



# Final Call for Papers

Padova, Italy,  
September 19-20, 2002



## RADECS 2002 Workshop – Radiation Effects on Components and Systems

The RADECS 2002 workshop will be held on September 19 and 20, 2002 in Padova, Italy, in the ancient building of the University of Padova, one of the oldest Universities in Europe. The conference features a technical program consisting of sessions of the contributed papers describing the latest observations in radiation effects on electronic components and systems. The technical programme includes poster and oral sessions.

### **Theme**

The RADECS Workshops alternate every two years with the grand RADECS Conferences. Papers describing radiation effects on devices, integrated circuits, sensors and systems, as well as hardening, test and environmental modelling methods will be presented in oral and poster session.

Target applications are space, high-energy physics, medical system, nuclear power industry, and military.

### **Organising Committee**

D. Bisello (Chairman, Padova University, I), M. Pegoraro (INFN Padova, I), G. Prete (INFN Legnaro, I).

### **Scientific Committee**

A. Paccagnella (Chairman, Padova University, I), R. DeMarino (ESA-ESTEC, NL), S. Duzellier (ONERA, F), F. Faccio (CERN, CH), F. Fantini (Modena University, I), J.L. Leray (CEA, F), G. Manoni (ASI, I), R. Sharp (AEA Technology, UK), F. Saigné (Reims University, F), M. Sonza Reorda (Politecnico Torino, I), E. Zaroni (Padova University, I).

### **IEEE Liason**

R. Schrimpf (Vanderbilt University, USA).

### **RADIATION ENVIRONMENTS AND TEST FACILITIES**

Medical and nuclear industry environments  
High energy physics research environments  
Modelling of radiation environments  
Irradiation and test facilities  
Dosimetry, detector technologies, total dose and dose rate measurement  
Space and ground tests

### **HARDENING METHODS**

Technology and system hardening techniques  
Methods of reducing susceptibility to total dose, displacement damage, and transient radiation effects  
Technologies involving insulating substrates

### **RADIATION EFFECTS ON MATERIALS, DEVICES AND SYSTEMS**

Basic mechanisms - Radiation interaction with materials  
Radiation effects on electronics and optoelectronics  
Computer simulation of radiation effects  
Total dose effects  
Non-destructive single-event effects (SEE)  
Potentially destructive single-event effects (latch-up, burnout...)  
High dose rate transient effects - Combined effects of electrical stress and radiation

### **TEST METHODS AND EXPERIMENTAL DATA**

Use of standard components in radiation environments (COTS)  
Component characterisation and selection methods  
Experimental data obtained for components  
Databases  
System qualification  
Experience from systems already in service  
Hardness assurance / long-term availability of parts

**All abstracts must be received by March 9, 2002.**

### **Paper acceptance and notification to Authors**

In May 2002, the Scientific committee will notify authors with the results of the selection (accepted or not, oral or poster session). In case of acceptance, Extended Abstracts will be published in the Abstract Booklet distributed at the Conference. A selection of best papers will be submitted for publication in the IEEE Transactions on Nuclear Science, based on a separate review process.

## Submission information

### Documents required:

-a cover letter stating the title of the paper, its main author and co-authors, together with contact details (address, telephone and fax numbers and e-mail address) for the main author. It should likewise indicate preference for oral or poster presentation. This letter should also include an abstract of approximately 35 words. This file should be named

**FirstAuthorName\_letter.PDF.**

-an Extended Abstract of no more than four pages, including tables and figures, specifying the purpose of the work, significant results and how the work advances the state of the art. IEEE format, though not required, is strongly encouraged. This file should be named

**FirstAuthorName.PDF.**

Electronic submissions is required. All documents must be in English.

**Deadline: March 9<sup>th</sup>, 2002.**

Send a cover letter, which should include a 35 words abstract, and the Extended Abstract, all in PDF format to:

**radecs@dei.unipd.it**

Further instructions are available on web site:

**www.radecs.org**

### Industrial exhibitors

Participation of industrial exhibitors is encouraged. The exhibit offers companies the opportunity to showcase their products, technologies and services to key technical management personnel associated with electronics used in applications requiring radiation tolerance in harsh environments. Booths will be provided by the organization. For information please directly contact prof. A. Paccagnella through the Conference web site.



### For more information:

Please visit the RADECS web site for more information:

**www.radecs.org**

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### Padova, Italy

Located in a center of Veneto, region of north-eastern Italy, Padova (Padua) is a historical city near Venezia (Venice), and it offers a multitude of cultural sites. Padova gives visitors the opportunity to enjoy cultural activities ranging from outstanding museums, galleries, and visit historical building. Probably better known as the city of St. Anthony and "Prato della Valle", the greater public square in Europe, Padova is among the most important Art Cities in Italy. The classical itinerary includes the visit to the most important monuments of the town, especially those realized between the 13th century and the 15th century.

That was the most extraordinary economic and cultural period, that left an indelible mark on the town: the Medioeval City Walls, the great civil and religious buildings, the foundation of the University (1222), the second in Italy, which attracts masters and students from the whole Europe, for instance Harvey (the discoverer of blood circulation) and Galileo Galilei has been teacher for many years. Others important symbols are the wonderful frescoes painted by Giotto and his followers, Guariento, Altichiero, Giusto de' Menabuoi, and later the works by Andrea Mantegna and Donatello.

For other information about Padua see:

**<http://www.apr.padova.it/menuengl.htm>**



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