33rd European Symposium on Reliability of Electron Devices Failure Physics and Analysis (ESREF 2022)

September 26 – 29, 2022

Berlin, H4 Hotel Berlin Alexanderplatz

+++ CALL FOR PAPERS +++ CALL FOR PAPERS +++ CA ++

Call for Papers

ESREF 2022, the 33th European Symposium on Reliability of Electron Devices, Failure Physics and Analysis, will take place in Berlin (Germany) from 26th to 29th September 2022 at the H4 Hotel Berlin Alexanderplatz. This international symposium continues to focus on recent developments and future perspectives 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. The conference provides attractive exhibition and sponsorship options.

SCOPE OF PAPERS

High quality abstracts are accepted for presentation at ESREF and publication in Microelectronics Reliability Journal. **They should contribute to reliability concepts, the understanding and analysis of failure mechanisms by means of innovative methods in failure analysis, measurement, characterisation or modelling.** During submission the authors will be asked to give their preferences with regards one or more tracks as described below:

A Assessment Techniques and Methods for Devices and Systems

Design for reliability, built-in reliability; virtual qualification; advanced reliability simulation; limits to accelerated tests; screening methods; yield/reliability relationship; counterfeit detection on system level; KI-based reliability assessment; condition monitoring; multi-objective reliability assessment techniques; including sustainability aspects in the assessment; …

B Semiconductor and Nanoelectronics Technologies

Process-related issues, passivation stability; hot carriers injection, NBTI, TDDB; high-K dielectrics and gate stacks; Low-K dielectrics and Cu interconnects; metal migration: mechanical and thermal aspects; non-volatile and programmable cells; silicon on insulator devices; nano-electronics, nano-electronic materials for solid state devices; …

C Progress in Failure Analysis Methods

Electron, ion and optical beam techniques; scanning probe techniques; static or dynamic techniques, back-side techniques; acoustic microscopy; electric or magnetic field based techniques; electrical, thermal and thermo-mechanical characterization; sample preparation, construction analysis; failure analysis: case studies; Identification of counterfeits; …

D Microwave Devices and Circuits

Microwave and compound semiconductor devices; devices for 5G communication; radar sensors; …

E Packaging and Assemblies

E1 Wafer- and Panel-Level Interconnection Technologies

First level interconnects; 3D-integration and through-silicon-vias; PCB-embedding, fan-out and chip-scale packaging; chip/package interaction; …

E2 Second-Level Interconnects

Solder and high-temperature interconnects; sinter-interconnects; wire-bonds; …

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F Power Devices and Systems

F1 Smart Power Devices, IGBT, Thyristors

F2 Wide Bandgap Power Devices

F3 Power Electronic Systems

G Photonics Devices

Solar cells and display; optoelectronics; organic electronics: OLED, electronic ink, TFT

H - MEMS and Sensors

Bio-electronics, bio-sensors, nano-bio-technologies; MEMS and MOEMS; NEMS and nano-objects; …

I - Extreme Environments and Radiation

ESD-EOS, latchup; EMC-EMI (integrated circuits, power electronic systems); radiation impact on circuits and systems reliability; …

SUBMISSION GUIDELINES:

Please submit a 4-page extended summary through our online system. A template and information on the submission procedure can be found at:

https://www.esref2022.org/submissions/

PAPER SUBMISSION

If accepted at the journal, the papers will go through a full peer-review process. All accepted papers will be published in Microelectronics Reliability journal (5-year impact factor:1.589) at the time of the conference. Info: https://www.journals.elsevier.com/microelectronics-reliability

KEY DEADLINES:

Submission for 4-page abstract:
March 11, 2022

Notification of acceptance:
May 2, 2022

Final paper (5-6 pages) for review (Elsevier Editorial System):
May 19, 2022

Final upload to the journal (Elsevier Editorial System):
June 9, 2022

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 discuss recent developments, open issues and exchange the know-how on specific topics.

For further information concerning the Scientific Program, please contact: office@esref2022.org

VENUE:

ESREF 2022 will be hosted in the conference center of the H4 Hotel in Berlin Alexanderplatz. The location offers a multitude of different travel options and hotels at different budget levels are available on site.

ORGANISATION COMMITTEE

Conference Chair:
Martin Schneider-Ramelow, Fraunhofer IZM / TU Berlin

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Organized by Fraunhofer IZM

In cooperation with TU berlin

Supported by ECPE

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