Yu-Chih Tung

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OBJECTIVE   Full-Time Software Engineer or Research Scientist

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SELECTED PROJECTS

FORCEPHONE: SOFTWARE-BASED TOUCH FORCE SENSING WITH ONLY BUILD-IN SENSORS

Enable touch force sensing at smartphones without installing any new hardware

Published in ACM Mobisys 2016, also reported by TechCrunch engadget c|net

(This project is also going to be licensed by a major phone manufacturer)

ECHOTAG: INTRASTRUCTURE-FREE LOCATION TAGGING BY SMARTPHONES

Build a geo-fencing app to remember locations by hearing inaudible sound reflections

Published in ACM MobiCom 2015

CSISEC: SECURE CSI ESTIMATION PROCESS FOR MU-MIMO

Identify and implement a new "forged-CSI" attack against wireless physical security

Published in ACM CCS 2014

TURBORATE: RATE ADAPTATION FOR MU-MIMO SYSTEMS

Design and implement a novel rate adaptation achieving 3x throughput of MU-MIMO

Published in ACM MobiCom 2012 (Nominated for best papers)

INTRESTS &SKILLS

Mobile Computing & Cross-layer Optimization / Wireless Networks & Security

C/Java/C++/Obj-C/Python/JNI/Matlab/libSVM/Linux/Android/iOS

WORKING EXPERIENCE

SOFTWARE ENGINEER INTERN, FACEBOOK, 2017

Integrate TLS 1.3 into subsystems [C/Obj-C/Linux]

Solve several cross-layer compatibility issues, such as TCP Fast Open and TCP Non-Blocking, reducing 2x more latency from the original porting

RESEARCH INTERN, HP LABS, 2015

Test wireless non-cryptic security [C/C++/Linux]

Implement a new wireless signal-based authentication on HP's routers and discover the potential issues of such a non-cryptic security system

RESEARCH INTERN, CSAIL, MIT, 2012

Build MU-MIMO wireless prototypes [C/Python]

Design the "TurboRate" project and build a prototype with GnuRadio in USRP embedded testbeds, showing a 3x throughput improvement

RESEARCH ASSISTANT, ACADEMIA SINICA, 2011

Build my thesis project on P2P storage systems [C/Python/Matlab]

Propose a new system metric which considers both the file access time and availability and then implement a new file replica algorithm saving 30% joint access time on NS2 simulation

APP DEVELOPER, KINGFONG, TAIWAN, 2010

Solely design an iOS/Andorid app [Java/Obj-C/PHP]

KING FONG 金豐集團   Help employee know their rights
4.6-star rated / 10k+ downloaded
https://goo.gl/Y8KVTd

EDUCATION **UNIVERSITY OF MICHIGAN**

PhD in Computer Science & Engineering, advised by Prof. Kang G. Shin, GPA 4.00

NATIONAL TAIWAN UNIVERSITY

M.S. in Department of Computer Science & Information Theory, GPA 3.90

NATIONAL CHIAO TUNG UNIVERSITY

B.S. in Department of Computer Science, GPA 3.95 **(ranked 3/200+, and graduated in advance)**

HONORS & **UMICH CSE HONOR COMPETITIONS (WINNER OF SOFTWARE GROUP)**
AWARDS
University of Michigan, 2016

RACKHAM INTERNATIONAL FELLOWSHIP

University of Michigan, 2014

STUDENT TRAVEL GRANT

ACM MobiCom, Mobisys, MobiHoc, and University of Michigan

BEST PAPER NOMINATION

ACM MobiCom, 2012

PRESIDENTIAL AWARD (RANKED TOP 2% OVER SIX SEMESTERS)

National Chiao Tung University, 2010

PROFESSIONAL **AUTHOR OF OFFICAL PORTING OF THE POPULAR LIBSVM ON ANDROID**
SERVICE
https://github.com/yctung/AndroidLibSvm

CO-FOUNDER OF AN ONLINE SERVICE (AUTO-PLAYING MOBILE GAMES VIA IMAGE PROCESSING)

http://ayappteam.com/sleepngame/

CLUB LEADER

StarVoice (rock music club composed by 100+ students), National Chiao Tung Univeristy

TECHNICAL PROGRAM COMMITTEE (TPC)

ACM S3 at MobiCom 2016, 2017

EXTERNAL REVIEWER

IEEE/ACM Transactions on Mobile Computing/Networking/Information Forensics Security

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ACADEMIC **USER-INTERACTIVE CHARGING OF MOBILE DEVICES**
PUBLICATIONS
Liang He, Yu-Chih Tung and Kang G. Shin, ACM Mobisys 2017 (Best poster award)

EXPANSION OF HUMAN–PHONE INTERFACE BY SENSING STRUCTURE-BORNE SOUND PROPAGATION

Yu-Chih Tung and K.G. Shin, ACM Mobisys 2016

ANALOG MAN-IN-THE-MIDDLE ATTACK AGAINST LINK-BASED PACKET SOURCE IDENTIFICATION

Yu-Chih Tung, K.G. Shin, and K.H. Kim, ACM MobiHoc 2016

ECHOTAG: ACCURATE INFRASTRUCTURE-FREE INDOOR LOCATION SENSING WITH SMARTPHONES

Yu-Chih Tung and K.G. Shin, ACM MobiCom 2015

VULNERABILITY AND PROTECTION OF CHANNEL STATE INFORMATION IN MULTIUSER MIMO NETWORKS

Yu-Chih Tung, S. Han, D. Chen, and K.G. Shin, ACM CCS, 2014

RATE ADAPTATION FOR 802.11 MULTIUSER MIMO NETWORKS

W.L. Shen, Yu-Chih Tung, K.C. Lee, K.C.J. Lin, S. Gollakota, D. Katabi and M.S. Chen, ACM MobiCom, 2012 (Best paper nomination)

RATE ADAPTATION AND USER MATCHING FOR MULTIUSER MIMO NETWORKS

Yu-Chih Tung, W.L. Shen, K.C.J. Lin, ACM S3 Workshops, 2012

AVAILABILITY IS NOT ENOUGH: MINIMIZING JOINT RESPONSE TIME IN P2P STORAGE SYSTEMS

Yu-Chih Tung, C.F. Chou, K.C.J. Lin, Mater Thesis, also published in a IEEE System Journal

BANDWIDTH-AWARE REPLICA PLACEMENT FOR PEER-TO-PEER STORAGE SYSTEMS

Yu-Chih Tung, K.C.J. Lin, C.F. Chou, IEEE GLOBECOM 2011