Daniel E. Krutz

Rochester Institute of Technology
Department of Software Engineering
Center of Cybersecurity
Golisano Building 70
Rochester, NY 14623-5608

Phone: (585) 475-2896
Email: dxkvse@rit.edu
Homepage: http://www.se.rit.edu/~dkrutz

RESEARCH INTERESTS

Autonomic Computing, Mobile Security, Computing Education

EDUCATION

Ph.D. Computer Science, Nova Southeastern University, 2013.
  Dissertation: Code Clone Discovery Based on Concolic Analysis

M.S. Software Design & Management, Rochester Institute of Technology, 2007.

B.S. Computer Science & History, St. John Fisher College, 2004.

EMPLOYMENT

Assistant Professor, Department of Software Engineering, RIT 2017–Present.

Lecturer, Department of Software Engineering, RIT 2010–2017.

PUBLICATIONS

[1] PERUMA, Anthony ; PALMERO, Jeffrey ; KRUTZ, Daniel E.: Investigating User Perception and Comprehension of Android Permission Models. In: *Proceedings of the 5th International Conference on Mobile Software Engineering and Systems*, 2018 (MOBILESoft '18)

[2] PERUMA, Anthony ; KRUTZ, Daniel E.: Security: A Critical Quality Attribute in Self-Adaptive Systems. In: *13th International Symposium on Software Engineering for Adaptive and Self-Managing Systems*, 2018 (SEAMS '18)

[3] KRUTZ, Daniel E. ; RICHARDS, Thomas: Cyber Security Education: Why Don't We Do Anything About It? In: *ACM Inroads* 8 (2017), Oktober, Nr. 4, 5–5. http://dx.doi.org/10.1145/3132217. – DOI 10.1145/3132217. – ISSN 2153–2184

[4] KRUTZ, Daniel E. ; MUNAIAH, Nuthan ; PERUMA, Anthony ; MKAOUER, Mohamed W.: Who Added That Permission to My App?: An Analysis of Developer Permission Changes in Open Source Android Apps. In: *Proceedings of the 4th International Conference on Mobile Software Engineering and Systems*. Piscataway, NJ, USA : IEEE Press, 2017 (MOBILESoft '17). – ISBN 978–1–5386–2669–6, 165–169

[5] MCAFEE, Patrick ; MKAOUER, Mohamed W. ; KRUTZ, Daniel E.: CATE: Concolic Android Testing Using Java Pathfinder for Android Applications. In: *Proceedings of the 4th International Conference on Mobile Software Engineering and Systems*. Piscataway, NJ, USA : IEEE Press, 2017 (MOBILESoft '17). – ISBN 978–1–5386–2669–6, 213–214

[6] CHESTER, Piper ; JONES, Chris ; MKAOUER, Mohamed W. ; KRUTZ, Daniel E.: M-perm: A Lightweight Detector for Android Permission Gaps. In: *Proceedings of the 4th International Conference on Mobile Software Engineering and Systems.* Piscataway, NJ, USA : IEEE Press, 2017 (MOBILESoft '17). – ISBN 978–1–5386–2669–6, 217–218

[7] DENNIS, Colton ; KRUTZ, Daniel E. ; MKAOUER, Mohamed W.: P-lint: A Permission Smell Detector for Android Applications. In: *Proceedings of the 4th International Conference on Mobile Software Engineering and Systems.* Piscataway, NJ, USA : IEEE Press, 2017 (MOBILESoft '17). – ISBN 978–1–5386–2669–6, 219–220

[8] KRUTZ, Daniel E. ; MALACHOWSKY, Samuel A.: Teaching android security through examples: a publicly available database of vulnerable apps. In: *ACM Inroads* 7 (2016), Nr. 4, S. 96–98

[9] Conference Organization. In: *2016 International Conference on Cloud and Autonomic Computing (ICCAC)*, 2016, S. ix–xi

[10] KRUTZ, Daniel E. ; MUNAIAH, Nuthan ; MENEELY, Andrew ; MALACHOWSKY, Samuel A.: Examining the Relationship Between Security Metrics and User Ratings of Mobile Apps: A Case Study. In: *Proceedings of the International Workshop on App Market Analytics.* New York, NY, USA : ACM, 2016 (WAMA 2016). – ISBN 978–1–4503–4398–5, 8–14

[11] KRUTZ, Daniel E. ; MIRAKHORL, Mehdi: Architectural Clones: Toward Tactical Code Reuse. In: *Proceedings of the 31st Annual ACM Symposium on Applied Computing.* New York, NY, USA : ACM, 2016 (SAC '16). – ISBN 978–1–4503–3739–7, 1480–1485

[12] MUNAIAH, Nuthan ; KLIMKOWSKY, Casey ; MCRAE, Shannon ; BLAINE, Adam ; MALACHOWSKY, Samuel A. ; PEREZ, Cesar ; KRUTZ, Daniel E.: Darwin: a static analysis dataset of malicious and benign Android apps. In: *Proceedings of the International Workshop on App Market Analytics* ACM, 2016, S. 26–29

[13] MALACHOWSKY, S. A. ; KRUTZ, D. E.: A project component in a web engineering course. In: *2015 IEEE Frontiers in Education Conference (FIE)*, 2015, S. 1–6

[14] KRUTZ, D. E. ; MENEELY, A. ; MALACHOWSKY, S. A.: An insider threat activity in a software security course. In: *2015 IEEE Frontiers in Education Conference (FIE)*, 2015, S. 1–6

