# Rocky Slavin <span style="float:right">May 17, 2017</span>

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CONTACT
INFORMATION

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Floresville, TX 78114 USA

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RESEARCH
INTERESTS

**Software Engineering and Cyber Security**
- Mobile application security
- Security requirements patterns

EDUCATION

**PhD Candidate** <span style="float:right">**December 2016 - Present**</span>
Department of Computer Science <span style="float:right">**Expected Graduation: December 2017**</span>
University of Texas at San Antonio, San Antonio, TX
- *Advisor:* Dr. Jianwei Niu
- *Research Topics:*
  - Mobile Application Privacy
  - Elicitation and Documentation of Security Requirements Patterns

**Bachelor of Science, Computer Science** <span style="float:right">**May 2012**</span>
Department of Computer Science
University of Texas at San Antonio, San Antonio, TX
- *Computer Science GPA:* 3.61
- *Overall GPA:* 3.31
- *Concentration:* Computer and Information Security

RESEARCH
EXPERIENCE

**Privacy Policy Analysis** <span style="float:right">**June 2015 to Present**</span>
*Collaborative Research:* University of Texas at San Antonio, Carnegie Mellon University

- Constructed privacy phrase ontologies for the analysis of policy violation types
- Implemented natural language processing techniques for identification of privacy policy intent

**Mobile Application Privacy** <span style="float:right">**June 2015 to Present**</span>
*Collaborative Research:* University of Texas at San Antonio, Carnegie Mellon University

- Created framework for detection of privacy policy violations in Android application code.
- Designed and implemented POLIDROID, a publicly-accessible and open-source tool suite for the detection of privacy policy violations in compiled and source code (http://polidroid.org).
- Designed and implemented POLIDROID-AS, a publicly-accessible and open-source IDE plugin for the detection of privacy policy violations in real-time during development (http://polidroid.org/plugin).

**Security Requirements Patterns** <span style="float:right">**January 2012 to Fall 2014**</span>
*Collaborative Research:* University of Texas at San Antonio, Carnegie Mellon University, North Carolina State University

- Collaborated with other researchers in order to improve the usability of security requirements patterns by software developers through empirical studies and analysis.
- Proposed a template which acts as a set of guidelines for creating and describing security requirements patterns. These guidelines serve to describe the characteristics

and boundaries of security requirements patterns in order for software developers to better be equipped for pattern development and use.
- Designed user studies involving expert knowledge elicitation for security requirements.
- Implemented the Security Pattern Repository, a publicly-accessible and open-source web-based repository of security patterns (http://sefm.cs.utsa.edu/repository).

TEACHING AND MENTORING EXPERIENCE

**The University of Texas at San Antonio**, San Antonio, TX

- Instructor - CS3773 Software Engineering                                  **Summer 2017**
    - 50 students
    - Lectured on foundations of software engineering, requirements engineering, and Unified Modeling Language (UML).

- Instructor - CS3773 Software Engineering                                  **Spring 2017**
    - 40 students
    - Lectured on foundations of software engineering, requirements engineering, and Unified Modeling Language (UML).

- Mentor- Mobile Application Data Collection Design                        **Spring 2016**
    - Guided three graduate students through their research for their master's thesis based in my preexisting works
    - Oversaw two groups of undergraduates during their implementation of back-end servers for mobile applications.
    - Guided students on design of PHP and NodeJS software.

- Teaching Assistant - CS4723 Software Validation and Quality Assurance **Fall 2012**
    - Graded coursework.

- Teaching Assistant - CS1173 Data Analysis and Visualization             **Fall 2012**
    - Assisted instructor in conducting lectures by answering student questions regarding MATLAB.
    - Graded coursework.

- Teaching Assistant - CS1117 Introduction to Computer Programming II **Fall 2009**
    - Conducted weekly recitation sessions to strengthen student understanding of Java programming material.
    - Graded coursework.

PUBLICATIONS

**Refereed Journal Publications**

[1] Hui Shen, Ram Krishnan, **Rocky Slavin**, and Jianwei Niu. Sequence Diagram Aided Security Policy Specification. In: *IEEE Transactions on Dependable and Secure Computing (TDSC)*, vol 13, No 3, pp 381-393, 2015.

