

**Plastic deformation of self-affine rough metal surfaces under contact loading
A green's function dislocation dynamics analysis**

Parayil Venugopalan, Syam

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Propositions

accompanying the dissertation

PLASTIC DEFORMATION OF SELF-AFFINE ROUGH METAL SURFACES UNDER CONTACT LOADING

by

Syam PARAYIL VENUGOPALAN

1. As one approaches smaller length scales, true contact area becomes an insignificant quantity (Chapter 4).
2. Displacement-controlled loading leads to more physically meaningful results than pressure-controlled loading in studying plastic deformation (Chapter 4).
3. The fractal limit is over-rated in the contact mechanics community (Chapter 4 & 5).
4. Simplified models need not necessarily imply reduced accuracy.
5. Multi-scale modeling is complex, where hierarchical multi-scale modeling is real and concurrent multi-scale modeling is imaginary.
6. Size effects are not only restricted to crystalline materials but also to economics, smaller nations are statistically more prosperous with higher per-capita wealth.
7. With increasing complexity and intelligence of a system, the level of unfairness increases.
8. If lifespan of humans are doubled we would have progressed more as a civilization.
9. Lyrics are potential inhibitors to a vocal performer's artistic freedom.
10. The more you read, the more you clutter your mind.
11. The world does not require more successful people, it requires people with compassion.
12. The greatest discoveries mankind has seen came when one turned inward (inspired from Sadhguru's quotes).

These propositions are regarded as opposable and defensible, and have been approved as such by the promotor Prof. dr. ir. L. Nicola.