ZHENG YUE

05-Oct.-1992, Chinese
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EDUCATION

Nanyang Technological University (NTU), Singapore **2015/08 – 2019/08**
Ph.D., School of Electrical and Electronic Engineering (EEE)
Thesis: PUF-based Solutions to Unification of User, Device, Data Authentication
Research: Hardware security, Physical Unclonable Functions
Supervisor: Chang Chip Hong (IEEE Fellow)
CGPA: 4.63/5

Shanghai University (SHU), Shanghai, China **2011/09 – 2015/07**
Bachelor, School of Communication and Information Engineering
Major: Communication Engineering
CGPA: 3.88/4 (Ranking: 1/368)

EXPERIENCE

Nanyang Technological University, Singapore **2019/08 – Present**
Project Officer,
Lab: VIRTUS, IC Design Centre of Excellence
Project: PUF-based Lightweight Mutual Authentication
Supervisor: Prof. Chang Chip Hong

Kyoto University, Japan **2019/03 – 2019/06**
Short-term International Student,
Lab: Processor Architecture and Systems Synthesis
Project: Dynamic Vision Sensor based Event-driven PUF
Supervisor: Prof. Takashi Sato

MAJOR AWARDS

(Singapore) People's Choice Award, Three Minute Thesis (3MT) Competition **2017/08**
Title: Give your device a fingerprint – the magic of physical unclonable function
(NTU) People's Choice Award, Three Minute Thesis (3MT) Competition **2017/07**
Title: Give your device a fingerprint
NTU Research Scholarship (RSS) **2015/08 – 2019/07**
Excellent Graduate Award **2015/07**
National Scholarship **2013 – 2014**
Top Class Scholarship **2013 – 2014**
Top Class Scholarship **2012 – 2013**
Top Class Scholarship **2011 – 2012**
Excellent Student Award **2013 – 2014**
Excellent Student Award **2012 – 2013**
Excellent Student Award **2011 – 2012**

SKILLS & LANGUAGE

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

PUBLICATIONS

Journals:

[1] **Y. Zheng**, X. Zhao, S. Takashi, Y. Cao, and C. H. Chang, “Event-driven dynamic vision sensor based physical unclonable function for camera authentication in reactive monitoring system,” *IEEE Trans. Inf. Forensics, Security (TIFS)*. Sept. 2019 (**Submitted**).

[2] Y. Cao, W. Zheng, X. Zhao, **Y. Zheng**, and C. H. Chang, “A 5 pJ/b 366 μm2 true random number generator based on differential current starved inverter ring oscillators,” IEEE *J. Solid-State Circuits (JSCC)* (**Under major revision**).

[3] **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 (TIFS)*. vol 15, pp. 620-634, 2020.

[4] **Y. Zheng**, Y. Cao and C.H. Chang, "UDhashing: Physical unclonable function based user-device hash for endpoint authentication," *IEEE Trans. Industrial Electronics (TIE)*, vol. 66, no. 12, pp. 9559-9570, Dec. 2019.

[5] 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 (TETC)*, Mar. 2019 (Currently Early Access).

Magazine:

[6] 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 (CAS)*, vol. 17, no. 3, pp. 32–62, thirdquarter 2017.

Conferences:

[7] 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. 2019 IEEE Int. Symp. Circuits and Syst. (ISCAS)*, Hokkaiddo, Japan, May. 2019.

[8] **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)*, Florence, May. 2018.

[9] 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)*, Florence, May. 2018.

[10] **Y. Zheng**, Y. Cao, and C.H. Chang, “Facial biohashing based User-Device physical unclonable function for bring your own device system (Invited Paper),” in *Proc. IEEE Int. Conf. Consumer Electronics (ICCE 2018),* Las Vegas, US, Jan. 2018.

[11] Y. Cao, C.H Chang, **Y. Zheng**, X Zhao. "An energy-efficient true random number generator based on current starved ring oscillators," in *Proc. IEEE Asian Hardware-Oriented Security and Trust (AsianHOST)*, Beijing, China, Oct. 2017.

[12] 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)*, Baltimore, USA, May. 2017.

[13] **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. IEEE Asian Hardware-Oriented Security and Trust (AsianHOST)*, Yilan, Taiwan, Dec. 2016.