27th IEEE European Test Symposium

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CALL FOR PAPERS (Hybrid format)

The IEEE European Test Symposium (ETS) is Europe’s premier forum dedicated to presenting and discussing scientific results, emerging ideas, applications, hot topics and new trends in the area of electronic-based circuits and system testing, reliability, security and validation. ETS’22 will be held in *Casa Convalescència*, located in the historical modernist site *Hospital de la Santa Creu i Sant Pau* (World Heritage Site by UNESCO, 1997) 10 minutes walking from the *Sagrada Familia* in Barcelona. On-line participation will be possible. ETS’22 is organized by UPC (Universitat Politècnica de Catalunya).

The program includes keynotes, scientific paper presentations, panels, tutorials, workshops and highlights/demos from industry. Besides regular technical papers, ETS’22 provides the opportunity of submitting scientific contributions for hot-topic papers and case-study papers (each with specific evaluation criteria). Submissions are also solicited for special sessions, tutorials, panels and workshops, as well as for the PhD Forum. Linked to the main ETS’22 symposium, the Test Spring School and Fringe Workshops will be organized.

You are invited to participate and submit your contributions to ETS'22. The areas of interest include (but are not limited to) the following topics:

TECHNIQUES AND METHODOLOGIES

- ***Electronic Testing:***
  - *Adaptive Test*
  - *ATE Hardware and Software*
  - *Automatic Test Generation*
  - *Built-In Self-Test*
  - *Defect-Based Test*
  - *Delay, Jitter and Perform. Test*
  - *Defect mechanisms*
  - *Dependability*
  - *Design for Reliability*
  - *Design for Test*
  - *Embedded test and measurement instruments*
  - *Fault Modeling and Simulation*
  - *Fault Tolerance*
  - *Functional Safety*
  - *Low-Power Test*
  - *Machine Learning and AI for Test*
  - *On-line Test*
  - *Power and Thermal-Aware Test*
  - *Reliability, Self-Repair*
  - *Signal Integrity Test*
  - *Verification and Validation*
- ***Diagnosis:***
  Defect Diagnosis, Fault Diagnosis, Failure Analysis, Machine Learning and AI for Diagnosis, Silicon Debug
- ***Security:***
  Design for Security, Hardware Security, Hardware Trust, Security Issues in Test, Trojan Detection
- ***Manufacturing and Test:***
  Economics of Test, Design for Manufacturing, Design for Yield, Standards, Yield Analysis and Enhancement.

TEST VEHICLES AND ARCHITECTURES

- ***Devices, Circuits and Systems:***
  - *Analog and Mixed-Signal*
  - *Boards, Digital circuits and IPs*
  - *Embedded systems*
  - *High-speed digital, Memories*
  - *Microsystems, MEMS sensors*
  - *NoCs, Processors*
  - *SoCs and embedded IPs*
  - *Stacked/3D ICs*
  - *Reconfigurable Systems*
  - *Reversible and quantum devices*
  - *RF, Micro and mmWave*
  - *Photonics devices*
- ***Emerging architectures:***
  Approximate Circuits, In-memory computing, Neuromorphic architectures, Photonics architect., Quantum architectures.

Publications: ETS'22 will produce Formal Proceedings of scientific papers with ISBN number that will be indexed by the IEEE Xplore Digital Library. All accepted technical papers submitted in one of the three categories (regular, hot topic, and case study) will be included in the formal Proceedings (each following its own guidelines).

Submissions: ETS’22 seeks original, unpublished contributions of the following types:

- **Scientific Papers** for the Formal Proceedings:
  - **Regular Papers**, *(6 pages)* presenting novel and complete research work.
  - **Hot-Topic Papers**, *(4 pages)* presenting early innovative ideas with incomplete results, emerging and future test/reliability/safety problems, or identifying open problems that merit innovative future research.
  - **Case-Study Papers**, *(4 pages)* presenting relevant industrial (or industrial collaboration) data that demonstrate a previously published concept, or that can help further research advancements.
- **Case study Presentations for the Industry Sessions *(10’ presentation, 10’ Q&A)***, industry specialists are solicited to submit a 300-word abstract and 1 page of data/charts about “Testing in the real world”: Testing, probing, handling, validation & simulation, GR&R, yield, coverage, quality, FuSa.
- **PhD Forum Contributions** from students eager to discuss their on-going research.
- **Proposals for Panels, Embedded Tutorials, Special Sessions and Fringe Workshops.**
- **Industrial Presentations and Demos** focusing on new features of test/reliability/safety products.

Key Dates for Submissions:

Scientific Papers:	**December 10th, 2021**
Industrial case study abstracts & charts, PhD Forum, panels, tutorials, special sessions & workshops:	**January 21st, 2022**
Notification of acceptance:	**February 11th, 2022**
Camera-ready manuscript:	**March 15th, 2022**

Further Information:

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