

**OBJECTIVE** System/product generalist positions


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**SELECTED PROJECTS** **LIBAS: CROSS-PLATFORM FRAMEWORK FOR MOBILE ACOUSTIC SENSING APPLICATIONS**

Build a cross-platform/open-source schema for the fast development of sound sensing  
Published in ACM Mobisys 2018

**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**   
(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

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

**&SKILLS** **Familiar:** C/C++/Obj-C/Java/Python/Matlab **Experienced:** Linux/Android/iOS/PHP/SQL

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**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, then implement a new file replica algorithm saving 30% joint access time on NS2 simulation

**APP DEVELOPER, KINGFONG, TAIWAN, 2010**

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



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## 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)**

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## HONORS & AWARDS **UMICH CSE HONOR COMPETITIONS (WINNER OF SOFTWARE GROUP)**

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

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## PROFESSIONAL SERVICE **AUTHOR OF OFFICAL PORTING OF THE POPULAR LIBSVM ON ANDROID**

<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 PUBLICATIONS **CROSS-PLATFORM SUPPORT FOR RAPID DEVELOPMENT OF MOBILE ACOUSTIC SENSING APPLICATIONS**

Yu-Chih Tung, Duc Bui and Kang G. Shin, ACM Mobisys 2018

### **USER-INTERACTIVE CHARGING OF MOBILE DEVICES**

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