[15] KRUTZ, Daniel E. ; MIRAKHORLI, Mehdi ; MALACHOWSKY, Samuel A. ; RUIZ, Andres ; PETERSON, Jacob ; FILIPSKI, Andrew ; SMITH, Jared: A dataset of open-source Android applications. In: *Mining Software Repositories (MSR), 2015 IEEE/ACM 12th Working Conference on* IEEE, 2015, S. 522–525

[16] KRUTZ, Daniel E. ; MALACHOWSKY, Samuel A. ; SHIHAB, Emad: Examining the effectiveness of using concolic analysis to detect code clones. In: *Proceedings of the 30th Annual ACM Symposium on Applied Computing* ACM, 2015, S. 1610–1615

[17] KRUTZ, D. E. ; MALACHOWSKY, S. A. ; JONES, S. D. ; KAPLAN, J. A.: Enhancing the educational experience for deaf and hard of hearing students in software engineering. In: *2015 IEEE Frontiers in Education Conference (FIE)*, 2015, S. 1–9

[18] KRUTZ, Daniel E. ; LE, Wei: A code clone oracle. In: *Proceedings of the 11th Working Conference on Mining Software Repositories* ACM, 2014, S. 388–391

[19] KRUTZ, Daniel E. ; MALACHOWSKY, Samuel A. ; REICHLMAYR, Thomas: Using a Real World Project in a Software Testing Course. In: *Proceedings of the 45th ACM Technical Symposium on Computer Science Education.* New York, NY, USA : ACM, 2014 (SIGCSE '14). – ISBN 978–1–4503–2605–6, 49–54

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[20] KRUTZ, Daniel E. ; SHIHAB, Emad: CCCD: Concolic code clone detection. In: *Reverse Engineering (WCRE), 2013 20th Working Conference on* IEEE, 2013, S. 489–490

[21] KRUTZ, D. E. ; MENEELY, A.: Teaching Web Engineering using a project component. In: *2013 IEEE Frontiers in Education Conference (FIE)*, 2013. – ISSN 0190–5848, S. 1366–1368

[22] KRUTZ, D. E. ; VALLINO, J. R.: Experiencing disruptive behavior in a team using moles. In: *2013 IEEE Frontiers in Education Conference (FIE)*, 2013. – ISSN 0190–5848, S. 1492–1495

[23] KRUTZ, D. E. ; LUTZ, M.: Bug of the Day: Reinforcing the importance of testing. In: *2013 IEEE Frontiers in Education Conference (FIE)*, 2013. – ISSN 0190–5848, S. 1795–1799

GRANTS

- "Mobile Accessibility Modules for Computing Courses" - 2017 RIT SEED - $11,200
- "Inclusive Apps: Supporting Mobile Accessibility Standards Through Educational Exercises" - 2016 SIGCSE Special Projects - $3,800
- "PLASMA: A Set of Educational Mobile Security Modules" - 2016
- RIT Lecturers Development - $1,800
- RIT FEED Development Grant - $3,150
- "Supporting Education Using a Public Oracle of Vulnerable Mobile Apps" - 2015 SIGCSE Special Projects - $2,400
- "Investigating Android M Permissions: Adoption, Ratings, and Malware" - 2015 RIT Lecturers Development - $1,800
- "Enhancing Software Engineering Education for Deaf/HoH Students" - 2014 RIT Lecturers Development - $525

COURSES TAUGHT

- Web Engineering: Spring 2012 - present (developed new course).
- Research Methods (graduate course) - Fall 2016 - Present
- Engineering of Secure Software - Fall 2014 - Spring 2017
- Foundations of Software Engineering (graduate course) - Fall 2015 - 2017
- Introduction to Software Engineering: Fall, - Present
- Software Testing: Fall 2010 - Fall 2014.
- Freshman Seminar: Fall 2011, 2012 & 2015.
- Senior Project Coaching: 2010-present.
- Engineering of Enterprise Software Systems: Spring 2013 - Present
- Independent Study: Spring 2013-Present

SERVICE

Conference Organizing Committees

- Innovation & Technology in Computer Science Education (ITiCSE). Associate PC. 2016 - Present
- IEEE International Conference on Cloud and Autonomic Computing (ICCAC). Poster Chair. 2017
- IEEE International Conference on Cloud and Autonomic Computing (ICCAC). Web Chair. 2016

Conference Reviewer

- (ASEE) American Society for Engineering Education. 2011-present

- (FIE) Frontiers in Education. 2013-present
- (InCULT) International Conference on University Learning and Teaching 2016 - Present

INDUSTRY EXPERIENCE

- Technology Consultant, Mindex Technologies 8/2009 – 8/2010.
- Sr. Software Engineer, 5Linx Enterprises, 2/2009–8/2009.
- R&D Software Developer, Xerox Corporation 5/2004–1/2009.

PROFESSIONAL ASSOCIATIONS

- Access Computing https://www.washington.edu/accesscomputing/
- Association for Computing Machinery (ACM)
- Institute of Electrical and Electronics Engineers (IEEE)

UNIVERSITY SERVICE

- College Governance Committee 2016-Present (Chair 2017 - Present)
- Coordinator for concurrent sections of Introduction to Software Engineering course (12-15 sections with 240-300 students) (2010-2016)
- Undergraduate curriculum committee, 2012-2016
- Software Engineering Honors Advocate 2015-Present

REFERENCES

Available upon request

<div align="center">Last updated: March 6, 2018</div>