

## 5. CONCLUSION

From the results and analysis that has been done from this final project, it can be concluded that:

1. From the static analysis, model S6 is identified as the most effective BLMD, with the highest elastic stiffness of 15854.27 N/mm and energy dissipation of 15735680 N.mm. The analysis also shows that increasing the thickness and width of the BLMD improves stiffness, energy dissipation, and damping, while reducing the height and length has a similar effect, enhancing these properties.
2. A computational dynamic analysis program was developed to evaluate the performance of the BLMD-equipped nose landing gear. The results show that model S6, with the highest stiffness, reduces maximum displacement by 33% compared to the base model (S1) but has the highest acceleration response. Conversely, model S7, with the lowest stiffness, reduces acceleration by 24.53% compared to S1 but results in higher displacement. These findings highlight a trade-off between stiffness and dynamic response, where higher stiffness decreases displacement but increases acceleration, while lower stiffness reduces acceleration but increases displacement.