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CALL FOR PAPERS

21st EUROPEAN SYMPOSIUM RELIABILITY OF ELECTRON DEVICES, FAILURE PHYSICS AND ANALYSIS

Gaeta – Italy
11 - 15 October 2010



Organized by:



with the technical co-sponsorship of :



Department of Automation,
Electromagnetism, Informa-
tion Engineering and
Industrial Mathematics
University of Cassino



EUROPEAN CENTER FOR
POWER ELECTRONICS
WWW.ECPE.ORG

ESREF 2010, the 21st European Symposium on Reliability of Electron Devices will take place in Gaeta (Italy) from 11th to 15th October 2010.

This international symposium continues to focus on recent developments and future directions in Quality and Reliability Management of materials, devices and circuits for micro, nano, and optoelectronics. It provides a European forum for developing all aspects of reliability management and innovative analysis techniques for present and future electronic applications.

LOCATION OF THE CONFERENCE (143 km from the Fiumicino international airport of Rome and 105 km from Capodichino international airport of Naples):

SUMMIT HOTEL
Via Flacca, Km 23
04024 GAETA (LT) – Italy

SUBMISSION GUIDELINES

The deadline for the submission of summaries is **March 14th, 2010**. The four page-extended summaries must include a title page with a five-line abstract, the complete address, the fax number and e-mail address of the corresponding author and the preference for oral or poster presentation. Please note that abstracts and papers must be in English.

Authors are requested to upload an electronic file (in Adobe Acrobat PDF or Microsoft WORD format) of the summary at:

<http://www.esref.org>

DEADLINES

14 March 2010	Submission of summaries
30 April 2010	Notification of acceptance
30 May 2010	Submission of final manuscripts

Elsevier Science will publish the ESREF 2010 proceedings as a special issue of the Microelectronics Reliability journal.

30 June 2010	Receipt of final papers at the Publisher Elsevier Science (UK)
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TECHNICAL PROGRAMME

The conference will concentrate on two main areas of interest in electronics concerning designers, manufacturers and users:

- Strategy for Quality and Reliability Assessment during Product Development and Life Cycle.
- Advanced Analysis Techniques for Technologies and Product Evaluation.

EQUIPMENT EXHIBITION

The Symposium will feature the latest in service providers, equipment manufacturers and suppliers.

Large exhibit rooms will give the opportunity to key-vendors to represent the core business area in these fields.

For further information concerning the equipment exhibition, please contact:

Antonino Porzio, Carmine Abbate
esref2010@unicas.it

SCOPE OF PAPERS

Papers are requested on the following topics:

Quality and Reliability assessment techniques and methods for Devices and Systems

Design for reliability, Built-in reliability, Virtual qualification, Reliability simulation, Extreme environments, Advanced models for Reliability prediction, Reliability test structures, Limits to accelerated tests, Screening methods, Yield/reliability relationship.

Physical Modeling and Simulation for Reliability Prediction

Characterization of defects, Defect models, Numerical simulation, Simulation of reliability in integrated circuits.

Advanced Failure Analysis: Defect Detection and Analysis

Electron, ion and optical beam techniques, Scanning probe techniques, Static or dynamic techniques, Backside techniques, Acoustic microscopy, Electric or magnetic field based techniques, Electrical, thermal and thermo-mechanical characterization, Sample preparation, construction analysis, Failure analysis: case studies.

Failure Mechanisms in New Materials and Transistors

Process-related issues, Passivation stability, Hot carriers injection, NBTI, TDDB, High-K dielectrics and gate stacks, Low-K dielectrics and Cu interconnects, ESD-EOS, Metal migration: mechanical and thermal aspects, Radiation impact on circuits and systems reliability.

Failure analysis and Reliability of Advanced and Nanoscale electronics

Non-volatile and programmable cells, Silicon on Insulator devices, Wide bandgap semiconductors, Microwave and compound semiconductor devices, Photonic devices: Optoelectronics, lasers and solar cells, Optical and NTC Interconnects, MEMS and MOEMS, NEMS and nano-objects.

Power Devices Reliability

Smart-power devices, IGBT, thyristors, High voltage devices, Thermal management.

Packaging and Assembly Reliability

Failure mechanisms and environmental constraints, MCM, CSP, BGA, SiP, WLP, QFN, advanced PCB, Bonding, solders and joints, Connectors, Passive elements.

Photovoltaic Devices and System Reliability

III-V Semiconductors, Thin Films, Concentration PV

Organic Electron Devices Reliability

TFT, OLEDs, Organic photovoltaic cells

Tutorials by experts will provide review presentation of relevant topics and **Invited papers** will introduce the mainstream topics.

Workshops organized in correlation with the ESREF conference will give the opportunity to exchange the know-how and field returns on specific topics.

For further information concerning the Scientific Program, please contact:

Giovanni Busatto - esref2010@unicas.it - <http://www.esref.org>