TZU-WEI CHAO

(+886)975765981 ◇ CheshireCatNick@gmail.com
https://cheshirecatnick.github.io

EXPERIENCE

Network Security Lab, National Taiwan University **2015.9 - 2019.8**
Lab Member

- Research in software-defined network, web API crawler, blockchain security, and consensus algorithms
- Publish and present a workshop paper in NetSoft conference 2016
- Master thesis: A Security Simulator and Evaluation for Voting-Based Consensus Algorithms

COBINHOOD & DEXON **2018.1 - 2019.5**
Blockchain Researcher

- Research in blockchain and design DEXON consensus algorithm

> DEXON is the fastest (officially online) blockchain system (1s finality) and the first blockchain that provides secure on-chain randomness.

- Develop a consensus simulator for testing/verifying the security of consensus algorithms

National Taiwan University **2018.2 - 2018.6**
Teaching Assistant

- Teaching assistant for **Cryptography and Network Security**

> Outstanding Teaching Assistant Award from the Department of CSIE, NTU

Industrial Technology Research Institute **2016.7 - 2018.6**
Part-Time Software Engineer

- Develop innovative services, including a parking/delivering app and a trading bot platform
- Develop websites, back-end server and Android apps using Java, Node.js and MongoDB

Department of CSIE, National Taiwan University **2015.2 - 2016.1/2017.9 - 2018.1**
Network/System Administrator

- Team leader of the firewall team, responsible for configuring and maintaining the firewall
- Team member of the personal computer team, responsible for maintaining and upgrading systems and software of classroom computers

NTU RoboPAL, National Taiwan University **2015.9 - 2017.9**
Team Member

- Attend RoboCup 2016 and 2017
- Study robot balancing, kicking, sound localization, and strategy adjustment

> Rank top 4 in outdoor competition and top 12 in indoor competition in RoboCup 2016

National Taiwan University **2016.2 - 2016.6**
Teaching Assistant

- Teaching assistant for **Network Administration and System Administration Training**
- Give two lectures about firewall (pfSense) and SDN (software-defined network)

TECHNICAL STRENGTHS

Programming Languages	C/C++, Javascript, Java, Python, C#, HTML/CSS
Development Tools	Git, Vim, Linux shell
Professional Knowledge	Blockchain, Network Security, Cryptography, SDN

EDUCATION

National Taiwan University, Taiwan **2017.9 - 2019.8**
M.S. in Computer Science and Information Technology

National Taiwan University, Taiwan **2013.9 - 2017.6**
B.S. in Computer Science and Information Technology

PROJECTS

Consensus Simulator
Consensus algorithms play important roles in distributed systems such as blockchain or database. This project aims to design a framework to simulate consensus algorithms under malicious attacks. It is designed to be flexible and can simulate consensus algorithms with high precision and efficiency.

DEXON RNG
DEXON blockchain has on-chain randomness generated by threshold signatures, which is unpredictable, secure and verifiable. This web page uses the randomness to create a random number generator. It is fairer than other centralized random number generators since the randomness can be verified and cannot be easily manipulated by anyone.

CobinBot
This project aims to create a flexible infrastructure for developing bots for COBINHOOD exchange. Common modules and APIs are provided to conveniently create bots with different functionalities, such as trading, backtesting, price alerting or attending campaigns.

ACADEMIC PAPERS

- **Tzu-Wei Chao**, Hsu-Chun Hsiao "A Security Simulator and Evaluation for Voting-Based Consensus Algorithms"
- Tai-Yuan Chen, Wei-Ning Huang, Po-Chun Kuo, Hao Chung, **Tzu-Wei Chao** "DEXON: A Highly Scalable, Decentralized DAG-Based Consensus Algorithm"
- **Tzu-Wei Chao**, Hao Chung, Po-Chun Kuo "Fair Byzantine Agreements for Blockchains"
- **Tzu-Wei Chao**, Yu-Ming Ke, Bo-Han Chen, Jhu-Lin Chen, Chen Jung Hsieh, Shao-Chuan Lee, Hsu-Chun Hsiao "Securing Data Planes in Software-Defined Networks," IEEE NetSoft 2016: 465-470