



Call for Papers
**26th IEEE International Symposium on
 On-Line Testing and Robust System Design**
 Naples, Italy
 July 13-15, 2020

<https://www.testgroup.polito.it/iolts2020>



Issues related to On-line 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 the 2020 edition is organized by the IEEE Computer Society Test Technology Technical Council, the Politecnico di Torino, the University of Athens, the TIMA Laboratory, and iRoC Technologies.

The topics of interest include (but are not limited to) the following ones:

- Dependable system design
- Dependable Computer Architectures
- Design-for-Reliability
- Design for Reliability approaches for Low-Power
- Cross-layer reliability approaches
- Fault-Tolerant and Fail-Safe systems
- Functional safety
- Self-Test and Self-Repair
- Self-Healing design
- Self-Regulating design
- Self-Adapting design
- Reliability issues of Low-Power Design
- Robustness evaluation
- Quality, yield, reliability and lifespan issues in nanometer technologies
- Variability, Aging, EMI, and Radiation Effects in nanometer technologies
- On-line testing techniques for digital, analog and mixed-signal circuits
- Self-checking circuits and coding theory
- On-line monitoring of current, temperature, process variations, and aging
- Power density and overheating issues in nanometer technologies
- Field Diagnosis, Maintainability, and Reconfiguration
- Design for Security
- Fault-based attacks and counter measures
- Design for Robustness for automotive, railway, avionics, space, large industrial applications, IT infrastructure, cloud computing, and wired, cellular and satellite communications
- CAD for robust circuits design

Submissions: The IOLTS Committee invites authors to submit papers in the above or related technical areas. Accepted papers and posters will be included in formal Proceedings to be published by the IEEE. Papers must be submitted electronically following the instructions provided at the symposium web site. Papers should be in the standard IEEE conferences double-column format. Accepted, regular papers will be allowed six pages in the IEEE proceedings of IOLTS.

Please observe the following key dates:

Submission deadline: March 2, 2020 – Notification of acceptance: April 22, 2020 – Camera-ready papers due: May 12, 2020

Submission Information

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General Information

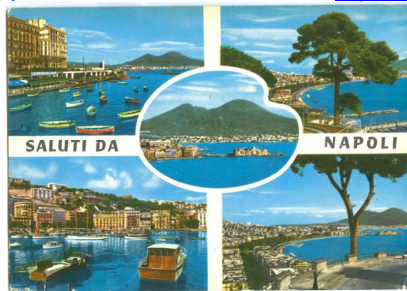
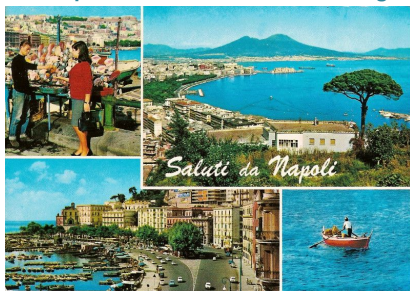
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About the location: IOLTS 2020 will be held in the beautiful Naples. Naples is located halfway between two volcanic areas, the volcano Mount Vesuvius and the Phlegraean Fields. The city is noted for its rich history, art, culture and gastronomy and, in the modern day, the historic centre of the city is listed by UNESCO as a World Heritage Site. The metropolitan area of Naples is the second most populated in Italy and one of the largest in all of Europe with around 3.8 million people. The whole history of Naples is based on the concept of welcoming foreigners and of different cultures living side by side. The city's enviable geographical position half-way down the Italian coast makes it easy to reach from anywhere in the world. The wonderful historical, artistic and archaeological heritage is an intrinsic part of the city. At the same time, we mustn't forget its contemporary creative nature which ensures the city always has some new project on the go, some new goal, and plenty of new ideas. Naples is a city on the sea, a place full of light yet with dark, hidden foundations. It has a great cultural and artistic identity which is stamped on the brow of its many museums, castles, churches, squares, narrow streets and archaeological remains. It is a city in which culture, art and "light" mix with the obscure darkness of a hidden, submerged, underground world.

For all updated information concerning IOLTS 2020, please visit the IOLTS web site: <https://www.testgroup.polito.it/iolts2020>



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