

Call for Papers
GNSS+R 2017

Specialist Meeting on Reflectometry using GNSS and other Signals of Opportunity

May 23–25, 2017

University of Michigan

Ann Arbor, MI USA

GNSS+R 2017 will provide a forum for the leading experts and young researchers working on the scientific uses, engineering design, and technology development of reflectometry and related fields of remote sensing to come together and share their recent results and plans for the future. The meeting will also provide a setting for other interested parties, not directly involved with reflectometry research, to become familiar with its latest techniques, capabilities and applications and to interact directly with its active research community. For example, an assessment of early on-orbit performance by the CYGNSS mission will be featured.

GNSS-R (Global Navigation Satellite Systems Reflectometry) remote sensing from ground, airborne and space-based observation platforms is the focus of geophysical and engineering research with a broad spectrum of Earth observation applications. GNSS-R remote sensing exhibits unique characteristics to complement other active and passive Earth observation methods. One significant attribute is its leveraging of existing and ubiquitous GNSS infrastructure, consisting of multiple constellations of transmitting GNSS satellites with dedicated ground operational support and large ground-based receiver networks. This infrastructure assures the reliability and continuity of the transmission signals and supports the foundation for many potential applications in Earth Observation.

Building upon the successes of GNSS-R, reflectometry-based remote sensing has more recently expanded to use digital communication satellite signals as well. These signals operate over a wider range of microwave frequencies, which expands the range of geophysical phenomenology sensed by the scattered signals. Communication signals also tend to be transmitted at much high power density levels, which further expands the dynamic range of scattered signals that can be sensed. Geophysical parameters which can be sensed by GNSS-R and other, communication based, signals of opportunity include ocean surface winds, sea surface height, soil moisture, ice properties, snow water equivalent, and vegetation biomass.

Numerous ground based, balloon and airborne field campaigns, networks and experiments are being conducted. Current spaceflight projects include the TechDemoSat-1 mission, launched in 2014 and the CYGNSS small satellite constellation, launch in December 2016, and the GEROS-ISS mission, currently in formulation to launch in 2019. We invite contributions that focus on all aspects of GNSS+R research and development, including:

- Theoretical aspects, model development and signal processing methods
- Ground and airborne experiments
- New and recent satellite missions
- Instrumentation and technology development
- Data utilization for ocean, land, vegetation, cryosphere and atmosphere applications

GNSS+R 2017 will be held on the campus of the University of Michigan in Ann Arbor, MI, USA during 23-25 May 2017.

Details concerning submission of abstracts, conference registration, and travel and other meeting logistics are posted at <http://www.gnssr2017.org>. A scientific program will also be posted there shortly after abstracts are reviewed and the program is organized.

Deadlines:

The abstract submission deadline is 27 January 2017

Hotel reservation deadlines vary between 22 April and 1 May 2017, depending on the hotel

Early registration deadline is 23 April 2017. (On-site registration is also possible)

Scientific organizing committee

Chris Ruf, University of Michigan, Ann Arbor, USA (conference general chair)

Scott Gleason, Southwest Research Institute, Boulder, USA (conference technical co-chair)

Adriano Camps, UPC-Barcelona Tech/IEEC, Barcelona, Spain

Estel Cardellach, ICE-CSIC/IEEC, Barcelona, Spain

Maria Paola Clarizia, U-M, Ann Arbor, USA (conference technical co-chair)

James Garrison, Purdue University, West Lafayette, USA

Kristine Larson, University of Colorado, Boulder, USA

Manuel Martin Neira, ESA/ESTEC, Noordwijk, Netherlands

Nazzareno Pierdicca, Università di Roma La Sapienza, Italy

Martin Unwin, SSTL, Guildford, UK

Jens Wickert, GFZ, Potsdam, Germany

Valery Zavorotny, NOAA/ESRL, Boulder, USA

Cinzia Zuffada, JPL/Caltech, Pasadena, USA

Local organizing committee at the University of Michigan

Chris Ruf, Aaron Ridley, Daren McKague, Rick Baker, Barb Lupi

