Call for Papers

27th International Symposium on
Design & Diagnostics of Electronic Circuits & Systems

April 3-5, 2024 | Kielce, Poland

https://ddecs2024.tu.kielce.pl

The International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS) provides a forum for exchanging ideas, discussing research results, and presenting practical applications in the areas of design, test, and diagnosis of nanoelectronic digital, analog, and mixed-signal circuits and systems. The 27th edition of the DDECS Symposium will be held in Kielce (Poland), which is located in the Świętokrzyskie Mountains, the oldest mountain range in Europe.
The areas of interest include (but are not limited to) the following topics:

Topic 1. Analog, Mixed Signal, RF and Sensors
- Wireless circuits and systems
- High-frequency circuits
- Sensor technologies
- RF design and test
- Analog neuromorphic circuits
- Analog and mixed-signal design and test

Topic 2. Digital Circuit and System Design
- Hardware architectures for DNNs
- AI & edge computing architectures
- Neural architecture search (NAS)
- Autonomous systems
- VLSI circuits design
- SoC and NoC architectures
- FPGA, DSP, accelerators
- Approximate computing
- High-performance computing
- Low-power design
- Embedded and cyber-physical systems
- Embedded applications
- EDA tools and methodologies
- ML-based EDA tools

Topic 3. Test, Verification and Dependability
- Circuits and systems test
- Reliability and robustness of DNNs
- Fault-tolerance
- Self-health awareness and fault management
- Test infrastructures
- Diagnosis and debug
- Formal and simulation-based verification
- Functional safety
- Reliability
- ML-based test and dependability solutions

Topic 4. Secure HW and Embedded Systems
- Cryptographic implementations
- Attacks against implementations
- Side-channel analysis
- Trusted computing platforms
- IP protection and reverse engineering
- Hardware Trojans

Topic 5. Emerging Technologies, AI application for HW Design & Test, New Computing Paradigms
- Brain-inspired computing
- Polymorphic and ambipolar circuits
- Reversible logic
- Quantum computing
- Quantum dot cellular automata
- Stochastic computing
- In-memory computing
- Memristor technology
- Emerging memory devices
- Silicon photonics
- Microfluidics and biochips
- DNA computing

Publication and submission

DDECS 2024 seeks original, unpublished contributions of the following types:
- Regular Papers (6 pages) presenting novel and complete research work
- Student Papers (4 pages) from students eager to discuss their on-going research
- Student Demos (2 page proposal) from students interested in presenting practical results, targeting one of the conference topics, and competing for an award.
- Embedded Tutorials (1-2 page proposal)

The DDECS review process is single-blind, i.e. the author information is not hidden. Accepted Regular and Student papers (not demos) will be submitted for inclusion in IEEE Xplore. Extended versions of selected DDECS papers will be published in the Journal of Circuits, Systems and Computers (JCSC).

Key dates
Submission deadline: ~~December 13, 2023~~ **January 8, 2024** (abstract), ~~December 20, 2023~~ **January 15, 2024** (full)
Notification of acceptance: February 19, 2024

General Chair
S. Deniziak, *KUT Kielce, PL*

General Vice-Chair
M. Jenihhin, *TalTech, EE*

Program Chairs
A. Steininger, *TU Wien, AT*
M. Schölzel, *UAS Nordhausen, DE*

Publications Chair
Vojtech Mrazek, VUT Brno, CZ

Topic Chairs
K. Schneider-Hornstein, TU Wien AT
P. Fišer, *CTU in Prague, CZ*
E. Sanchez, Politec. di Torino, IT
I. Polian, Univ. Stuttgart, DE
M. Függer, ENS Paris-Saclay, FR

Steering Committee
L. Sekanina, *VUT Brno, CZ* (Chair)
A. Bosio, *École Centrale de Lyon, FR*
G. Cserey, *PPKE Budapest, HU*
P. Fišer, *CTU in Prague, CZ*
T. Garbolino, *Silesian UT, PL*
K. Jelemenská, *STU Bratislava, SK*
M. Jenihhin, *TalTech, EE*
H. Kubatova, CTU in Prague ,CZ
M. Liviu ,TU Cluj-Napoca, RO
H. Manhaeve, *Ridgetop Europe, BE*
W. Pleskacz, *WUT Warsaw, PL*
J. Raik, *TalTech, EE*
M. Schölzel, *UAS Nordhausen, DE*
M. Shafique, NYU, UAE
Z. Stamenkovic, *IHP, DE*
A. Steininger, *TU Wien, AT*
V. Stopjaková, *STU Bratislava, SK*

Further information
General Chair
S. Deniziak, *KUT Kielce, PL*
s.deniziak@tu.kielce.pl

Program Chairs
A. Steininger, *TU Wien, AT*
andreas.steininger@tuwien.ac.at
M. Schölzel, *UAS Nordhausen, DE*
mario.schoelzel@hs-nordhausen.de