

Postdoctoral Fellowship in SATELLITE PRECISION ATTITUDE DETERMINATION



APPLIED RESEARCH LABORATORIES The University of Texas at Austin

The Signal and Information Sciences Laboratory (SISL) of the Applied Research Laboratories at the University of Texas at Austin (ARL:UT) invites applications for a postdoctoral fellowship position. The SISL remote sensing group has an active portfolio with respect to research and development in the areas of airborne and space-based altimetry. Current efforts are in support specifically of the NASA Ice, Cloud and Land Elevation-2 (ICESat-2) satellite mission. This spacecraft is planned to launch in late 2017 and carries onboard a multi-beam laser altimeter. The primary scientific goal of the mission, similar to its predecessor ICESat, is to provide altimetry data to determine elevation change of the ice sheets in the Arctic and Antarctic in order to quantify the ice-sheet contributions to current and recent sea-level change. In addition ICESat-2 will focus on measurements over sea ice that can be used to derive thickness and examine the ice/ocean/atmosphere exchanges of energy, mass and moisture. However, the fidelity of the pursued science (Polar and secondary global applications) rests in part on the ability to accurately resolve the precision attitude and pointing determination (PPD) of the onboard instrument, ATLAS (Advanced Topographic Laser Altimetry System). As such, this position would support development of algorithm solutions for ICESat-2 PPD using the hardware/software configured for the mission (on-board star trackers, laser reference system, and inertial reference units). In addition, this position would support the integration of the algorithms into the mission architecture for planned commissioning (testing and verification) and operational (data product production) phases once the satellite is on-orbit.

SISL invites applications from individuals that have recently completed their Ph.D. in engineering. Applicant must have received his or her Ph.D. within the last three years in order to be eligible. Individuals with research experience in precision attitude determination are preferred. A familiarity with PPD related hardware is also desired in addition to proven capabilities with computational development, estimation theory, data analysis and HDF5 data processing. The successful applicant should demonstrate strong potential as an independent researcher and small team collaborator. A willingness to work with undergraduate and graduate researchers is also advantageous.

The appointment is contingent upon the completion of the requirements for a Ph.D. and will be for an initial period of one year with the possibility of renewal for an additional year. Outstanding recipients may be considered for staff positions at the completion of their appointment. U.S. Citizen: subject to a government security investigation and must meet eligibility requirements for access to classified information at the level appropriate to the project requirements of the position.

Salary range will be determined by level of experience and qualifications. Candidates should submit a curriculum vitae (with citizenship indicated), and three professional references to:

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