

ZHENG YUE

05-Oct.-1992, Chinese

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EDUCATION

PhD , School of Electrical and Electronic Engineering Nanyang Technological University (NTU), Singapore Thesis: PUF-based Solutions to Unification of User, Device, Data Authentication Research area: Hardware security, Physical Unclonable Functions CGPA: 4.63/5	Aug. 2015 - Present
Bachelor , School of Communication and Information Engineering Shanghai University (SHU), Shanghai, China Major: Communication Engineering CGPA: 3.88/4 (Ranking: 1/368)	Sept. 2011 - Jul. 2015

EXPERIENCE

Exchange student , Graduate School of Informatics Kyoto University, Japan PUF design, simulation & evaluation in Cadence and Matlab Image tampering detection/location implementation in Matlab User-device authentication scheme implementation in Matlab Active IC metering implementation in FPGA An event-driven PUF layout practice Teaching assistant Final Year Project mentor	Mar. 2019 - Jun. 2019 2015 - Present Jul. 2018 - Jan. 2019 Mar. 2018 - Jun. 2019 Aug. 2017 - Oct. 2017 Mar. 2017 - May. 2017 Aug. 2017 - Dec. 2018 Aug. 2016 - May. 2019
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AWARDS

(Singapore) Three Minute Thesis competition - People's Choice Award Title: Give your device a fingerprint – the magic of physical unclonable function	Aug. 2017
(NTU) Three Minute Thesis competition - People's Choice Award Title: Give your device a fingerprint.	Jul. 2017
NTU Research Scholarship (RSS)	Aug. 2015 – Jul. 2019
Excellent Graduate Award	Jul. 2015
National Scholarship (Top 1%)	2014
Principal Scholarship (Top 3%)	2014
Principal Scholarship (Top 3%)	2013
Principal Scholarship (Top 3%)	2012

SKILLS & LANGUAGE

Skills: Matlab, Cadence (Spectre, OceanScript), Linux, Latex, FPGA, Verilog
Languages: Chinese (Native), English (Fluent in both writing and oral)

HOBBIES

Reading, Bowling, Swimming, Takewon-do (Black-tip)

PUBLICATIONS

Journals:

- [1] **Y. Zheng**, Y. Cao and C.H. Chang, "A PUF-based data-device hash for tampered image detection and source camera identification", *IEEE Trans. Inf. Forensics. Security*, Apr. 2019. (Under major revision).
- [2] **Y. Zheng**, Y. Cao and C.H. Chang, "UDhashing: Physical unclonable function based user-device hash for endpoint authentication", *IEEE Trans. Industrial Electronics*, Jan 2019.
- [3] A. Cui, C.H. Chang, W. Zhou, **Y. Zheng**, "A New PUF Based Lock and Key Solution for Secure In-field Testing of Cryptographic Chips," *IEEE Trans. Emerging Topics in Computing*, Mar. 2019.

Magazine:

- [4] C.H. Chang, **Y. Zheng**, and L. Zhang, "A retrospective and a look forward: Fifteen years of physical unclonable function advancement," *IEEE Circuits and Syst. Magazine*, vol. 17, DOI 10.1109/MCAS.2017.2713305, no. 3, pp. 32–62, 2017.

Conferences:

- [5] **Y. Zheng**, Y. Cao, and C.H. Chang. "A new event-driven dynamic vision sensor based physical unclonable function for camera authentication in reactive monitoring system," in *Proc. Hardware-Oriented Security and Trust*, DOI 10.1109/AsianHOST.2016.7835551, Yilan, Taiwan, Dec. 2016.
- [6] **Y. Zheng**, Y. Cao, and C.H. Chang, "Facial bihashing based User-Device physical unclonable function for bring your own device system (Invited Paper)," in *Proc. IEEE Int. Conf. on Consumer Electronics (ICCE 2018)*, DOI 10.1109/ICCE.2018.8326074, Las Vegas, US, Jan. 2018.
- [7] **Y. Zheng**, S. S. Dhabu, and C.-H. Chang, "Securing IoT monitoring device using PUF and physical layer authentication," in *Proc. 2018 IEEE Int. Symp. Circuits and Syst. (ISCAS)*, DOI 10.1109/ISCAS.2018.8351844, Florence, May. 2018.
- [8] S. S. Dhabu, **Y. Zheng**, and C.-H. Chang, "Active IC Metering of Digital Signal Processing Subsystem with Two-Tier Activation for Secure Split Test," in *Proc. 2018 IEEE Int. Symp. Circuits and Syst. (ISCAS)*, DOI 10.1109/ISCAS.2018.8351390, Florence, May. 2018.
- [9] C. Q. Liu, **Y. Zheng**, C.H. Chang, "A new write-contention based dual-port SRAM PUF with multiple response bits per cell," in *Proc. IEEE Int. Symp. Circuits and Systems. (ISCAS 2017)*, DOI 10.1109/ISCAS.2017.8050700, Baltimore, USA, May. 2017.
- [10] Y. Cao, C.H. Chang, **Y. Zheng**, X. Zhao. "An energy-efficient true random number generator based on current starved ring oscillators." *Proc. Hardware-Oriented Security and Trust (AsianHOST)*, DOI 10.1109/AsianHOST.2017.8353992, Beijing, China, Oct. 2016
- [11] B. Wang, X. Zhao, **Y. Zheng**, C.H. Chang, "An in-pixel gain amplifier based event-driven physical unclonable function for CMOS dynamic vision sensors." in *Proc. 2018 IEEE Int. Symp. Circuits and Syst. (ISCAS)*, Hokkaido, Japan, May. 2018.