

# Yang Tang

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## EDUCATION

**Ph.D., Computer Science, Columbia University in the City of New York** Aug 2011 - Present  
First-year Ph.D. student, advised by Prof. Junfeng Yang. GPA 4.18/4.3.

**M.Phil., Computer Sci. & Eng., The Chinese University of Hong Kong** July 2009 - July 2011  
M.Phil. in Computer Sci. & Eng., advised by Prof. Patrick P. C. Lee and Prof. John C. S. Lui. GPA 3.89/4.0.

**B.Eng., Computer Sci. & Tech., Tsinghua University, Beijing, China** Aug 2005 - July 2009  
B.Eng. in Computer Sci. & Tech. with **Excellent Graduate Award**. GPA 88.4/100 (ranking 16/107 = 14.9%).  
**Monitor** in the freshman and senior years. **First place** in the Yearly Overall Quality Evaluation every year.

**Exchange Student, The Chinese University of Hong Kong** Aug 2007 - Dec 2007  
Exchange student. GPA 3.82/4.0.

## RESEARCH INTERESTS

Reliability and security of software systems (including web and mobile applications).

## PUBLICATIONS

Jingyue Wu, **Yang Tang**, Gang Hu, Heming Cui, and Junfeng Yang,  
“**Sound and Precise Analysis of Multithreaded Programs through Schedule Specialization.**”  
PLDI 2012, Beijing, China, June 2012. (AR: 48/255 = 18.8%)

Yuchong Hu, Henry C. H. Chen, Patrick P. C. Lee, and **Yang Tang**,  
“**NCCloud: Applying Network Coding for the Storage Repair in a Cloud-of-Clouds.**”  
FAST 2012, San Jose, CA, February 2012. (AR: 26/137 = 19.0%)

Arthur Rahumed, Henry C. H. Chen, **Yang Tang**, Patrick P. C. Lee, and John C. S. Lui,  
“**A Secure Cloud Backup System with Assured Deletion and Version Control.**”  
CloudSec (ICPP Workshop) 2011, Taipei, September 2011.

**Yang Tang**, Patrick P. C. Lee, John C. S. Lui, and Radia Perlman,  
“**FADE: Secure Overlay Cloud Storage with File Assured Deletion.**”  
SecureComm 2010, Singapore, September 2010. (AR: 28/112 = 25.0%)

## OPEN-SOURCE SOFTWARE

**FADE** <http://ansrlab.cse.cuhk.edu.hk/software/fade/>  
A C++ API on Linux, providing a secure overlay cloud storage with access control and file assured deletion. The scheme is implemented as described in the SecureComm'10 paper.

**Welly** <http://welly.googlecode.com/>  
A Cocoa application on Mac OS X, bringing best user experience for browsing BBS. Softpedia 100% FREE Award (<http://mac.softpedia.com/progClean/Welly-Clean-38827.html>). WWDC 2009 student scholarship.

## TEACHING ASSISTANT EXPERIENCE

Advanced Topics in Internet Technology (CMSC 5709)	Spring 2011
Distributed Systems and Networks (CENG 4430)	Spring 2011
Computer and Network Security (CSCI 5470)	Fall 2010
Data Communication and Computer Networks (CSCI 4430)	Spring 2010
Distributed Systems and Networks (CENG 4430)	Spring 2010
Introduction to Operating Systems (CSCI 3150)	Fall 2009
Principles of System Software (CENG 3150)	Fall 2009
Fundamentals of Programming (Course #30240233, Tsinghua University)	Fall 2005

## WORK EXPERIENCE

**Research Assistant, Software Systems Lab, Columbia University** **Aug 2011 - Present**  
Working on a project of enhancing the security in web and mobile applications.

**Teaching Assistant, Advanced Networking and System Research Lab, CUHK** **July 2009 - July 2011**  
Designed and implemented FADE, a secure overlay cloud storage with access control and file assured deletion. (Available at <http://ansrlab.cse.cuhk.edu.hk/software/fade/>) This work was published at SecureComm'10. Also worked on NCCloud, a project of distributed storage with network coding, which was published at FAST'12.

**Individual Developer, State Key Lab of Intelligent Technology and Systems** **Feb 2009 - July 2009**  
Developed an intelligent news event clustering system (my bachelor thesis), which automatically fetches data from the Internet, merges news within the same topic, and generates an integrated website. (Live demo system at <http://news.thuir.org/>) Got the highest thesis score (tied) among all the senior students in the department.

**Tester, Department of Foreign Languages, Tsinghua University** **Sep 2008**  
Tested an English-learning software. Figured out dozens of major bugs. Highly praised by the developers.

**Chief Developer, State Key Laboratory of Pervasive Computing** **June 2008 - Aug 2008**  
Developed BlueMC, an Wii/Kinect-like HCI application on an S60 mobile phone, which captures videos using the built-in camera, analyzes the motion with NokiaCV library, and controls a PC via bluetooth, in real time.

**Main Developer, Tsinghua RIIT-Intertrust DRM Laboratory** **Jan 2008 - June 2008**  
Developed the RTSP server and enhanced the client for GridMedia, a digital-right-preserving IPTV system using Peer-to-Peer technology. Such system was adopted by CCTV ([http://www.cctv.com/html/Gridmedia\\_index.html](http://www.cctv.com/html/Gridmedia_index.html)).

**Infrastructure Engineer, Intelligent Multimedia Group of Tsinghua University** **Mar 2007 - Aug 2007**  
Maintained the high-level feature extraction system (the essential component of video searching), which got the **first** place in the worldwide TRECVID 2007 evaluation.

**Private Tutor on Data Structures and Algorithms** **Sep 2006 - Jan 2007**  
Gave weekly one-to-one tutorials to a high school student, who won the first prize in the next NOIP programming contest of China.

## SCHOLARSHIPS AND AWARDS

Certificate of Merit at the Department of Computer Science and Engineering, CUHK	2011
Merit prize, Professor Charles K. Kao Student Creativity Awards	2011
Postgraduate studentship at CUHK	2009 - 2011
Excellent Graduate of Tsinghua University	2009
Apple WWDC Student Scholarship	2009
Three-Good Student of Beijing	2009
Guanghua Scholarship	2008
Citigroup Scholarship for Finance and Information Technology ( <b>The only person</b> in the department)	2007
Tsinghua Scholarship for Outstanding Merits	2006
Outstanding Student Leader of the Department of Computer Science and Technology	2006
12th Place, ACM International Collegiate Programming Contest, Asia Regional (Chengdu Site)	2005
Wan Bangru Gold Scholarship	2005
Outstanding Student of Beijing ( <b>Only 13 students</b> in Beijing got this award)	2005
Bronze Medal, The 21st National Olympiad in Informatics, China	2004

## SELECTED VOLUNTEER SERVICE

Athlete Service Attendant XSW, Games of the XXIX Olympiad	2008
Launched a summer program to help students in rural areas of Jiangxi Province, China	2006

## PERSONAL SKILLS

Native speaker of Chinese, fluent in English and moderate in Cantonese.

Experienced in C, C++, Java, Perl and Python programming in the Unix environment. Familiar with network programming, Android development, Amazon Web Services, the LLVM compiler framework, and many open-source libraries such as OpenSSL and FUSE. Knowledgeable about operating systems, computer networks, network security, and theoretical computer science.