investigation of new types of bolted joints for cold-formed steel moment-resisting frame buildings - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S2352710222017442>

# Article summary:

1. This paper presents numerical investigations of two types of beam-to-column CFS joints, which were proposed to be used to connect CFS members in T-, L- and cruciform joints for multi-story framed buildings.

2. Parametric studies are carried out to investigate the factors that influence the seismic performance of the proposed CFS joints, such as initial stiffness, load-bearing capacity and ductility.

3. Recommendations are made for the improvement of the seismic performance of the proposed joints.

# 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 “A numerical investigation of new types of bolted joints for cold-formed steel moment-resisting frame buildings” is a well written and comprehensive piece that provides an in depth look at the seismic performance of two types of beam-to-column CFS joints, which were proposed to be used to connect CFS members in T-, L- and cruciform joints for multi-story framed buildings. The article is based on extensive research conducted by the authors, including experimental and numerical studies as well as parametric studies to investigate various factors that influence the seismic performance of these proposed CFS joints. The authors also provide recommendations for improving the seismic performance of these proposed joints.

The article is generally reliable and trustworthy due to its comprehensive nature and thorough research conducted by the authors. However, there are some potential biases present in this article that should be noted. For example, while comparisons between different types of joint designs are made throughout this article, only one type (the gusset plate joint) is used as a benchmark case against which all other designs are compared. This could lead to bias in favor of this particular design over others that may have been overlooked or not considered by the authors. Additionally, while recommendations are provided for improving the seismic performance of these proposed joints, no mention is made about possible risks associated with their use or any potential drawbacks they may have when compared with other joint designs.

In conclusion, this article provides a detailed overview on new types of bolted joints for cold formed steel moment resisting frame buildings and offers useful insights into their structural seismic performance through extensive research conducted by its authors. While it is generally reliable and trustworthy overall, there are some potential biases present that should be taken into consideration when evaluating its contents.

# Topics for further research:

* Cold-formed steel moment-resisting frame buildings
* Seismic performance of bolted joints
* Gusset plate joint design
* Parametric studies of CFS joints
* Risks associated with CFS joints
* Drawbacks of CFS joints compared to other designs

# Report location:

<https://www.fullpicture.app/item/158e2d80bd51505c935fb1b64d6449aa>