Kaixin Yang

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Education

Viterbi School of Electrical and Computer Engineering, University of Southern California
Los Angeles, CA 90007, U.S. Sept.2019 – Present

Ph.D. in Computer Engineering, GPA: 3.70

School of Electronics Engineering and Computer Science, Peking University
Beijing, China Sept.2015 – Jul.2019

B.S. in Electronic and Information Science and Technology, GPA: 3.65

Anqing No.1 Middle School, Anqing, Anhui, China Sept.2012 – Jul.2015

High School

Anqing Foreign Language School, Anqing, Anhui, China Sept.2009 – Jul.2012

Middle School

Research Experience

Research on Hardware Security and Sequential Logic Encryption Aug.2019 – Present

Advisor: Prof. Nuzzo *Affiliation: Cyber-Physical System Design Group*

- Systematically summarized the assumptions and metrics of current sequential logic attack methods.
- Participated in the DARPA's project of evaluating logic encryption methods, and analyzed one successful sequential logic encryption scheme called HARPOON.

Research on Satellite Communication System and Network Oct.2017 – Jun.2019

Advisor: Prof. Na Yi *Affiliation: Institute of Advanced Communications*

- Did a literature review for distributed relational databases, learned the principles and advantages of developing them systematically, and examined the feasibility of highly-reliable distributed relational databases by using Tencent's PhxSQL as an experimental example.
- Helped design a distributed storage scheme for the satellite communication system and simulate satellite communication channel.
- Exploring the way to implement applications on the GPU platform with OpenCL.

Publication

Y. Hu, K. Yang, S. Nazarian, P. Nuzzo. SANSCrypt: A Sporadic-Authentication-Based Sequential Logic Encryption Scheme. *(State: Submitted, Conference: 2020 VLSI-SoC)*

Contest

Intel Cup Undergraduate Electronic Design Contest Apr.2017 – Jul.2018

Third Prize

- Designed *Lost and Found Cabinet with Personal Information Protection* based on Intel embedded platform called *UP*^{2} *Board*, which aimed at facilitating retrieving the lost property.
- Established the database of the system and implemented the Web server based on Flask framework.

Honors and Awards

2019 Annenberg Fellowship

2018 Excellent Presentation in The Sixth Peking University Young Scientists Symposium on Informatics

2018 Third Prize in 2018 Intel Cup Undergraduate Electronic Design Contest

2017 Award for Academic Excellence of Peking University in academic year

2017 Level 3 in National Computer Rank Examination

2016 First Prize in College Physics Contest awarded by Beijing Physics Society in year 2016

Skills

Programming Languages: C++, C, Python, MASM, C51, OpenCL C, SQL, Verilog

Softwares & platforms: MATLAB, Cadence, LaTeX, TensorFlow, Linux

Languages: Chinese(Native), English(Proficient)

Standard English Test: TOEFL 102 (R27, L27, S20, W28); GRE 323 (V153, Q170, W3.5)

Miscellaneous

Hobbies: Photograph, Photoshop, piano, soccer, basketball

Blog: https://sceneryinmirror.github.io