

Exam Solution  
Course: AE4872 Satellite Orbit Determination  
Exam Source: Studeersnel  
Exam Date: 2014-11-07

Author:  
collaborative effort

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## 0 Introduction

This contains an exam solution. If you wish to contribute to this exam solution:

1. Create a github account, (you can create an "anonymous" one).
2. git clone ...
3. edit your changes in the document.
4. open cmd, and browse to inside the folder you downloaded and edited
5. git pull (updates your local repository=copy of folder, to the latest version in github cloud)
6. git status shows which files you changed.
7. git add "/some folder with a space/someFileYouChanged.tex"
8. git commit -m "Included solution to question 1c."
9. git push

It can be a bit intimidating at first, so feel free to click on "issue" in the github browser of this repository and ask :) (You can also use that to say "Hi, I'm having a bit of help with this particular equation, can someone help me out?")

If you don't know how to edit a latex file on your own pc iso on overleaf, look at the "How to use" section of <https://github.com/a-t-0/AE4872-Satellite-Orbit-Determination>.

### 0.1 Consistency

To make everything nice and structured, please use very clear citations:

1. If you copy/use an equation of some slide or document, please add the following data:
  - (a) Url (e.g. if simple wiki or some site)
  - (b) Name of document
  - (c) (Author)
  - (d) PAGE/SLIDE number so people can easily find it again
  - (e) equation number (so people can easily find it again)
2. If you use an equation from the slides/a book that already has an equation number, then hardcode that equation number in this solution manual so people directly see which equation in the lecture material it is, this facilitates remembering the equations.
3. Here is an example is given in eq. (10.32[1]) (See file references.bib [1]).

$$R_n^E = \sum_{t=1}^n l_m(p_t, z_t) - \min_i \sum_{t=1}^n z_t^i \quad (10.32[1])$$

- 1 statistics and orbit det:Statistics and parameter estimation
  - 2 sat nav:Satellite altimetry over GPS survey point
  - 3 coordinates. time and gravity:Precise orbit determination
  - 4 sat nav:GPS
  - 5 kalman filter and orbit det:Kalman Filter
- Conclusion

## References

- [1] Some author. *Advanced tree dynamics*, volume lecture 5 of ~~AE2344~~ *Some course*, page 15. Accessed: 2019-04-27.