



Figure: TUM Campus Garching  
source: Uli Benz / TUM

# SERESSA 2017

## 13<sup>th</sup> International School on the Effects of Radiation on Embedded Systems for Space Applications

Spectrum Aerospace Technologies  
LRT & LRR Technical University Munich  
Leibniz Supercomputing Center  
Garching b. München, Germany

October 23<sup>rd</sup>-October 26<sup>th</sup>, 2017

<http://seressa.in.tum.de>

### CALL FOR PARTICIPATION

This four-day school SERESSA combines academic, government, and industrial communities working in the area of radiation effects on embedded systems. Radiation effects are a significant concern for space and avionic systems, as well as for critical applications operating at ground level (automotive, medical and banking). Lecturers with significant experience in key selected subjects will provide complete state-of-the-art instruction in this strategic field. The school is based on lectures, exercises, and practical courses involving real case studies using the common tools of the domain. The topics cover the full spectrum of radiation effects on space embedded systems: space environment, error mechanisms, testing, hardening by design, rate prediction. The intended audience includes both beginning and experienced researchers, engineers, and post-graduate students wishing to enhance their knowledge base in this rapidly evolving field. Topics covered by SERESSA include: radiation environment, spacecraft anomalies, single-event effects (SEE), total dose effects (TID), radiation effects in power systems, radiation effects in solar cells, architecture hardening in analog, and digital circuits and in memories, software hardening, effects in FPGAs, hardness assurance, rate prediction, radiation testing, laser testing and remote testing experiments.

### Topics

- radiation environment
- spacecraft anomalies
- single-event effects (SEE)
- total dose effects (TID)
- radiation effects in power systems
- radiation effects in solar cells
- architecture hardening in analog and digital circuits and in memories
- software hardening
- effects in FPGAs
- hardness assurance
- rate prediction
- radiation testing
- laser testing
- remote testing experiments

### About the venue:

Munich is the capital and most populated city in the German State of Bavaria. It is a leading location for science and research with a long list of institutions from academia and industry such as TU Munich, LMU Munich, MTU AeroEngines, Airbus Defence and Space and Ariane Space. This school will be held in cooperation with Leibniz Supercomputing Center at TUM's Campus Garching. The venue is easily reachable from the nearby Munich Airport and Munich Center Station by public transport, car or bike.

Please use any of the contacts below for additional information

#### Program Information

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#### Local Information

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### General Chairs

Pascal Fouillat, IMS, France  
Raoul Velazco, TIMA, France

### Program Chairs

Otmane Ait Mohamed, Concordia University, Canada

### Local Chairs

Jaime Estela, Spectrum Aerospace, DE  
Martin Langer, LRT, MW, TUM, DE  
Dai Yang, LRR, IN, TUM, DE  
Carsten Trinitis, LRR, IN, TUM, DE

### Registration deadline:

October 20<sup>th</sup>, 2017

### Poster Submission deadline:

September 15<sup>th</sup>, 2017

### Author Notification:

September 30<sup>th</sup>, 2017

Raoul Velazco  
Dale Mc Morrow  
Jaime Estela  
Editors

Radiation Effects on  
Integrated Circuits and  
Systems for Space  
Applications



All participants of the SERESSA 2017 Workshop can purchase the book with a discount of 20%.

Supporters: Bayerische Forschungsallianz bavAIRia

Organized by:



Leibniz-Rechenzentrum  
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