



Orbit Determination Toolbox (ODTBX) Seminar

Thursday March 22nd 2012 **12noon-1pm**, ARMS 3115 (**Free Pizza!**)

Presented by: Rosemary Huang, Chris Spreen and Alinda Mashiku.

The Orbit Determination Toolbox is an analysis toolset based on the integration of Matlab and existing astrodynamics software developed by NASA Goddard Space Flight Center's Navigation and Mission Design Branch.

- It provides a flexible architecture for early mission analysis.
- Facilitates implementing new measurement and dynamic models from a library of base classes.
- A Java Astrodynamics Toolbox is used as an engine for things that might be slow or inefficient in MATLAB, like high-fidelity trajectory propagation, lunar and planetary ephemeris lookups, precession, nutation, polar motion calculations etc
- The primary analysis functions are sequential filter/smoothen and batch least-squares commands that incorporate **monte-carlo data simulation, linear covariance analysis, measurement processing, and plotting capabilities** at the generic level. These functions have a user interface that is based on that of the MATLAB ODE suite.

Open source software available at : <http://sourceforge.net/projects/odtbx/>

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