

Asian Hardware Oriented Security and Trust Symposium

December 14-16, 2022, Singapore (Hybrid)



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Call for Papers

Historically, cybersecurity community believed that the underlying hardware is secure and trustworthy. However, the globalization of the IC supply chain invalidates the illusion of an isolated and trusted supply chain; the wide connection of computing devices also exposes new and powerful attack surfaces. Heavy reliance on third-party resources/services renders hardware security and trust a concern. With the advances in artificial intelligence and internet of things, the threat landscape is evolving with relentless new problems and challenges awaiting the hardware security community to address. Multi-disciplinary research and multi-pronged approaches are sought for the development of fully operational software and hardware platforms with enhanced security targeting different phases in the entire IC life cycle.

Asian Hardware Oriented Security and Trust Symposium (AsianHOST) aims to facilitate the rapid growth of hardware security research and development in Asia and South Pacific areas. AsianHOST highlights new results in the area of hardware and system security. Relevant research topics include techniques, tools, design/test methods, architectures, circuits, and applications of secure hardware. **AsianHOST 2022** invites original contributions related to, but not limited by, the following topics:

- **Hardware-intrinsic security primitives (e.g., PUF and TRNG)**
- **Architectural and microarchitectural attacks and defenses**
- **Secure system-on-chip (SoC) architecture**
- **Trusted platform modules and hardware virtualization**
- **Side-channel attacks and countermeasures**
- **Hardware Trojan attacks and detection techniques**
- **Security analysis and protection of Internet of Things (IoT)**
- **Hardware IP core protection and trust for consumer electronics systems and IoT**
- **Security and trust of machine learning and artificial intelligence**
- **Automobile, self-drive and autonomous vehicle security**
- **5G and physical layer security**
- **Hardware-assisted cross-layer security**
- **Cyber-physical system (CPS) security and resilience**
- **Metrics, policies, and standards related to hardware security**
- **Security verification at IP, IC, and system levels**
- **Reverse engineering and hardware obfuscation**
- **Supply chain risks mitigation including counterfeit detection & avoidance**
- **Trusted manufacturing including split manufacturing, 2.5D, and 3D ICs**
- **Emerging nanoscale technologies in hardware security applications**

To contribute to the symposium, submit a PDF version of your paper on the symposium submission website (<https://easychair.org/conferences/?conf=asianhost2022>). The page limit is 6 pages, double column, IEEE format, with a minimum font size of 9 pts (preferably 10 pts). Submissions must be anonymous and must not identify the authors, directly or indirectly, anywhere in the manuscript. In addition to the full papers, AsianHOST 2022 will accept selected submissions as four-page short papers to be presented in a poster session. Accepted papers will be submitted for inclusion into IEEE Xplore subject to meeting IEEE Xplore's scope and quality requirements. Best paper award will be presented to the authors of a paper whose first author is a full-time student at the submission time. Selected accepted papers will be invited for extended journal paper submission to the IEEE Transactions on Circuits and Systems I: Regular Papers (TCAS-I) Special Issue for AsianHOST 2022 under the theme "Emerging Hardware Security and Trust Technologies".

AsianHOST 2022 will also feature two keynotes by Farinaz Koushanfar, UC San Diego and Georg Sigl, Technical University of Munich.

Important Dates:

Submission of Paper: ~~July 25, 2022, 23:59:59 CST~~ **August 15, 2022, 23:59:59 CST**
Notification of Acceptance: ~~September 5, 2022~~ **September 25, 2022**
Camera-ready Version: **November 21, 2022**

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