Bojun (Jessica) Wang

website	j7island.github.io
email	bojunw2@uci.edu
phone	(949)878-6070
address	34 Cedar Tree Ln, Irvine, CA 92612

CERTIFICATIONS

Network Engineer

Middle level, certified by Ministry of Industry and Information Technology, China.

SKILLS

Fluent: Java, C/C++;

Knowledgeable: Groovy, PSharp, HTML/CSS, Python, Shell, LaTeX

Tools: Linux, JVM, Emacs, Eclipse, Visual Studio, Git, Make

WORK EXPERIENCE

- 2015–now: The Analysis for Large-Scale Systems (AnalySys) group, UC Irvine.
- 2012–2015: Lab of Communication and Information Security, Peking University.
- 2011–2012: Lab of Information Security, Chongqing University.
- Jun.–Aug. 2011: Summer Intern at South Institute of Technology, China.

RECENT PROJECTS

Model Checking SmartThings SmartApps

- Summary: detect smart home apps' vulnerabilities.
- Transform the Groovy source code of Samsung SmartThings SmartApps to PSharp code.
- Use PSharp to model check the transformed code.
- Use the generated .dgml file to verify the communication channel of the SmartApps.

Vigilia: Securing Smart Home Edge Computing

- Summary: prevent mailicious communications in smart home apps.
- Provide a programming model (Set and Relation) for developing applications.
- Instrument the application code at the phase of the installation.
- Generate the routing policy based on the configurations users generated.
- Block the malicious communication by the generated routing policy.

PerfBlower: Quickly Detecting Memory-Related Performance Problems via Amplification

- Summary: detect Java applications' performance bugs.
- Use the Instrumentation Specification Language to describe and detect memory related performance bugs.
- Use C to build a data structure invariants detector.
- Hack the JVM and use JVM tool interface (JVMTI) to instrument the application code, for detecting the allocation sites that cause data structure invariants.

EDUCATION

2015–present	**M.S.** in Computer Science	
	School	*University of California, Irvine*
	Department	Department of Computer Sciences
	GPA	3.839/4
2012–2015	**M.S.** in Computer Applied Technology	
	School	*Peking University*
	Department	School of Electronic & Computer Engineering
	GPA	3.90/4
2008–2012	**B.S.** in Network Engineering	
	School	*Chongqing University*
	Department	College of Computer Science
	GPA	3.83/4 (rank: $1^{th}/289$)

PUBLICATIONS

1. Rahmadi Trimananda, Ali Younis, Bojun Wang, Bin Xu, Brian Demsky, Harry Xu, "Vigilia: Securing Smart Home Edge Computing," *ACM/IEEE Symposium on Edge Computing 2018 (SEC '18).*

2. Bojun Wang, Cheng Cai, Quan Zhou, "A Rational Threshold Signature Model and Protocol Based on Different Permission", *Journal of Applied Mathematics*, Vol.2014, 2014.

3. Cheng Cai, Yuesheng Zhu, Bojun Wang, "A Novel Mutual Authentication Scheme For Smart Card Without Information Leakage," *17th IEEE International Conference on Computational Science and Engineering (CSE)* , 2014.

4. Cheng Cai, Bojun Wang, Allah Ditta, Yi Yang, "A Rational Secret Sharing Scheme against Coalition Based on Nash equilibrium and Neighbor's Strategy," *Chinese Journal of Electronics*, Vol.23, No.3, July, 2014.

SCHOLARSHIPS & AWARDS

- IBM Outstanding Student Scholarship
- China Unicom Outstanding Student Scholarship
- China Aerospace Science & Technology Corp. Scholarship
- National Scholarship