

G01: Gravity, Geoid and Height Systems

Conveners: Marc Véronneau¹, and Yan-Ming Wang²

Co-chairs: Joe Henton³, and Georgia Fotopoulos⁴

¹ Canadian Geodetic Survey, Natural Resources Canada, Ottawa, ON, K1A 0Y7,
Phone: 343-292-6755, Fax : 613-995-3215, E-mail: marc.veronneau@canada.ca

² National Geodetic Survey, NOAA, Silver Spring, MD, 20910-3282 Phone: 301-713-3202
x127, Fax: 301-713-4172, E-mail: yan.wang@noaa.gov

³ Canadian Geodetic Survey, Natural Resources Canada, Sidney, BC, V8L 4B2,
Phone: 250-363-6658, E-mail: joe.henton@canada.ca

⁴ Dept. of Geological Sciences and Geological Engineering, Queen's University, Kingston, ON,
K7L 3N6, Phone: 613-533-6639, E-mail: georgia.fotopoulos@queensu.ca

Session Description

In 2013, Canada moved to a geoid-based vertical datum with the adoption of the Canadian Geodetic Vertical Datum of 2013 (CGVD2013). The United States of America (USA) are presently working in establishing a geoid-based vertical datum by the year 2022, aligned with CGVD2013, to replace the North American Vertical Datum of 1988 (NAVD 88).

Simultaneously, the Canadian and American hydrographic and geodetic agencies are coordinating their efforts to update the International Great Lakes Datum of 1985 (IGLD (1985)). These activities and communication with Mexico, Central America and Caribbean Islands will realize a unique height system for the North American continent. Satellite gravity missions, such as GRACE and GOCE, and the GRAV-D project are key factors in making it a reality. This session is open to all aspects related to gravity, geoid and heights systems. It includes, among others, theoretical and practical development of global and region geoid models, analysis of spatial and terrestrial gravity data, time series interpretation of absolute gravity and GRACE data, ratio investigation between gravity and height variation, and roadmaps towards Height systems unification, International Height Reference System and Global Absolute Gravity Reference System. In addition, presentations on the applications of gravity and height systems in engineering, hydrographic and oceanographic projects are welcome.

Primary Affiliation: Geodesy