

AGENDA

Monday, October 5

6:00 – 9:00 pm Ice Breaker Reception– welcoming remarks Ballroom B

Tuesday, October 6

7:30 – 8:30 am Breakfast Ballroom B

8:30 – 10:15 am Introductory Plenary Session Ballroom A

Introduction from organizing committee (15 min)

Keynote talks on morning themes emphasizing emerging research areas (25 min each)

- Cryosphere, Rick Forster – *Geodetic imaging of the cryosphere: Recent advances and future directions*
- Global Geodynamics, Brad Hager – *Overview of the DESDynI Mission*
- Geomorphology and Surface Processes, George Hilley – *Geodetic imaging of landscape morphology and change from the scale of plate boundaries to individual channels: Current research and future opportunities*

10:15 – 10:30 am Break..... Ballroom B

10:30 – Noon Morning breakout session (3 themes in parallel) Ballroom A/Canyon A & B

Discussions of scientific challenges and how they can be addressed by geodesy.

- Cryosphere – Jeanne Sauber
Space geodesy has brought major advances in recent years in what we know about glaciers and the dynamics of ice flow, including the role of land ice (ice sheets, caps and glaciers) in current and future sea level rise and the role of sea ice and associated feedbacks on the global climate system.
- Global Geodynamics – Brad Hager
Detailed measurements of surface motion and gravity field on continental and planetary scales are essential for understanding deformation of the tectonic plates and the fluid behaviour of the mantle below. Determination of earth rotation parameters, such as the polar motion and the length of day is also important for constraining geodynamic models and the internal structure of the Earth.
- Geomorphology and Surface Processes – John Oldow
The Earth's land surface is continuously reshaped by catastrophic tectonic and hydrologic events, sea level rise, and collapses; all of which impact the terrestrial water supply, ecosystems, and infrastructure. Measuring and characterizing the changes in the landscape and how the movement of water affects the land surface is key in understanding geologic and hydrologic processes and making links between hydrology, geology and biosphere.

12:00 – 1:00 pm Lunch Ballroom B
(Org. committee and theme leaders can meet to review results of morning session.)



1:00 – 2:15 pm	<p>Afternoon Plenary Session..... Ballroom A</p> <p>Keynote talks on afternoon themes emphasizing emerging research areas (25 min each)</p> <ul style="list-style-type: none"> • Natural Hazards, Mark Simons - <i>The future role and requirements of geodesy for natural hazards monitoring, mitigation, and response.</i> • Climate Change, Carol Raymond - <i>Role of Geodesy in Monitoring Climate Change</i> • Hydrology, Shimon Wdowinski - <i>New frontiers in hydro-geodesy</i>
2:15 – 2:30 pm	<p>Break..... Ballroom B</p>
2:30 – 4:00 pm	<p>Afternoon breakout session (3 themes in parallel) Ballroom A/Canyon A & B</p> <p>Discussions of scientific challenges and how they can be addressed by geodesy.</p> <ul style="list-style-type: none"> • Natural Hazards – Paul Segall <i>Surface deformation and gravity measurements around active faults and volcanic systems, landslides, regions of active subsidence are critical to understanding both the scientific processes and the societal hazards associated with these systems. Recent advances in geodetic techniques have also brought applications to tsunami warning and extreme weather events.</i> • Climate Change – Steve Nerem <i>One of the great scientific challenges is the understanding of interactions among the cryosphere, oceans, and the solid Earth, particularly in regard to the global redistribution of water and the implication for sea level. Geodetic measurements are also playing an increasingly important role in weather forecasting and for the study of atmospheric dynamics.</i> • Hydrology – Gerald Bawden <i>Geodetic imaging is providing important insights into the dynamics of local and regional aquifers, surface water, soil moisture, and snow pack, and is crucial for measuring changes in the ground-water supply and constraining the terrestrial water budget. More than 80 percent of the identified subsidence in the United States is a consequence of the increasing development of land and water resources, which threatens to exacerbate existing land subsidence problems and initiate new ones. Characterizing and monitoring how surface water (lakes, rivers, etc) is naturally and anthropogenically redistributed in space and time is key to resolving the terrestrial water supply component of the water cycle. Resolving the aerial extent, volume, surface velocities and circulation patterns in rivers and water bodies will significantly advance our understanding of the terrestrial water budget.</i>
4:00 – 4:30 pm	<p>Break..... Ballroom B</p> <p>Breakout Chairs preparation</p>
4:30 – 5:30 pm	<p>Closing Plenary Session..... Ballroom A</p> <p>Reports from theme leaders</p> <p>Discussion refining “grand challenges”</p>

