

## The [International Surface Working Group](#)

(<http://cimss.ssec.wisc.edu/iswg/meetings/2017/>)

Within the framework of the WMO [Coordinated Group for Meteorological Satellites \(CGMS\)](#) a number of international science working groups exist to provide expert recommendations and coordination for atmospheric observations. The Earth surface community has recognized the opportunity of a sister group addressing surface **Earth Observations (EO)** needs and their applications and a recommendation to form such a group was an outcome of the [4th Remote Sensing and Modelling of Surface Properties](#) workshop held in Grenoble in march 2016.

An international science working group focused on Earth's surface would integrate the other active scientific groups, gathering requirements that are specific to surface monitoring. A coordinated effort to bring concerns and advances from the scientific community could bring a clear focus by reviewing what technology has reached a maturity level to be directly used in surface monitoring and modelling applications and feed into weather and climate.

We invite you to participate in the inaugural International Surface Working Group, hereafter ISWG, to discuss and investigate those particular issues which are felt to not have received either coherent or sufficient backing from existing international scientific coordination but are critical to support operational applications in forecasting and the monitoring of weather and climate.

### Subject of the workshop

The workshop will be designed to be inclusive of all surfaces, land, ocean and sea-ice. This workshop seeks to bring together scientists working on areas which are particularly poorly monitored by current satellite missions. To the CGMS, we will put forward recommendations on those surface properties where continuity in the monitoring is lacking a cooperative international advocate. Particular examples include **satellite based** estimation of **soil moisture, snow, land surface temperature** and **surface water body extents**. This group will bring forward a continuity plan using existing systems and the ones planned which would fill this application gap in the future would be a primary effort to fall upon this group.

After the conclusion of the meeting the actions and recommendations of this group will be prepared in a report delivered to the WMO CGMS body.

### Important Dates

- Deadline for Abstracts: 14 March 2017

- Final Program: 01 June 2017
- ISWG workshop: 19-20 July 2017

This focused meeting will have no parallel sessions. The workshop format is chosen to encourage open discourse with ample time for questions, and discussions.

### Venue

The meeting will convene in at the [Moss Landing Marine Laboratory](#) in Moss Landing, CA located at the center of Monterey Bay.

### Registration

Registration and submission of abstracts will close on 14th of April, 2017. Please register using the following link: <https://doodle.com/poll/qa66czpwss2ibn48>. Abstract should be emailed directly to [ben.ruston@nrlmry.navy.mil](mailto:ben.ruston@nrlmry.navy.mil), [gianpaolo.balsamo@ecmwf.int](mailto:gianpaolo.balsamo@ecmwf.int), [Fatima.karbou@meteo.fr](mailto:Fatima.karbou@meteo.fr), and/or [vanessa.m.escobar@nasa.gov](mailto:vanessa.m.escobar@nasa.gov) again by the 14<sup>th</sup> of April, 2017.

### Meeting topics

*The following **non-exhaustive** list of scientific topics is suggested:*

- **Assimilation of surface sensitive observations:** IR/MW, active/passive remote sensing, methods for handling the surface emissivity and brightness temperature; quality control issues and methodology; atmospheric variable sensitivity studies; and observation/background error specification.
- **Land surface assimilation schemes:** State of the operational land surface modelling systems and recent developments; sensitivity and optimization studies of surface model parameters using remotely sensed data; outcomes of SMOS, SMAP, GPM missions; calibration issues, variable transforms or PDF matching techniques
- **Radiative transfer developments and emissivity/reflectivity models:** VIS/IR/MW, all surface types, review of current available parameterization for forward modelling the surface boundary for remotely sensed data; description of available land emissivity databases/atlasses (MW and IR); intercomparison/validation of physical models and retrieved emissivity (MW and IR, including land, ocean, water-bodies and ice surfaces).
- **Retrievals of surface parameters:** land surface temperature, soil moisture, snow water equivalent, water-body extent, sea surface wind, salinity, canopy parameters, vegetation water content, sea-ice concentration, etc. and the resulting surface emissivity/reflectance spectra.
- **Other relevant topics:** model-data comparison efforts involving EO dataset and shared experiences from ongoing surface monitoring systems including their infrastructure will be providing context for discussing and reviewing the existing capabilities.