Sivana Hamer

✉ sahamer[at]ncsu[dot]com
🔗 sivanahamer.github.io
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⯃ sivanahamer

Second-year Computer Science Ph.D. Student at North Carolina State University. I work in the Realsearch and WSPR research groups, advised by Dr. Laurie Williams. Currently, I am researching the **state of software supply chain security** as a community **to help improve the security posture of industry and open-source projects**. I look forward to opportunities to conduct software supply chain security research.

RESEARCH INTERESTS

Empirical software engineering, software measurement, software security, software supply chain security, and mining software repositories.

EDUCATION

North Carolina State University .... North Carolina,United States

PhD. Computer Science   2023-pres.
GPA: 4.0. *Advisor:* Dr. Laurie Williams

Universidad de Costa Rica .... San José, Costa Rica

M.Sc. Computer Science and Informatics   2023
Thesis: Mining software repositories to automatically measure developer code contributions. *Advisor:* Dr. Christian Quesada-López
Grade: 9.93/10. Graduation with honors.

B.Sc. Computer Science and Informatics   2020
Grade: 9.72/10. Graduation with honors.

EXPERIENCE

North Carolina State University .... North Carolina, United States

Graduate Research Assistant - Computer Science   2023-pres.
Working on: Software Supply Chain Security. *With:* Dr. Laurie Williams.

Universidad de Costa Rica .... San José, Costa Rica

Researcher - Centro de Investigaciones en Tecnologías de Información y Comunicación   2019 - 2023
Research projects: "Automated procedure for measuring contributions from repositories of software development projects". (Project No. 834-C1-011). Research instructor. "Empirical evaluation of a methodology for the automation of the measurement of software functional size". (Project No. 834-B8-A27). Research instructor, graduate research assistant and undergraduate research assistant.

Interim Instructor - Escuela de Ciencias de la Computación e Informática   2020 - 2023
Imparted courses: Software Design (CI-0136), Databases (CI-0127), Software Engineering and Database Integrator Project (CI-0128), Programming 1 (CI-0112), and Computer principles (CI-0202).

Carnegie Mellon University .... Pennsylvania, United States

Student Visitor Research Internship - Software and Societal Systems Department   jan - mar 2022

With: Dr. Bogdan Vasilescu

AWARDS, SCHOLARSHIPS, AND FELLOWSHIPS

- *Goodnight Doctoral Fellowship (2023-2027).*

- *RSA Conference Security Scholar (2024).*

- *North Carolina State University Provost's Doctoral Fellowship (2023).*

- *Best Postgraduate Grade Universidad de Costa Rica* (2020).

PUBLICATIONS

[P9] **Hamer, Sivana**, Marcelo d'Amorim, and Laurie Williams. Just another copy and paste? comparing the security vulnerabilities of chatgpt generated code and stackoverflow answers. In *Deep Learning Security and Privacy Workshop*. IEEE Security and Privacy Workshops (SPW), 2024

[P8] Christian Quesada-López, **Hamer, Sivana**, and Marcelo Jenkins. Exploring students' behaviors and perceptions in continuous measurement of software projects. In *Latin American Computing Conference (CLEI)*. IEEE, 2024

[P7] Erik Kuhlmann, **Hamer, Sivana**, and Christian Quesada-López. Visualización de software como ciudad: Un análisis de percepciones y experiencias de estudiantes. In *Latin American Computing Conference (CLEI)*. IEEE, 2023

[P6] **Hamer, Sivana**, Christian Quesada-López, and Marcelo Jenkins. Students' perceptions of integrating a contribution measurement tool in software engineering projects. In *IEEE International Conference on Software Engineering Education and Training*, 2023

[P5] **Hamer, Sivana**, Christian Quesada-López, and Marcelo Jenkins. Automatically recovering students' missing trace links between commits and user stories. In *Conferencia Iberoamericana de Software Engineering (CIbSE)*, 2021

[P4] **Hamer, Sivana**, Christian Quesada-López, and Marcelo Jenkins. Students projects' source code changes impact on software quality through static analysis. In *Quality of Information and Communications Technology*, pages 553–564. Springer International Publishing, 2021

[P3] **Hamer, Sivana**, Christian Quesada-López, Alexandra Martınez, and Marcelo Jenkins. Using git metrics to measure students' and teams' code contributions in software development projects. *CLEI Electronic Journal*, 2021

[P2] **Hamer, Sivana**, Christian Quesada-López, Alexandra Martínez, and Marcelo Jenkins. Measuring Students' Source Code Quality in Software Development Projects Through Commit-Impact Analysis. In *International Conference on Information Technology & Systems*, pages 100–109. Springer International Publishing, 2021

[P1] **Hamer, Sivana**, Christian Quesada-López, Alexandra Martínez, and Marcelo Jenkins. Measuring students' contributions in software development projects using Git metrics. In *2020 XLVI Latin American Computing Conference (CLEI)*. IEEE, 2020

SERVICE AND MISCELLANEOUS

- Reviewer: Transactions of Software Engineering (2024). Shadow Reviewer: International Conference on the Foundations of Software Engineering (2025).

- Student Officer in the WSPR laboratory.

- Student Officer at LA/CSC (Computer Science Organization for Latin American students).

- Computer Science Doctoral Recruiting Event Student Volunteer for North Carolina State University (2024).

- Maintainer of the se-deadline web page to keep track of the deadlines of software engineering research venues.

MENTORSHIP

- Jacob Bowen (MS Student).

LANGUAGES

- *Native or bilingual:* English and spanish.

TECHNOLOGIES

- *Programming languages and other technologies:* Python, Java, R, LaTeX, C#, HTML, CSS, UML, JavaScript, Bash, Microsoft SQL Server, MySQL, and Neo4j.

- *Frameworks and libraries:* ASP.NET, Flask, NUnit, JUnit, Selenium, Bootstrap, jQuery, React, and Unity.

- *Software tools:* Git, Jenkins, JIRA, Microsoft Visual Studio, and Visual Studio Code.