

# CURRICULUM VITAE – RUIMIN SUN

## CONTACT INFORMATION

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## RESEARCH INTERESTS

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Operating System **Security**  
**Malware Detection**  
**Deep Learning** on system and software performance analysis  
Operating System and Software **Reliability**

## EDUCATION

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**University of Florida** Aug. 2014 – Aug. 2018 (expected)  
Ph.D. in Electrical and Computer Engineering  
Advisor: Daniela Oliveira  
Co-advisor: Xiaolin (Andy) Li

**University of Florida** Aug. 2012 – May. 2014  
M.S. in Microelectronic Engineering  
Advisor: Xiaolin (Andy) Li

**Southeast University, China** Aug. 2008 – Jun. 2012  
B.S. in Electronic Engineering  
Advisor: Ruqiang Yan

## AWARDS AND HONORS

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Grace Hopper Celebration Scholarship	2017
IEEE S&P Travel Award	2015
GREPSEC II (An NSF supported workshop for women and underrepresented groups in computing) Travel Award	2015
Wilson and Marie Collins Graduate Fellowship, University of Florida	2014
19th GENI Travel Award	2014
Achievement Award in Engineering, University of Florida	2012-2014
First prize in College Student Robotics Contest, Jiangsu Province	2011
First prize in National Undergraduate Mathematical Contest in Modeling, SEU	2010
First prize in the IEEE Standard MicroMouse Searching Maze Contest, SEU	2010
Second prize in Autonomous Vehicle Contest, SEU	2009
Third prize in National Challenging Cup College Student Contest, SEU	2011
Alumni Scholarships, SEU	2008-2011
Government Scholarship, National Scholarship, SEU	2008-2011

## ACADEMIC TALKS

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The Case for Less Predictable Operating System Behavior	HotOS 2015
Bear: A Framework for Understanding Application Sensitivity to OS (Mis)Behavior	ISSRE 2016
The Dose Makes the Poison - Leveraging Uncertainty for Effective Malware Detection	DSC 2017

## PROFESSIONAL SERVICES

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<b>Conference Reviewer:</b>	ACSAC 2015, 2016 AsiaCCS 2014, 2015 Raid 2016 DSC 2017
<b>Workshop Reviewer:</b>	WiSec 2016

## PUBLICATIONS

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DSC '17	<b>Ruimin Sun</b> , Xiaoyong Yuan, Andrew Lee, Matt Bishop, Don Porter, Xiaolin Li, Andre Gregio and Daniela Oliveira. <i>The Dose Makes the Poison - Leveraging Uncertainty for Effective Malware Detection</i> .
ISSRE '16	<b>Ruimin Sun</b> , Andrew Lee, Aokun Chen, Donald E. Porter, Matt Bishop and Daniela Oliveira. <i>Bear: A Framework for Understanding Application Sensitivity to OS (Mis)Behavior</i> .
USENIX ;login '15	<b>Ruimin Sun</b> , Donald E. Porter, Daniela Oliveira and Matt Bishop. <i>The Case for Unpredictability as Deception as OS Features</i> . Usenix ;login, Aug 2015. (Invited Paper)
HotOS'15	<b>Ruimin Sun</b> , Donald E. Porter, Daniela Oliveira, Matt Bishop, <i>The Case for Less Predictable Operating System Behavior</i> , HotOS 2015

## TEACHING

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EEL 4930/EEL 5934 Cross-Layered Security, Spring 2015, University of Florida  
EEL 4930/EEL 5934 Cross-Layered Security, Spring 2016, University of Florida

### Interested Courses to Teach:

- Undergraduate level: introduction to computer security, operating system design, distributed computing, computer communication, algorithms, and computer programming.
- Graduate level: system and software security, network security, virtual computers, cloud computing, deep learning analysis, IoT/cyber-physical systems.

## PRIMARY RESEARCH PROJECTS AND EXPERIENCE

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- System for Fine-grained Software Senility Measurement and Analysis  
Goal: to pinpoint the cause of flaky software bugs and reproduce buggy environment through measuring the performance of minor "function" during software execution, and record system-wide traces

- Making Deep Learning-based Real-Time Malware Detection Practical with Multi-Stage Classification  
Goal: to implement a practical system for multi-stage malware detection through combining the fast speed of traditional machine learning based models and high accuracy of modern deep learning based models in malware detection.
- Chameleon: A Spectrum-Behaved Operating System  
Goal: to create a diverse operating system with three environments-standard, unpredictable and deceptive. Whitelisted software runs in standard environment, suspicious software run in unpredictable environment, and malware run in deceptive environment.
- GatorIoT: An IoT-based Indoor Social Network Service  
Goal: to deploy a secure social network service with indoor localization system
- Secure Stock Exchange System with Reliable Multicast  
Goal: to improve stock exchange system security through encryption/decryption and ensure system reliability with a stateful recovery and retry mechanism.