



EarthVision 2021

Large Scale Computer Vision for Remote Sensing Imagery

IEEE Workshop, CVPR 2021, Virtual.

June 2021.

Web: <https://www.grss-ieee.org/earthvision2021/>

Aims and scope

Earth Observation (EO)/Remote Sensing is an ever-growing field of investigation where computer vision, machine learning, and signal/image processing meet. The general objective is to provide large-scale, homogeneous information about processes occurring at the surface of the Earth exploiting data collected by airborne and spaceborne sensors. Earth Observation implies the need for multiple inference tasks, ranging from detection to registration, data mining, multi-sensor, multi-resolution, multi-temporal, and multi-modality fusion, and regression, to name just a few. It comprises ample applications like location-based services, online mapping services, large-scale surveillance, 3D urban modelling, navigation systems, natural hazard forecast and response, climate change monitoring, virtual habitat modelling, etc. The sheer amount of data calls for highly automated scene interpretation workflows.

This workshop, held for its fifth edition at the CVPR 2021, aims at fostering collaboration between the computer vision as well as machine learning disciplines and the remote sensing community to boost automated interpretation of EO data. EarthVision will additionally help build cooperation within the CVPR community for this highly challenging and quickly evolving field that has a big impact on human society, economy, industry, and the planet.

Submissions are invited from all areas of computer vision and image analysis relevant for, or applied to, environmental remote sensing. Topics of interest include, but are not limited to:

- Super-resolution in the spectral and spatial domain
- Hyperspectral and multispectral image processing
- 3D reconstruction from aerial images
- Feature extraction and learning
- Semantic classification of UAV / aerial and satellite images and videos
- Deep learning tailored for Earth observation
- Domain adaptation and concept drift
- Human-in-the-loop
- Multi-resolution, multi-temporal, multi-sensor, multi-modal processing
- Earth observation and machine learning approaches for adaptation to climate change



- Vision and machine learning methods for recovery from disasters and extreme events
- Public benchmark data sets: Training data standards, testing & evaluation metrics, as well as open source research and development.

Important Dates

Full paper submission:	March 7, 2021
Notification of acceptance:	April 7, 2021
Camera-ready paper:	April 14, 2021
Workshop (full day):	June 2021

Submission guidelines

A complete paper should be submitted using the EarthVision templates provided on the workshop website. The paper length must not exceed 8 pages (excluding references) and formatting follows CVPR 2021 instructions. All manuscripts will be subject to a double-blind review process, i.e. authors must not identify themselves on the submitted papers.

Papers are to be submitted using the dedicated submission platform on the Workshop website (<https://www.grss-ieee.org/earthvision2021/submission.html>). By submitting a manuscript, the authors guarantee that it has not been previously published or accepted for publication in a substantially similar form. CVPR rules regarding plagiarism, double submission, etc. apply.

Workshop organizers

- Ronny Hänsch, German Aerospace Center, Germany
- Devis Tuia, EPFL, Switzerland
- Jan Dirk Wegner, University of Zurich & ETH Zurich, Switzerland
- Bertrand Le Saux, ESA/ESRIN, Italy
- Naoto Yokoya, Uni. of Tokyo & RIKEN, Japan
- Nathan Jacobs, Uni. of Kentucky, USA
- Fabio Pacifici, Maxar, USA
- Mariko Burgin, NASA JPL, USA
- Loïc Landrieu, IGN, France
- Charlotte Pelletier, UBS Vannes, France
- Maryam Rahnemoonfar, University of Maryland, USA



Challenge

EarthVision 2021 will again feature interesting challenges addressing modern problems of Remote Sensing and Earth Observation. Stay tuned for details!

Sponsoring

The event is co-organized by the Image Analysis and Data Fusion Technical Committee of the IEEE-GRSS, and it is sponsored by

Gold Sponsors



Bronze Sponsors

