Journal of Systems Architecture (JSA)

Special Issue on:

Fault-aware security design of current and post-quantum computing systems designs

Guest editors:

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The call for contributions to this special issue is open to all researchers and practitioners. Additionally, the authors of selected high-quality papers accepted at FDTC 2025 (22nd Workshop on Fault Diagnosis and Tolerance in Cryptography, Kuala Lumpur, Malaysia, 14 Sept. 2025) are invited to extend their work and submit it for consideration of publication in this special issue.

Submission opening: June 1st, 2026 (see the JSA website)

Topics include (but are not limited to):

FAULT INJECTION SETUP AND PRAXIS:
- novel and improved mechanisms for fault injection
- practical issues in fault injection setup and validation of results
- practical limitations of attacks and their implications for security

HIGHLY-INVASIVE ATTACKS ON DEVICE SECURITY:
- setups for invasive attacks and their practical results, such as photonic emission analysis, laser thermal imaging, laser-voltage imaging and focused-ion beam technology
- practical issues, potential and limitations

ATTACKS ON MACHINE LEARNING (ML) ARCHITECTURES:
- validation of earlier results
- resilience of ML models to faults

CASE STUDIES:
- attacks on cryptographic implementations, classical and post-quantum
- attacks on embedded devices, e.g., mobile phones, industrial control devices, hardware wallets, security tokens and smartcards

COUNTERMEASURES (DETECTION, RESISTANCE AND TOLERANCE):
- countermeasures for cryptographic implementations, classical and post-quantum
- countermeasures for firmware of embedded systems
- detection countermeasures, e.g., control flow integrity
- HW/SW co-design countermeasures for CPU architectures

DESIGN TOOLS FOR THE ANALYSIS OF FAULT ATTACKS AND COUNTERMEASURES:
- early estimation of fault attack robustness
- automated insertion of fault countermeasures