



# 9<sup>TH</sup> INTERNATIONAL SYMPOSIUM ON THE PHYSICAL AND FAILURE ANALYSIS OF INTEGRATED CIRCUITS



8-12 July 2002  
Raffles City Convention Centre  
Singapore

# IPFA 2002

## CALL FOR PAPERS

The 9<sup>th</sup> International Symposium on the Physical and Failure Analysis of Integrated Circuits (IPFA 2002) is organised by the IEEE Reliability/CPMT/ED Singapore Chapter in co-operation with the Centre for Integrated Circuit Failure Analysis and Reliability (CICFAR) of the National University of Singapore (NUS) and the Institute of Microelectronics (IME). The Symposium is technically co-sponsored by the IEEE Electron Device Society and the IEEE Reliability Society.

The Symposium will be devoted to the fundamental understanding of the physical mechanisms of device failures and issues related to device reliability, especially those related to advanced process technologies. The Technical Committee is inviting papers related to research work in the following or related areas:

### Advanced Failure Analysis Techniques

- Physical, chemical and electrical analysis techniques for fault isolation and failure identification
- New techniques including optical beam, electron beam, ion beam and scanning probe techniques
- Novel applications of standard failure analysis techniques

### Practical Issues in Building-in Reliability

- Reliability engineering emphasizing design and process aspects
- Process control in wafer processing and reliability
- Assembly related issues in device reliability
- Statistical Analysis

### Dielectrics and Hot-Carrier Reliability

- Time dependent dielectric breakdown
- Oxide degradation mechanisms and modelling
- Plasma induced damages - characterization techniques, mechanism and modelling
- Tunnel oxides in non-volatile memories
- Hot-carrier effects - measurement techniques and modelling

### EOS/ESD and CMOS Latchup

- Effect of ESD on specific devices and new protection structures
- Latent damages and damage interpretation
- ESD modelling and measurement techniques
- CMOS latchup characterization and modelling
- Failure analysis of ESD damage

### Packaging and Metallization Related Failure Mechanisms

- Electromigration studies and modelling
- Contact degradation and related issues
- MCM, BGA, TAB and other advanced packaging related failure mechanisms
- Package stress modelling and characterization

### Reliability and Failure Analysis of Specialist Devices

- Power semiconductor devices
- Optoelectronic devices
- Compound semiconductors
- Micro Electro-Mechanical Systems
- Magnetic Recording Heads

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### Exchange Papers

In a paper exchange arrangement with ESREF and ISTFA, the Best Papers from ESREF 2001 and ISTFA 2001 will be presented at IPFA 2002, while the best papers in reliability and failure analysis from IPFA 2002 will be presented at the corresponding conferences.

### Tutorials

In conjunction with the technical symposium, four tutorials on topics in failure analysis and reliability will be conducted.

### Exhibition

A 3-day exhibition of physical analysis equipment and services will be held concurrently with the Symposium. Prospective exhibitors are requested to contact the IPFA Secretariat for further information on the exhibition.

## SUBMISSION GUIDELINES

Prospective authors are requested to submit **one cover page and a two-page summary** (inclusive of figures, photographs and references) of their previously unpublished and original research work.

The cover page should contain the following information:

1. Title of the work.
2. Name, affiliation, and address of each author.
3. Telephone number, fax number and e-mail address of the corresponding author
4. An abstract not exceeding 50 words.
5. The category/categories (Advanced FA techniques, Dielectrics and Hot-Carrier Reliability, etc.) that you would like your submission to be considered under.

The summary section of the submission **should not** contain any reference to the authors or their affiliation, and **must** present the content of the submission according to the following sub-headings:

1. Objectives: The aim of your work.
2. Originality: Novelty of a technique or application, new knowledge contributed.
3. Significance: Why the results are important and how the results relate to previously reported work.
4. Summary: The summary should state clearly and concisely the specific results of the work.

All submissions must be in English. Submissions that do not adhere to the above guidelines will be rejected. Please e-mail your submission in **Adobe PDF format** to the Technical Program Chair at [ipfa@pacific.net.sg](mailto:ipfa@pacific.net.sg) by **7 January 2002**. Please limit your submission file size to 2 MB. If you do not receive an e-mail acknowledgement within 3 working days, please contact the IPFA Secretariat immediately. **Hardcopy submissions will not be accepted.** For further details please contact the technical program chair.

Authors of papers that have been accepted for presentation will be notified by 25 February 2002. Upon notification of acceptance, authors will be given guidelines for the paper and slide preparation and presentation. The final camera-ready manuscript (to be submitted by 19 April 2002) must conform strictly to the manuscript preparation guidelines before they can be published in the Symposium Proceedings and presented at the symposium.

<b>IMPORTANT DATES:</b>	7 January 2002	Submission of Summary and Abstract
	25 February 2002	Notification of Paper Acceptance
	19 April 2002	Submission of Camera-ready Manuscript

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