



## ANNUAL REPORT OF THE SIG 3D REMOTE SENSING FOR THE YEAR 2016

*THE DEADLINE FOR THE SUBMISSION OF THIS REPORT TO THE EARSEL SECRETARIAT IS  
JANUARY 10th, 2017 (by email: [secretariat@earsel.org](mailto:secretariat@earsel.org))*

Name of SIG:	3D Remote Sensing
Name of chairperson:	Mattia Crespi, Karsten Jacobsen
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Year:	2016

### WORKSHOPS AND CONFERENCE (INSIDE AND OUTSIDE EARSEL)

Chairs of SIG 3D Remote Sensing and Urban Remote Sensing finalized the International Journal of Remote Sensing Special Issue related to the Joint Workshop organized during the 34th EARSeL Conference held in Warsaw on June 2014.

The SIG did not organize a proper workshop in 2016, but participated into the organization of two sessions during the 36th EARSeL Symposium held in Bonn on June 20-24, 2016.

Moreover SIG contributed to:

- XXIII ISPRS Congress - Prague (Czech Republic), July 12-19, 2016
- ESA Living Planet Conference - Prague (Czech Republic), May 9-13, 2016

The SIG will contribute to:

- 37th EARSeL Symposium
- ISPRS Hannover Workshop - Hannover (Germany), June, 6-9, 2017
- FOSS4G Europe Conference - Paris - Marne-la-Vallée (France), July, 18-22, 2017
- ISPRS Geospatial Week - Wuhan (China), September, 18-22, 2017

A Joint Workshop with the SIGs Urban Remote Sensing, Radar Remote Sensing and Developing Countries will be organized in 2018 at Ruhr University in Bochum (Germany).

### WEBSITE AND PROMOTION ACTIVITIES

The SIG website is operational in the old version and under restyling according the new EARSeL format (at present - December 2016 - there still are some difficulties due to this new format). It is also foreseen a promotion of the SIG under LinkedIn, in order to make easy both the count of the Colleagues/people interested in SIG activities and, vice versa, the tracking of the SIG activities by them.

## OTHER INFORMATION

### Scientific activities

The main scientific activities of the SIG were devoted to the following topics:

- to refine/establish new algorithms to generate DSM and DEM from high resolution optical and SAR sensors, with a particular care to complex morphology areas (urban – also for building detection - , mountain), also considering the potentialities of the new high resolution sensors (ZY-3, Pleiades; COSMO-SkyMed, TerraSAR-X and RADARSAT-2); the implementation of new algorithms was developed also in connection with proposals opened within the Google Summer of Code 2014, 2015 and 2016, and benefiting of the already well established Open Source environment as OSSIM
- to validate the new versions of global DSMs as ALOS World 3D (AW3D30) and the commercial WorldDEM and compare it with SRTM and ASTER GDEM2 as well with reference data (also benefiting of free available LiDAR and aerial DSM and DEM)

### Cooperation with other Associations

The SIG maintained a continuous cooperation with ISPRS, especially with the following Technical Working Groups:

- WG I/4: Calibration and Validation of Satellite Sensors
  - WG III/3: SAR-based Surface Generation and Deformation Monitoring
  - ICWG IV/II: Global Mapping: Updating, Verification and Interoperability
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