

RADECS
2021

VIENNA, 13-17 September



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European Conference on

Radiation and its Effects on Components and Systems

September 13-17, 2021

Vienna, Austria

Call for Papers

In 2021 the RADECS conference on radiation and its effects on components and systems will be held September 13th to 17th in Vienna, Austria. The conference features a full-day short course, a technical program including oral and poster presentations, a radiation effects data workshop and an industrial exhibit.

The conference theme is “**Committed to Safety and Sustainability in Space**”, with a view to future space missions and applications, and the use of space for the entire global community.

The RADECS conference is the European annual forum on the effects of radiation on electronics and optoelectronics devices and systems where scientists and engineers exchange on the latest progresses and results about radiation effects on electronics.

RADECS 2021 is organized by the Seibersdorf Laboratories in collaboration with CERN and several supporting partners, under the patronage of the RADECS association.

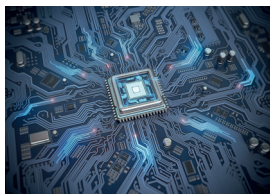
The first day of the conference, September 13th, 2021, will be dedicated to a short course providing both the basics and state-of-the-art knowledge on selected topics.

The technical program will be held from September 14th to September 17th, featuring thematic sessions, a data workshop and an industrial exhibit.

RADECS 2021 is soliciting papers in the areas listed next page.

www.radeecs2021.org





Topics

The RADECS 2021 Conference is soliciting papers describing significant new findings or developments in the following areas:

RADIATION EFFECTS

- **Basic Mechanisms of Radiation Effects**
Ionizing dose – Non ionizing dose/Displacement damage – Synergistic effects - Effects on materials & advanced device structures – Radiation transport, energy deposition and dosimetry – Cryogenic or high temperature effects.
- **Radiation Effects on Devices & ICs**
Ionizing dose – Non ionizing dose/Displacement damage – Synergy with Single Event Effects – Modelling and characterization of devices, circuits and systems responses.
- **Single Event Effects: Mechanisms & Modelling**
Single-Event charge collection phenomena and mechanisms – Single Event Transients - Modelling at radiation-matter interaction, device, circuit or system level.
- **Single Event Effects: Devices & ICs**
Single-Event Effects specific characterization of devices, circuits and systems – SEE Rate prediction.
- **Photonics, Optoelectronics & Sensors**
Optoelectronic and optical materials, devices and systems – Sensors – MEMs.

HARDENING & HARDNESS ASSURANCE

- **Hardening Techniques**
Methods for hardened design and/or manufacturing at component, circuit and system level.
- **Radiation Hardness Assurance & Emerging Qualification Needs and Solutions**
New testing techniques – Hardness assurance methodology – Alternative RHA approaches – COTS qualification and risk assessment – Field return.

RADIATION ENVIRONMENTS AND FACILITIES

- **Radiation Environments**
Space environments and weather – Atmospheric and ground-level environments – Accelerator, medical and nuclear environments – Characterization and modelling – In-flight experiments.
- **Facilities and Dosimetry**
Radiation exposure facilities – Emerging facility user needs and challenges - Instrumentation methods – Dosimetry.

RADIATION EFFECTS DATA WORKSHOP

- Evaluation/qualification data with complete identification of tested commercial devices.

Important dates

- Paper submission opening: **January 9th, 2021**
- **Submission deadline: April 9th, 2021**
- Notification of acceptance: **June 4th, 2021**
- Final paper due: **September 9th, 2021**

Paper submission instructions

1. Prepare a single PDF file of an informative two to four pages summary describing results appropriate for 12-minute oral or a poster presentation. The summary must include a 35-words abstract and sufficient detail about the work to permit a meaningful technical review. The summary must be no less than two and no more than four pages in length, including figures, tables and references.
2. Prepare your [RADECS 2021 summary template](#) using the two-column format of the [IEEE Transactions on Nuclear Science](#) template.
3. Obtain all corporate, sponsor, and government approvals and releases necessary for presenting your paper at an open attendance international meeting.
4. Summary submission is electronic only through the [RADOCS](#) online tool before April 9th, 2021, midnight (Vienna time). Authors are prompted to state their preference for the presentation modality (oral, poster, or data workshop poster) and technical session. The final category of all papers will be determined by the Technical Program Committee, which is responsible for selecting accepted papers from initial submissions.

Accepted papers will be published in the RADECS 2021 Conference Proceedings.

Papers accepted for oral or poster presentation at the conference will also be eligible for publication in a special issue of the IEEE Transactions on Nuclear Science. Selection for this issue will be based on a separate submission of a complete paper that will be subject to the standard full peer review.

RADSAGA Student Grant

The RADSAGA EU project will deliver several RADECS Student Grants to cover Short Course and Technical Sessions registration fees for students who submitted a paper as first author. Selection of the beneficiaries will be performed among submitted student papers by the RADECS 2021 Technical Committee and the RADECS Association Steering Committee, and results will be announced early June 2021.

