

Absolute and Relative Orbit Determination for Satellite Constellations

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Propositions

accompanying the dissertation

Absolute and Relative Orbit Determination for Satellite Constellations

by

Xinyuan MAO

1. In-flight GPS receiver antenna corrections are more useful than the ground experimental ones (Chapter 2).
2. GNSS-based satellite orbit determination precision is not limited by software, but by hardware (Chapter 3).
3. It always takes more than one iteration of satellite data pre-processing to get the best scientific results (Chapter 4).
4. Optimal satellite baseline solutions require the inclusion of prior knowledge about relative satellite dynamics (Chapter 5).
5. Precise orbit determination is very much like brewing a good beer, which demands various ingredients, a scientific recipe and sufficient time. It is in general controlled by existing experience, but the most surprising taste often comes from random trial and errors.
6. Popular support strongly enhances the advancement of science.
7. A daily Dutch lunch offers a wonderful view for understanding Dutch culture.
8. A successful PhD candidate understands more about his/her capabilities and talents than limitations.
9. The crewed Mars landing mission is not realistic until creatures are confirmed somewhere else than in the Earth-Moon system.
10. An easy way of touching the essence of your life is speaking out the names of the five most important people for you in fifteen seconds.

These propositions are regarded as opposable and defensible, and have been approved as such by the promotor prof. dr. ir. P.N.A.M. Visser.