Open House & IEEE GRSS Chapter Meeting

We cordially invite you to attend the open house of the new **Remote Sensing Laboratory** of the Department of Geology at UB on November 9, 2007. The open house will be followed by a presentation given by Bea Csatho about NASA's ICESat satellite laser altimetry mission. This event is organized by the Western New York Chapter of IEEE GRSS.

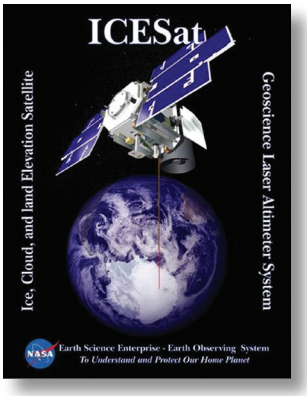
Program

4:30 - 5:15
Open house at Remote Sensing Lab
Department of Geology
(with refreshments)
864 Natural Sciences Complex
University at Buffalo; Buffalo, NY 14260

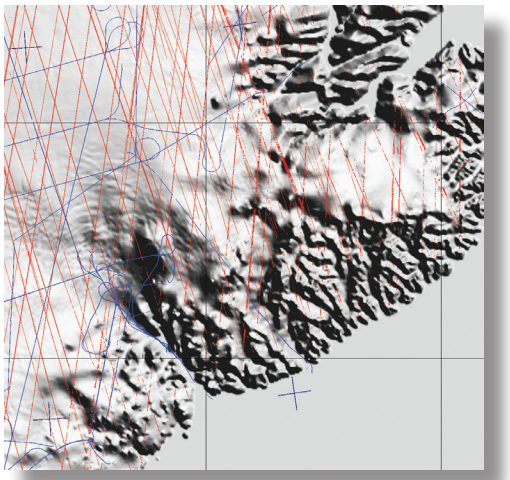
5:30 - 6:30
IEEE GRSS Chapter meeting & presentation
4 Knox Lecture Hall
University at Buffalo; Buffalo, NY 14260

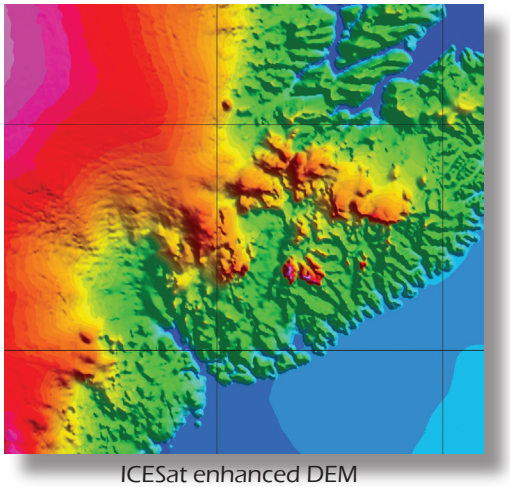
Monitoring Earth-Surface Dynamics with ICESat Satellite Laser Altimetry

Bea Csatho, Assistant professor, UB Geology, member of NASA's ICESat Science Team



Abstract: NASA's Ice, Cloud, and land Elevation Satellite **(ICESat)**, the first laser altimetry satellite orbiting the Earth, was launched in 2003. ICESat is the benchmark Earth Observing System mission for measuring ice sheet mass balance, cloud and aerosol heights, as well as land topography and vegetation characteristics. This presentation will introduce the Geoscience Laser Altimeter System (GLAS), the main sensor of the ICESat satellite, and review the main achievements of the ICESat mission. It will describe research at the University at Buffalo and at the Ohio State University, namely (1) activities related to the calibration and validation of ICESat measurements; (2) the development of a novel fusion scheme that uses ICESat laser points to establish a reference frame enabling rigorous registration of aerial and satellite imagery; (3) the generation of a new DEM of the Greenland Ice Sheet and (4) monitoring cryospheric changes in Greenland and Antarctica. Potential use of ICESat laser altimetry for monitoring Great Lakes water level, snow depth distribution and forest biomass will also be discussed.


Greenland DEM with ICESat orbits


ICESat enhanced DEM

Biography: Dr. Bea Csatho has over 25 years experience in remote sensing, geophysics, GIS and glaciology. She is currently an Assistant Professor at the Department of Geology, University at Buffalo, SUNY, where she teaches remote sensing and GIS. Her recent research, supported by NASA and NSF grants, focuses on climate change in the polar regions. Her projects include investigations of glacier and ice sheet mass balance, geomorphology and structural geology, development of data processing methods for satellite and airborne laser altimetry and multisensor fusion. Dr. Csatho is a science team member of NASA's Ice Cloud and land Elevation Satellite (ICESat) mission. She has participated in 7 expeditions in the polar regions. She currently uses satellite altimetry to monitor glacier dynamics in Antarctica and participates in the GNET program that develops a network of continuous GPS stations to study crustal motions in Greenland. Prior to coming to UB she held positions at the Byrd Polar Research Center at the Ohio State University, Columbus, Ohio and at the Eotvos Lorand Geophysical Institute of Hungary in Budapest. She received her MS in Applied Mathematics from the Eotvos Lorand University in Budapest, Hungary in 1989 and her PhD in Geophysics from the University of Miskolc, Hungary in 1993.

Directions to University at Buffalo: Take I-90 west to I-290 west. Proceed west on I-290 (Youngman expressway) until exit 5B, Millersport Highway North. When you exit onto Millersport highway, proceed through one traffic light (Flint Road intersection), past the Maple Road exit, and continue to the Flint Entrance to UB's North Campus.

Where to park: After taking the Flint Entrance, make a left turn to Augspurger Road at the first intersection. The first parking lots, Hochstetter A and B parking lots, don't require parking permits after 3 PM.

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