# Education

## University of New South Wales (UNSW) Jul 2012 – Present

**M.S in Computer Science and Engineering (Research) GPA: Distinction**

**Thesis Topic:** Security Evaluation of Message Authentication Systems

* Systematically analyzed the security of Cost-Effective Tag Design (CETD)([Hong, Guo et al. 2012](#_ENREF_1)) and fixed the security weaknesses with low additional costs.

**Auditing Courses:** COMP9101Design and Analysis of Algorithms, COMP9201 Operating Systems, COMP9243 Distributed Systems, COMP9171 Object-Oriented Programming, COMP9041 Software Construction

## Beihang University (BUAA), Top University in Project 985, China Sep 2008 – Jun 2012

**B.E in Software Engineering GPA: Distinction**

* **Award:** Beihang University Undergraduate Scholarship,Second Prize

Each School of Beihang University nominates 5%-7% candidates annually based on academic achievement, commercial application of research, and leadership potential

# Experience

## Graduate Teaching Assistant, UNSW Aug 2013 – Dec 2013

**Course:** COMP9032 Microprocessors and Interfacing

* Supervised 2 groups of 30 students in AVR assembly language programming. In total, 20 out of 30 got full marks on weekly labs and 5 out of 30 got full marks on the final design project

## Summer Intern, National ICT Australia (NICTA) Nov 2012 – Feb 2013

## The Software Systems Research Group

I was in charge of developing the fundamental desktop environment on seL4 microkernel operating system.

I designed and implemented a desktop environment based on CAmkES model ([Kuz, Liu et al. 2007](#_ENREF_2))(a component-based software architecture on seL4).

The desktop environment provides functions to choose a slides stored on virtual disk and display it to the screen.

This desktop environment has the following properties:

* Component-Based: Units of desktop environment are encapsulated to isolated components. Crash of a single component will not affect any other component
* Generic Component: Each component can be adopted by different apps in the desktop environment concurrently.
* Scalability: Each app in the desktop environment is constructed by connecting a app-client component with other general purpose components with interfaces.

# Extra-Curricular Activity

## Vice-Present, Beihang University Volunteer Association Oct 2009 – Oct 2010

## Venue Administration Volunteer of 11th China National Competition of College Students' Extracurricular Academic and Scientific Achievement

* **Honors:** Annual Outstanding Volunteer of Beihang University 2009, 2010

Beihang University nominates 20 candidates each year based on volunteer service time and service feedback

# Projects

**Security Evaluation System, UNSW 2013**

* Developed general purpose software in C to evaluate the security of Message Authentication (MA) systems
* Friendly APIs to facilitate connecting various source codes of MA systems and evaluation mechanisms

**Audio Processing Command-Line Tool, UNSW 2013**

* Extended the course project “audio reversing command-line app” in Java to a multiple services tool with friendly APIs for scalability

**Commercial Guiding System for the Blind,** VIA-Beihang Joint Lab **2011**

* Constructed a Human Sensing Sub-System for the project on 8051 MCU using infrared probe
* High identification accuracy and high recognition speed.

**A-Star Programming Contest Website,** Baidu  **2010**

* Designed and implemented UI and front-end codes

# Skills

* **Programming Languages:**

**Expert**: C, Java, and Python;

**Very Competent**: HTML, CSS, and Matlab;

**Understanding**: Linux/Unix Shell script, JavaScript, C++, and C#

* **Working Platforms:**

**IDE:** MS Visual Studio, Eclipse, and Xcode;

**Operating Systems:** MS Windows, Linux/UNIX, OS X, and Virtual Machine

* **Languages:**

**English:** fluent**; Mandarin Chinese:** Native

Bibliography

Hong, M., et al. (2012). A cost-effective tag design for memory data authentication in embedded systems. Proceedings of the 2012 international conference on Compilers, architectures and synthesis for embedded systems. Tampere, Finland, ACM: 17-26.

Kuz, I., et al. (2007). "CAmkES: A component model for secure microkernel-based embedded systems." J. Syst. Softw. 80(5): 687-699.