[2] **Rocky Slavin**, Xiaoyin Wang, Mitra Hosseini, William Hester, Ram Krishnan, Jaspreet Bhatia, Travis D. Breaux, and Jianwei Niu. Toward a Framework for Detecting Privacy Policy Violations in Android Application Code. To be submitted: *ACM transactions on Software Engineering and Methodology (TOSEM)*, 2017.

**Refereed Conference Proceedings**

[3] Xiaoyin Wang, Xue Qin, Mitra Bokaei Hosseini, **Rocky Slavin**, Jaspreet Bhatia, Travis D. Breaux, and Jianwei Niu. UILeak: Detecting Privacy Policy Violations on User Input Data for Android Applications. Under review: *ACM SIGSOFT International Symposium on the Foundations of Software Engineering (ESEC/FSE)*, 2017.

[4] **Rocky Slavin**, Xiaoyin Wang, Mitra Hosseini, William Hester, Ram Krishnan, Jaspreet Bhatia, Travis D. Breaux, and Jianwei Niu. Toward a Framework for Detecting Privacy Policy Violations in Android Application Code. In: *28th ACM/IEEE International Conference on Software Engineering (ICSE)*, pp 25-36, 2016.

[5] **Rocky Slavin**, Xiaoyin Wang, Mitra Hosseini, William Hester, Ram Krishnan, Jaspreet Bhatia, Travis D. Breaux, and Jianwei Niu. PVDetector: A Detector of Privacy Policy Violations for Android Apps. In: *IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft)*, 2016.

[6] **Rocky Slavin**, Jean-Michel Lehker, Jianwei Niu, and Travis D. Breaux. Managing Security Requirements Patterns using Feature Diagram Hierarchies. In: *22nd IEEE International Requirements Engineering Conference (RE)*, pp 193-202, 2014.

**Refereed Workshop Proceedings**

[7] **Rocky Slavin**, Hui Shen, and Jianwei Niu. Characteristics and Boundaries of Security Requirements Patterns. In: *2nd International Workshop on Requirements Patterns (RePa)*, 2012.

**Technical Reports**

[8] **Rocky Slavin**, Xiaoyin Wang, Mitra Bokaei Hosseini, Jianwei Niu, Jaspreet Bhatia, Travis D. Breaux. PoliDroid-AS: A Privacy Policy Alignment Plugin for Android Studio. Technical Report CSTR-2017, University of Texas at San Antonio Department of Computer Science, 2017.

[9] Hanan, Hibshi, **Rocky Slavin**, Jianwei Niu, Travis D. Breaux. Rethinking Security Requirements in RE Research. Technical Report CSTR-2014-001, University of Texas at San Antonio Department of Computer Science, 2014.

[10] Hui Shen, Ram Krishnan, **Rocky Slavin**, and Jianwei Niu. Sequence Diagram Aided Security Policy Specification. Technical Report CSTR-2014-005, University of Texas at San Antonio Department of Computer Science, 2014.

**Posters**

[11] **Rocky Slavin**, Xiaoyin Wang, Mitra Bokaei Hosseini, William Hester, Ram Krishnan, Jaspreet Bhatia, Travis D. Breaux, and Jianwei Niu. Toward a Framework for Detecting Privacy Policy Violation in Android Application Code. In: *University of Texas at San Antonio, College of Sciences Research Conference*, 2015.

[12] Jean-Michel Lehker, **Rocky Slavin**, and Jianwei Niu. Integration of Security Pattern Selection Practices with Pattern Storage. In: *Symposium and Bootcamp on the Science of Security (HotSoS)*, 2014.

[13] **Rocky Slavin**, Jean-Michel Lehker, and Jianwei Niu. Managing Security Requirements Patterns using Feature Diagram Hierarchies. In: *University of Texas at San Antonio, College of Sciences Research Conference*, 2013.

[14] **Rocky Slavin**, Hui Shen, and Jianwei Niu. Characteristics and Boundaries of Security Requirements Patterns. In: *University of Texas at San Antonio, College of Sciences Research Conference*, 2012.

