

## Buckling, Post-buckling and Vibrations of Composite Plates under Combined Thermomechanical Loads

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# Propositions

accompanying the dissertation

## BUCKLING, POST-BUCKLING AND VIBRATIONS OF COMPOSITE PLATES UNDER COMBINED THERMOMECHANICAL LOADS

by

**Javier GUTIÉRREZ ÁLVAREZ**

1. Using low-CTE fittings in thermomechanical testing helps to make evident the individual contribution of each load type to the occurrence of buckling. (This proposition pertains to this dissertation).
2. In a combined test setup where heat and compression are to be applied simultaneously, the ideal configuration would require a horizontal, floor-parallel compressing device and placing the heating source under the specimen. (This proposition pertains to this dissertation).
3. In a combined loading test setup, the amount of issues caused by each load type will not simply add up, they will multiply each other. (This proposition pertains to this dissertation).
4. Thermomechanical buckling experiments can be a valuable tool for the education of future aerospace engineers. (This proposition pertains to this dissertation).
5. For any given author in buckling, the used nomenclature, axis layout and sign convention will be arranged in order to maximize confusion.
6. One of the hardest things to do in research is learning to distinguish "instinct" from "confirmation bias".
7. Disruptive technologies (internet, cellphone, etc.) *per se* do not solve social problems. They do change society, but often in unpredictable ways.
8. Filtering information/news before sharing them in social media is an act of social responsibility.
9. In occasions, a certain research path is taken because the researcher is inadvertently more interested in the path than in the results themselves.
10. Clarity, conciseness and simplicity are rarely the consequence of innate talent.

These propositions are regarded as opposable and defensible, and have been approved as such by the promotor prof. dr. C. Bisagni.

# **Stellingen**

behorende bij het proefschrift

## **BUCKLING, POST-BUCKLING AND VIBRATIONS OF COMPOSITE PLATES UNDER COMBINED THERMOMECHANICAL LOADS**

door

**Javier GUTIÉRREZ ÁLVAREZ**

1. Stelling 1.
2. Stelling 2.
3. Stelling 3.
4. Stelling 4.
5. Stelling 5.
6. Stelling 6.
7. Stelling 7.
8. Stelling 8.
9. Stelling 9.
10. Stelling 10.

Deze stellingen worden opponeerbaar en verdedigbaar geacht en zijn als zodanig goedgekeurd door de promotor prof. dr. A. Kleiner.