Progress in Radioglaciology

Call for Papers

The International Glaciological Society (IGS) will publish a special issue of the *Annals of Glaciology* with the theme "Progress in Radioglaciology". The issue will be part of Annals Volume 61 and will be issue number 81. Papers accepted for publication will be published immediately on the Cambridge University Press website and a final printed version will be available in late 2019.

This issue will be edited by Associate Chief Editor Dustin Schroeder (Stanford; dustin.m.schroeder@stnford.edu) and Scientific Editors Rob Bingham (Edinburgh), Don Blankenship (UTIG), Knut Christianson (Washington), Olaf Eisen (AWI), Gwenn Flowers (SFU), Nanna Karlsson (GEUS), Ala Khazendar (JPL), Jonathan Kingslake (Columbia), Michelle Koutnik (Washington), John Paden (CReSIS), Jeremie Mouginot (Grenoble), and Martin Siegert (Imperial)

- August 1st 2018 - Submissions Open
- August 1st 2019 - Deadline for Submission to issue 81 of the Annals
- October 1st 2019 - Deadline for final versions of accepted articles. Authors are expected to respond to galley proofs shortly thereafter.
- Papers accepted for publication before these deadlines will be published online immediately.

THEME

Radio echo sounding is a powerful geophysical approach for directly characterizing the subsurface conditions of terrestrial and planetary ice masses at the local, regional and global scales. As a result, a wide array of orbital, airborne, towed and in situ instruments, platforms and data analysis approaches for radar sounding have been developed, applied or proposed. Terrestrially, airborne radar sounding data has been used in glaciology to observe ice thickness, basal topography, and englacial layers for more than five decades. More recently, it has also been exploited to estimate the extent and configuration of subglacial water, the ice sheet surface, the geometry of subglacial bedforms, the spatial variation of melt, temperature, and the transition between frozen and thawed bed. Planetary radar sounders have been used or are planned to observe the subsurface and near-surface conditions of Mars, Earth's Moon, comets and the icy moons of Jupiter. These instruments provide critical subsurface context for surface sensing, particle, and potential-field instruments in planetary exploration payloads. This symposium will discuss advances in radar sounding systems, mission concepts, signal processing, data analysis, modeling and scientific interpretation.

Topics of interest are:

1. Radar systems: development, performance and platforms
2. Data: intercomparison, validation and release
3. Radar Processing: propagation, inversion and automation
4. Englacial Structure: layers, deformation and accretion bodies

5. Attenuation: near surface properties, temperature and chemistry
6. Bed Conditions: topography, roughness, thermal state and hydrology
7. Interpretation: comparing observations with modeling and theory.
8. Planetary: radioglaciological investigations of planetary cryospheres

Other relevant topic suggestions are welcome. If you have such a suggestion or if you have any questions about the suitability of your paper for this Annals issue, please contact the Associate Chief Editor or one of the Scientific Editors:

Dustin Schroeder: dustin.m.schroeder@stanford.edu
Rob Bingham: r.bingham@ed.ac.uk
Don Blankenship: blank@ig.utexas.edu
Knut Christiansen: knut@uw.edu
Olaf Eisen: olaf.eisen@awi.de
Gwenn Flowers: gwenn_flowers@sfu.ca
Nanna Karlsson: nbkglaciology@gmail.com
Ala Khazendar: ala.khazendar@jpl.nasa.gov
Jonathan Kingslake: jk3930@columbia.edu
Michelle Koutnik: mkoutnik@uw.edu
John Paden: paden@ku.edu
Jeremie Mouginot: jeremie.mouginot@univ-grenoble-alpes.fr
Martin Siegert: m.siegert@imperial.ac.uk