

Small Scales, Vast Ocean

Submesoscale Ocean Topography with Bistatic Synthetic-aperture Radar Interferometry

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Propositions

accompanying the dissertation

Small Scales, Vast Ocean

SUBMESOSCALE OCEAN TOPOGRAPHY WITH BISTATIC
SYNTHETIC-APERTURE RADAR INTERFEROMETRY

by

Andreas THEODOSIOU

1. Scientists are failing to systematically use most of the available remote sensing data because they cannot keep up with the rate at which the data volume is increasing.
2. Failing to frame interferometry as a particular case of tomography fundamentally limits the understanding of it.
This proposition pertains to this dissertation.
3. A breakthrough in oceanography will be made when we migrate from the study of single realizations of the surface to the study of the underlying statistics.
4. Oceanography would benefit more from an instrument that measures statistical properties of the surface, than from an imaging sensor from which estimates of said properties are made.
This proposition pertains to this dissertation.
5. Scientists primarily concerned with the impact of their work should drop research and pick up lobbying.
6. Working under the constraints of a funded project is part of being a researcher. Thus, universities should not accept self-funded PhD students.
7. Effective communication of findings and their relevance is part of a scientist's societal obligations. The current skepticism towards academia is a scientific failure.
8. Politics is the allocation of values, resources, and power, and the decision making process on these matters within a society. Technology is a social good. Thus, all technology is political.

9. The discouragement of political discourse, in the name of neutrality and inclusiveness, is antithetical to a university.
10. “A scientific world-view which does not profoundly come to terms with the problem of conscious minds can have no serious pretensions of completeness.” – Roger Penrose, *Shadows of the Mind: A Search for the Missing Science of Consciousness*.

These propositions are regarded as opposable and defensible, and have been approved as such by the promotor Prof. Dr. ir. R.F. Hanssen and promotor Prof. Dr. ir. F. López-Dekker.