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Propositions

accompanying the dissertation

TOPOLOGY OPTIMIZATION OF GEOMETRICALLY NONLINEAR STRUCTURES

by

Lidan ZHANG

1. Just like learning from history to live wisely today, incorporating the ROM basis from previous steps enhances the ROM basis of the current step. (Pertains to this dissertations).
2. Extensional modes are essential for ROMs to accurately simulate the nonlinear behavior of nearly inextensional shell structures. (Pertains to this dissertations).
3. Scaling down rigid-body rotations in low-density shell or plate elements can create artificial in-plane stiffness. (Pertains to this dissertations)
4. Topology optimization tends to be "lazy," seeking the least effort solution unless constrained by sufficient restrictions. (Pertains to this dissertations)
5. In research, pursuing complexity is easy; simplifying it for deep understanding is hard.
6. Simulations are always expected to be validated by experiments—except when modeling financial capital losses.
7. Education is not merely about acquiring academic knowledge, but about shaping one's human character, understanding of the world, and approach to everyday life.
8. Life offers many choices; the journey is never confined to a single path.
9. Engaging in musical instrument practice can stimulate creativity and inspire innovative ideas in research.
10. Truly valuable things do not become outdated—they become timeless classics.

These propositions are regarded as opposable and defendable, and have been approved as such by the promotor prof. dr. ir. A. van Keulen.