



ASHES 2021 — ATTACKS AND SOLUTIONS IN HARDWARE SECURITY Nov. 19 2021, Seoul, South Korea

ASHES 2021 – CALL FOR PAPERS & PARTICIPATION

We are happy to announce the **Fifth Workshop on Attacks and Solutions in Hardware Security (ASHES 2021)**, a post-conference workshop of **ACM CCS 2021**, one of the premier computer security conferences, in Seoul, South Korea.

ASHES deals with any aspects of hardware security, including both theory and practice, and welcomes any contributions in this area. Among others, it particularly highlights novel techniques and methods, as well as emerging application areas. This includes new attack vectors, novel designs and materials, lightweight security primitives, nanotechnology, and PUFs on the methodological side, as well as the internet of things, automotive security, smart homes, pervasive and wearable computing on the applications side.

Specific topics of interest include, but are not limited to:

- Fault injection and countermeasures
- Side channels and countermeasures
- Hardware Trojans and countermeasures
- Tamper sensing and tamper protection
- New physical attack vectors or methods
- Biometrics
- Secure sensors and sensor networks
- Device fingerprinting and hardware forensics
- Emerging computing technologies in security
- Lightweight hardware solutions
- Lightweight implementation of cryptographic and security primitives
- Security of reconfigurable and adaptive hardware
- Post-quantum security
- New designs and materials in hardware security
- Nanophysics and nanotechnology in hardware security
- PUFs and new/emerging variants thereof
- Secure implementation and secure design of cryptographic and security primitives
- Scalable hardware solutions for many players/endpoints
- Item tagging, secure supply chains, and product piracy
- Hardware security and machine learning
- Hardware security in emerging application scenarios
- Information leakage in the cloud
- Electronic voting machines
- Anti-forensic attacks and protection
- Hardware security in mobile platforms
- Architectural factors in hardware security, isolation versus encryption
- Secure hardware for multiparty computation
- Secure hardware in intellectual property protection and content protection
- Integration of hardware roots of trust and PUF
- Quality metrics for secure hardware
- Conformance and evaluation of secure hardware
- Formal treatments, formal proofs, or standardization/categorization of hardware-related techniques
- Hardware security in the internet of things

To account for the special nature of hardware security as a rapidly developing discipline, **ASHES hosts four different paper categories:** Classical **full papers**, **short papers**, **wild and crazy (WaC) papers** (whose purpose is rapid dissemination of promising, potentially game-changing novel ideas), and **systematization of knowledge (SoK) papers** (which overview, structure, and categorize a certain subarea). **Furthermore, all accepted ASHES papers will be invited for extended versions at an annually appearing ASHES issue at the Journal of Cryptographic Engineering (JCE).** Please visit the workshop's website for further details: <http://ashesworkshop.org>

Besides its technical sessions, ASHES will host **invited keynotes** by **Farinaz Koushanfar (UC San Diego)** and **Ruby Lee (Princeton)**.

Committees

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Important Dates

Paper submission deadline:
June 25, 2021, 23:59:59 EDT

Acceptance notification:
August 13, 2021

Camera-ready deadline:
September 6, 2021

Workshop Date:
November 15, 2021

www.ashesworkshop.org