

**SPIE. REMOTE SENSING**

13-16 September 2021

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Madrid, SpainSubmit abstracts by:  
**28 April 2021****Remote Sensing of Clouds and the Atmosphere XXVI** (RS104)

*Conference Chairs:* **Adolfo Comerón**, Univ. Politècnica de Catalunya (Spain); **Evgueni I. Kassianov**, Pacific Northwest National Lab. (United States); **Klaus Schäfer**, Atmospheric Physics Consulting (Germany)

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This conference focuses on methods, underlying technologies, and applications of remote sensing of clouds and Earth and planetary atmospheres, including the following topics:

**REMOTE SENSING, INCLUDING PROFILING, OF CLOUDS, ATMOSPHERIC AEROSOLS, TRACE GASES AND METEOROLOGICAL PARAMETERS**

- cloud detection, profiling and characterization
- cloud modelling
- cloud screening
- gas measurements and retrieval from ground, air and space
- aerosol detection, measurements and retrieval from ground, air and space
- assimilation of remote sensing data of clouds, aerosols and trace gases into meteorological, transport, and air-quality models
- remote sensing of constituents, dynamical and electrical structure, and wave motions of the upper atmosphere
- studies of middle and upper atmosphere variability and climatology
- hyperspectral data processing
- deep learning, machine learning, handling and processing big data.

**RADIATIVE TRANSFER**

- Earth radiation budget
- 3D radiative transfer and approximation methods
- retrieval methods, profiling, and data assimilation
- atmospheric correction
- non-LTE radiative effects and radiative transfer codes
- non-LTE retrieval methods.

**LIDAR, RADAR, AND OTHER ACTIVE AND PASSIVE (MICROWAVE, INFRARED, VISIBLE AND ULTRAVIOLET) ATMOSPHERIC MEASUREMENT TECHNIQUES AND TECHNOLOGIES**

- remote sensing by FTIR, DOAS and other spectroscopic techniques
- lidar (elastic backscatter, Raman, DIAL, etc.) methods for aerosol, cloud and gas measurements
- radar profiling of cloud parameters
- satellite retrievals (infrared, microwave) targeting the upper troposphere and lower stratosphere (MIPAS, ACE-FTS, MLS, OMPS, etc.)
- advances in laser sources for lidar sensing of clouds, aerosols and gases from ground, airborne and space-borne platform
- advances in detectors for remote sensing systems of clouds and the atmosphere
- advances in retrieval methods
- synergy between different types of instruments
- calibration/validation of satellite retrievals of atmospheric variables
- low-cost sensor networking and interplay with mobile devices (including unmanned aerial vehicles), trace compound retrieval and remote sensing from ground, air and space, food and water security, predicting and monitoring natural disasters (wildfire, landslides, floods, etc.), search and rescue.

**APPLICATIONS**

- weather forecast and climate trends
- air pollution monitoring, forecast and modelling, including data and information fusion
- measurement of industrial, agricultural, biomass, and volcanic emissions and transport, including determination of emission source strengths
- environmental, disaster, and fire monitoring
- improvement of agri-food production systems
- applications of small satellites (microsats, nanosats, cubesats) to remote sensing of the atmosphere.
- studies of ice sheets (Cryosat, ICESat, IceBridge, GRACE, IceCube, etc.) and snow cover dynamics.

CONTINUED NEXT PAGE➔

# Abstract Submission

## Present your research at SPIE Remote Sensing

Follow these instructions to develop a successful abstract and accompanying manuscript for the conference and for publication in the Proceedings of SPIE in the SPIE Digital Library.

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- Go to the conferences page (link below), browse the conference topics and choose one that most closely matches the topics of the work you wish to present. Click “Submit an Abstract” from within that conference, and you’ll be prompted to sign in to your spie.org account to complete the submission wizard.
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### What you will need to submit

A completed electronic submission should include the following:

- Title
- Author(s) information
- 500-word abstract for technical review
- 300-word summary for the program
- Keywords used in search for your paper (optional)
- Your decision on publishing your presentation recording to the SPIE Digital Library
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**Note:** Only original material should be submitted. Commercial papers, papers with no new research/development content, and papers with proprietary restrictions will not be accepted for presentation.

### Submission agreement

Presenting authors, including keynote, invited, oral, and poster presenters, agree to the following conditions by submitting an abstract. An author or coauthor will:

- Register and attend the meeting.
- Present as scheduled.
- Publish a 6- to 20-page manuscript in Proceedings of SPIE in the SPIE Digital Library.
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- Ensure that all clearances, including government and company clearance, have been obtained to present and publish. If you are a DoD contractor in the USA, allow at least 60 days for clearance.
- Ensure that you obtain a visa in time, if you need to do so. Visa Application Information and Invitation Requests.

### Important dates

Abstracts Submission Deadline	28 April 2021
Acceptance Notification Sent to Contact Author	18 June 2021
Manuscripts Due	16 August 2021

### Review and programme placement

- To ensure a high-quality conference, all submissions will be assessed by the Conference Chair/Editor for technical merit and suitability of content.
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