

## Ron Yih-Lun Huang

---

### CONTACT INFORMATION

E-mail: [ron@hng.tw](mailto:ron@hng.tw)  
Mobile: +886-920033167  
Website: <http://ronhuang.org/>

### EDUCATION

**National University of Singapore**, Singapore

*Ph.D., Electrical and Computer Engineering* July 2011 (attended)

- Adviser: Assist. Prof. Tim Marsh
- Area of Study: Human-Computer Interaction

**University of Southern California**, Los Angeles, California USA

*M.S., Computer Science* December 2004

- Adviser: Prof. Cyrus Shahabi
- Area of Study: Human-Computer Interaction

**National Taiwan University**, Taipei, Taiwan

*B.S., Electrical Engineering* June 2002

- Computer Science specialization

### RESEARCH INTERESTS

Human-computer interaction, end-user programming, software engineering, serious games

### RESEARCH EXPERIENCE

Graduate Class Projects

- Investigation of patterns of user experience for software programmers. The patterns are a collection of the best practices within the user experience design domain. But instead of targeting their normal audiences, the interaction designers, these patterns are transcribed in language familiar to software programmers.
- Designed a new human interface device, *Look Mom! No Touchpad*, which is capable of performing tasks similar to multi-touch touchpad. However, while normal touchpad can only be operated at fixed location, this device works on any surface. It is as if there is a virtual touchpad following underneath the user's hand.
- Explored the correlation between user experience and data (mouse movements, keystrokes, position of the user's character, etc.) collected within games.
- Improved recognition accuracy of an user-independent hand gesture-based human interface device.

Undergraduate Work

- Designed system to broadcast multimedia contents onto Bluetooth-enabled devices.
- Utilized XML as the storage backend for websites.

External Reviewer

- Reviewer for IEEE CSIDC 2002 submission proposal.

### ACADEMIC EXPERIENCE

**Teaching Assistant**

*TA for NM3226: Interactive Entertainment Design Methods* Fall 2010

- Assisted students on developing machinima.

*Lab instructor for 902 39110: Computer System Laboratory* Spring 2003

- Responsible for lecture and supervision of laboratory where senior undergraduate students design and implement embedded system based on Intel 8051 microcontroller.

*Lab instructor for 902 39120: Computer Network Laboratory* Spring 2003

- Designed the course syllabus and experiments, as this was a brand new laboratory.
- Responsible for lecture and supervision of laboratory where senior undergraduate students learn about wireless network, mobile IP and network simulation tool.

*Lab instructor for 902 37300: Digital Circuit Laboratory* Fall 2002

- Responsible for lecture and supervision of laboratory where senior undergraduate students design and implement digital circuitry using FPGA.

*Grader for 902 21400: Digital Electronics* Spring 2003

*Grader for 902 36500: Digital System Design* Fall 2002

## AWARDS

National University of Singapore

- NUS Research Scholarship, 2009–2013

Google Desktop Gadget Contest

- Honorable Mention, 2006

IEEE Computer Society International Design Competition (CSIDC) 2003

- 1<sup>st</sup> Place, 2003

IEEE Computer Society International Design Competition (CSIDC) 2001

- 5<sup>th</sup> Place, 2001

## PUBLICATIONS

Yih-Lun Huang and Tim Marsh. Software Patterns of User Experience: Giving Software Developers More Say in the Design Process. DPPI 11, the 5<sup>th</sup> conference on Designing Pleasurable Products and Interfaces, Milan, Italy, Jun 2011.

Yih-Lun Huang, Tim Marsh and Adrian David Cheok. Investigation of Software Patterns of User Experience. ACE2010, 7<sup>th</sup> International Conference on Advances in Computer Entertainment Technology, Taipei, Taiwan, Nov 2010.

Tim Marsh, Wee Ling Wong, Eduardo Carriazo, Luciano Nocera, Kiyoun Yang, Aditiya Varma, Hyunjin Yoon, Yih-Lun Huang, Chris Kyriakakis and Cyrus Shahabi. User Experiences and Lessons Learned from Developing and Implementing an Immersive Game for the Science Classroom. The 11<sup>th</sup> International Conference on Human-Computer Interaction, Las Vegas, Nevada, USA, July 2005

## PROFESSIONAL EXPERIENCE

**Generalplus Technology Inc.**, Taipei, Taiwan

*Staff Engineer*

October 2011 to Present

- Ported Android operating system (hardware abstraction layer and above) onto custom designed ARM system-on-a-chip solution.
- Implemented new features and enhanced build system to support sophisticated customization requirements from customers.
- Refactored existing porting implementation to comply with Android standards and idioms. Greatly reduced porting time frame between major Android releases.
- Maintained and synchronized internal repositories with Android upstream.

**Sunplus mMedia Inc.**, Taipei, Taiwan

*Advanced Software Engineer*

December 2007 to June 2009

- Designed and built a complete software development kit focused on digital photo frame.

**Compal Communications Inc.**, Taipei, Taiwan

*Software Engineer*

February 2005 to December 2007

- Ported various in-house and commercial (BREW) GUI frameworks to GSM and CDMA2000 platforms.
- Developed a C-based object-oriented GUI framework and the associated code generator, unit testing and automated integration testing system for feature phone.
- Optimized display performance for GUI framework.

**Computer Center, National Taiwan University**, Taipei, Taiwan

*Student Worker*

August 2000 to June 2002

- Constructed an online solution for the university health center to collect and analyze the health records.
- Maintained university homepage.

TECHNICAL SKILLS Programming: Lua, C, Java, Python, SQL, JavaScript, C++, PHP, C#, BASH shell scripting, GNU make, DVCS (git, mercurial), VCS (SVN, PVCS VM)

Information Technology: Networking (UDP, TCP, ARP, DNS), Service (nginx, Apache, SSH, SQL)

Applications: Emacs, T<sub>E</sub>X (L<sup>A</sup>T<sub>E</sub>X, B<sub>I</sub>B<sub>T</sub>E<sub>X</sub>), Word, Excel, GIMP

Operating Systems: Linux, Mac OS X, Windows Phone, Android, iOS, Windows

Embedded Systems: Software and hardware development with several MCU and DSP platforms (Motorola MCUs, Texas Instruments MCUs, Sunplus mMedia MCUs)

MEMBERSHIPS [Association for Computing Machinery \(ACM\)](#)

- *Member*, since 2003

[Institute of Information & Computing Machinery \(IICM\)](#)

- *Member*, since 2002

EXTRACURRICULAR **German Culture Club**, National Taiwan University

*Archives manager*

September 1999 to January 2000

- Responsible for storing and maintaining the documentations generated during the activities.

MISCELLANEOUS Citizenship: Taiwan

Language: Chinese (Mandarin), English, Taiwanese

REFERENCES Available upon request

Last updated: September 27, 2012