Test Technology Newsletter

June 2022

*The Newsletter of the Test Technology Technical Council
of the IEEE Computer Society*

Editor: Stefano Di Carlo

TTTC NEWS

The TTTC website always lists thelatest features and information for its visitors! To find out more, pleasevisit the website at http://www.ieee-tttc.org/

PAST TTTC EVENTS

The 18th IEEE Workshop on Silicon Errors in Logic – System Effects (SELSE'22)
19–20 May 2022
Virtual Event
https://selse.org/

The growing complexity and shrinking geometries of modern manufacturing technologies are making devices increasingly susceptible to the influences of electrical noise, process variation, transistor aging, and the effects of natural radiation. The system-level impact of these errors can be far-reaching, both in safety-critical aerospace and automotive applications and also for large-scale servers and high-performance applications.

The SELSE workshop provides a unique forum for discussion of current research and practice in system-level error management.

The 27th IEEE European Test Symposium (ETS'22)
23–27 May 2022
Barcelona, Spain
http://ets2021.upc.edu/en/

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) in Barcelona, which is located 10 min walking from the Sagrada Familia. The format of the conference will be hybrid, please check "COVID19" menu for more details. ETS'22 is organized by UPC (Universitat Politècnica de Catalunya).

The program includes keynotes, scientific paper presentations, panels, tutorials, workshops, and highlights/demos from the 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 Ph.D. Forum. Linked to the main ETS'22 symposium, the Test Spring School and Fringe Workshops will be organized.

UPCOMING TTTC EVENTS

The 6th IEEE International Conference in Asia (ITC-Asia'22)
24– 26 August, 2022
Taipei, Taiwan
http://itc-asia2022.org/

International Test Conference has been a flagship conference in test technology since 1970. In an attempt to stimulate more discussion and interaction between academia and the industry around the globe, ITC-Asia was initiated as a sister conference of ITC in 2017. This year, it is again back to Taipei City, Taiwan. Welcome to join us to immerse yourselves in not only the state-of-the-art test technology but also numerous semiconductor industry forums.

23rd IEEE Latin-American Test Symposium (LATS'22)
5–8 September, 2022
Montevideo, Uruguay
https://iie.fing.edu.uy/eventos/lats2022/

The IEEE Latin-American Test Symposium (LATS) is a recognized test and fault tolerance techniques forum attended by professionals from all over the world, in particular from Latin-America, to present and discuss various aspects of system, board, and component testing as well as design, manufacturing and in-field considerations with fault tolerance in mind. Accepted papers will be submitted for inclusion into IEEE Xplore subject to meeting IEEE Xplore's scope and quality requirements. Further, the best papers of its 23rd edition will be invited to re-submit to IEEE Design&Test, Journal of Electronic Testing: Theory and Applications (JETTA - Springer) and IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD).

The 28th International Symposium on On-Line Testing and Robust System Design (IOLTS'22)
12– 14 September, 2022
Torino, Italy
http://iolts.tttc-events.org/

Issues related to Online testing techniques, and more generally to design for robustness, are increasingly important in modern electronic systems. In particular, the huge complexity of electronic systems has led to growth in reliability needs in several application domains as well as pressure for low-cost products. There is a corresponding increasing demand for cost-effective design for robustness techniques. These needs have increased dramatically with the introduction of nanometer technologies, which impact adversely noise margins; process, voltage and temperature variations; aging and wear-out; soft error and EMI sensitivity; power density and heating; and make mandatory the use of design for robustness techniques for extending, yield, reliability, and lifetime of modern SoCs. Design for reliability becomes also mandatory for reducing power dissipation, as voltage reduction, often used to reduce power, strongly affects reliability by reducing noise margins and thus the sensitivity to soft errors and EMI, and by increasing circuit delays and thus the severity of timing faults. There is also a strong relation between Design for Reliability and Design for Security, as security attacks are often fault-based.
The International Symposium on On-Line Testing and Robust System Design (IOLTS) is an established forum for presenting novel ideas and experimental data on these areas. The Symposium is sponsored by the IEEE Council on Electronic Design Automation (CEDA) and by the IEEE Computer Society Test Technology Technical Council (TTTC).

The 2022 edition is organized by Politecnico di Torino and the University of Athens.

The IEEE International Test Conference (ITC 2022)
25–30 September 2022
Hybrid/Disneyland, Anaheim, CA
http://www.itctestweek.org/

International Test Conference, the cornerstone of Test-Week™ events, is the world's premier conference dedicated to the electronic test of devices, boards and systems-covering the complete cycle from design verification, test, diagnosis, failure analysis and back to process and design improvement. At ITC, test and design professionals can confront the challenges the industry faces, and learn how these challenges are being addressed by the combined efforts of academia, design tool and equipment suppliers, designers, and test engineers.

5th IEEE International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems (DFTS'22)
October 19th − 21st, 2022
Austin, Texas (USA)
http://www.dfts.org/index.htm

DFT is an annual Symposium providing an open forum for presentations in the field of defect and fault tolerance in VLSI and nanotechnology systems inclusive of emerging technologies. One of the unique features of this symposium is to combine new academic research with state-of-the-art industrial data, necessary ingredients for significant advances in this field. All aspects of design, manufacturing, test, reliability, and availability that are affected by defects during manufacturing and by faults during system operation are of interest.

NEWSLETTER EDITOR'S INVITATION

I would appreciate input and suggestions about the newsletter from the test community. Please forward your ideas, contributions, and information on awards, conferences, and workshops to Stefano Di Carlo, Control and Computer Engineering Department, Politecnico di Torino, I-10,129, Torino, Italy; stefano.dicarlo@polito.it.

BECOME A TTTC MEMBER
For more details and free membership, browse the TTTC Web page: http://tab.computer.org/tttc.