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| ARTICLES AND INTERVIEWS | • Paul Flahive. "UTSA Team Develops Tool Analyzing App Privacy", Texas Public Radio, 2016, https://goo.gl/4eJvhF.<br>• **Rocky Slavin**. "Does your Android App Collect More than it Promises to?", IEEE Software Blog, 2016, https://goo.gl/1RgBB4. |

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| CONFERENCE TALKS | • "Toward a Framework for Detecting Privacy Policy Violations in Android Application Code", *28th ACM/IEEE International Conference on Software Engineering (ICSE)*, 2016, Austin, USA.<br><br>• "Managing Security Requirements Patterns using Feature Diagram Hierarchies", *22nd IEEE International Requirements Engineering Conference (RE)*, 2014, Karlskrona, Sweden.<br><br>• "Characteristics and Boundaries of Security Requirements Patterns", *2nd International Workshop on Requirements Patterns (RePa) co-located with 20th IEEE International Requirements Engineering Conference (RE)*, 2012, Chicago, USA. |

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| INVITED TALKS | • "Toward a Framework for Detecting Privacy Policy Violation in Android Application Code", *University of Texas at San Antonio, College of Sciences Research Conference*, 2015, USA.<br>• "Characteristics and Boundaries of Security Requirements Patterns", *University of Texas at San Antonio, College of Sciences Research Conference*, 2012, USA. |

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| HONORS AND AWARDS | • Carlos Alvarez Graduate Fellowship **2017**<br>• ACM SIGSOFT CAPS Award **2016**<br>• Armed Forces Communications and Electronics Association Cyber Security Scholarship **2014–2015**<br>• Armed Forces Communications and Electronics Association Cyber Security Scholarship **2013–2014**<br>• Graduate Diversity Recruitment Fellowship **2012–2013**<br>• Armed Forces Communications and Electronics Association Cyber Security Scholarship **2011–2012**<br>• HEB Developer Challenge First Place Recipient **2011**<br>• University of Texas at San Antonio President's List **Fall 2009**<br>• University of Texas at San Antonio Dean's List **Spring 2005** |

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| INDUSTRY EXPERIENCE | **Scienteer Technologies**<br>*Co-Founder/Volunteer* **2015–Present**<br>• Created web-based system for management of thousands of science fairs with tens of thousands of users for various states.<br>• Designed form wizard for assisting middle and high school students in complying with International Science and Engineering Fair (ISEF) rules.<br>• Managed multiple cloud servers.<br>• Implemented REST API for third-party support.<br><br>**UTSA - Center for Research and Training in the Sciences**<br>*Program Specialist* **January 2010 to September 2012**<br>• Developed web applications used to maintain and facilitate the 2010, 2011, and 2012 ExxonMobil Texas Science and Engineering Fair website.<br>• Managed data for over 4,000 users using custom MySQL/PHP tools.<br>• Created registration and payment applications for multiple events. |

- Managed web servers using Apache 2.0 and IIS 7 on several Linux and Windows machines.

### Computational Biology Initiative

*System Administrator Assistant/Web Developer*        **2009–2010**
- Created registration system for user management.
- Responsible for scripts used in managing various Unix systems used for high performance computing.
- Installed and managed various servers to ensure high availability.
- Assisted administrator in system troubleshooting.

Skills

General Programming and Scripting Languages:
- C, C#, C++, Java, Perl, PHP, SED, AWK, Python

Web Technology:
- Laravel, CSS, PHP, NodeJS, ReactJS, JavaScript, Jquery, AJAX, ExpressionEngine, Apache2

Database Technology:
- MySQL, MariaDB, Microsoft SQL, SQLite, Eloquent ORM

Model Checking:
- NuSMV

Productivity Applications:
- TEX (LATEX, BIBTEX), Vim, most common productivity packages (for Windows and Linux platforms)

Scientific, Engineering, and Statistical Applications:
- MATLAB, SolidWorks

Operating Systems:
- Microsoft Windows, Linux, and other UNIX variants