

# Ayaan M. Kazerouni

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## RESEARCH INTERESTS

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I am broadly interested in **computing education**, **software testing**, and **software engineering**.

## EDUCATION

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**Ph.D. Computer Science** 2015–2020  
*Virginia Tech*

- Advisors: Dr. Clifford Shaffer and Dr. Stephen Edwards
- Dissertation: Measuring the Software Development Process to Enable Formative Assessments

**B.S. Computer Science** 2011–2015  
*University of West Georgia*

- Research mentor: Dr. Lewis Baumstark

## EMPLOYMENT

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**Assistant Professor, Computer Science and Software Engineering** September 2020–present  
*California Polytechnic State University, San Luis Obispo, CA*

**Summer Adjunct Faculty, Computer Science** May 2020–August 2020  
*Virginia Tech, Blacksburg, VA*

**PhD Candidate** August 2015–April 2020  
*Virginia Tech, Blacksburg, VA*

**Front-End Software Development Intern** June 2017–August 2017  
*Zappos.com, Las Vegas, NV*

## TEACHING

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**CSC 123 Introduction to Community-Action Computing** 1–2 offerings per year  
*California Polytechnic State University*

**CSC 203 Project-based Object-oriented Programming and Design** 2–3 offerings per year  
*California Polytechnic State University*

**CSC 305 Individual Software Design and Development** Spring 2023, 2024  
*California Polytechnic State University*

**CSC 307 Introduction to Software Engineering** Winter 2021  
*California Polytechnic State University*

**CSC 313 Teaching Computing** 1 offering per year  
*California Polytechnic State University*

**CSC 513 Computing Education Research and Practice (Graduate Course)** Winter 2021, 2023  
*California Polytechnic State University*

**CSC 590 Thesis Seminar** Winter 2023  
*California Polytechnic State University*

**CS 3114 Data Structures & Algorithms** Summer 2018, 2019, 2020  
*Virginia Tech*

**CS 3114 Data Structures & Algorithms (Teaching Assistant)** Fall 2015–Spring 2016  
*Virginia Tech*

## PEER-REVIEWED PUBLICATIONS

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\* indicates a student author.

### Journal papers

W. Fuchs\*, A. McDonald, A. Gautam, **A. M. Kazerouni**. “Recommendations for Improving End-User Programming Education: A Case Study with Undergraduate Chemistry Students”. *ACS Journal of Chemical Education (J Chem Ed)*, June 2024.

A. Shin\*, **A. M. Kazerouni**. “A Model of How Students Engineer Test Cases With Feedback”. *ACM Transactions on Computing Education (TOCE)*, October 2023.

**A. M. Kazerouni**, J. C. Davis, A. Basak, C. A. Shaffer, F. Servant, S. H. Edwards. “Fast and Accurate Incremental Feedback for

Students' Software Tests Using Selective Mutation Analysis". *Journal of Systems and Software (JSS)*, January 2021.

## Conference papers

K. Wortman, A. Gautam, S. Hug, P. Salvador Inventado, **A. M. Kazerouni**, J. Lehr, K. Sood, Z. Wood. "Reflecting on Practices to Integrate Socially Responsible Computing in Introductory Computer Science Courses (to appear)". *ACM Technical Symposium on Computer Science Education (SIGCSE)*, February 2025.

D. M. Krum, Z. Wood, E. Kang, **A. M. Kazerouni**, J. L. Lehr, S. Hug, P. S. B. Inventado, F. Tang, I. Yoon, A. Kulkarni, Y. Sun, M. Beheshti, A. Gautam, A. Hubbard Cheuoua, S. Hooshmand, K. A. Wortman. "Socially Responsible Computing: Promoting Latinx Student Retention Via Community Engagement in Early Computer Science Courses". *ASEE Annual Conference and Exposition (ASEE)*, June 2024.

**A. M. Kazerouni**, J. Lehr, Z. Wood. "Community Action Computing: A Data-centric CS0 Course". *ACM Technical Symposium on Computer Science Education (SIGCSE)*, March 2024.

J. Lee\*, **A. M. Kazerouni**, C. Siu, T. Migler. "Exploring the Impact of Cognitive Awareness Scaffolding for Debugging in an Introductory Computer Science Class". *ACM Technical Symposium on Computer Science Education (SIGCSE)*, March 2023.

A. Doebling\*, **A. M. Kazerouni**. "Patterns of Academic Help-Seeking in Undergraduate Computing Students". *Koli Calling Conference on Computing Education Research (Koli Calling)*, November 2021.

C. A. Shaffer, **A. M. Kazerouni**. "The Impact of Programming Project Milestones on Procrastination, Project Outcomes, and Course Outcomes: A Quasi-Experimental Study in a Third-Year Data Structures Course". *ACM Technical Symposium on Computer Science Education (SIGCSE)*, March 2021.

R. S. Mansur, **A. M. Kazerouni**, S. H. Edwards, C. A. Shaffer. "Exploring the Bug Investigation Techniques of Intermediate Student Programmers". *Koli Calling Conference on Computing Education Research (Koli Calling)*, November 2020.

T. Price, D. Hovemeyer, K. Rivers, A. C. Bart, G. Gao, **A. M. Kazerouni**, B. Becker, A. Petersen, L. Gusukuma, S. H. Edwards, D. Babcock. "ProgSnap2: A Flexible Format for Programming Process Data". *ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE)*, July 2020.

J. C. Davis, D. Moyer, **A. M. Kazerouni**, D. Lee. "Testing Regex Generalizability And Its Implications: A Large-Scale Many-Language Measurement Study". *IEEE/ACM International Conference on Automated Software Engineering (ASE)*, November 2019.

S. H. Edwards, Krishnan P. Murali, **A. M. Kazerouni**. "The Relationship Between Practicing Short Programming Exercises and Exam Performance". *ACM Global Computing Education Conference (CompEd)*, May 2019.

**A. M. Kazerouni**, C. A. Shaffer, S. H. Edwards. "Assessing Incremental Testing Practices and Their Impact on Project Outcomes". *ACM Technical Symposium on Computer Science Education (SIGCSE)*, February 2019. **2nd Best Research Paper**.

**A. M. Kazerouni**, C. A. Shaffer, S. H. Edwards. "Quantifying Incremental Development Practices and Their Relationship to Procrastination". *ACM Conference on International Computing Education Research (ICER)*, August 2017.

**A. M. Kazerouni**, C. A. Shaffer, T. S. Hall, S. H. Edwards. "DevEventTracker: Tracking Development Events to Assess Incremental Development and Procrastination". *ACM Conference on Innovation and Technology in Computer Science Education (ITiCSE)*, July 2017.

## Abstracts and posters

**A. M. Kazerouni**. "Toward Continuous Assessment of the Programming Process". *ACM Conference on International Computing Education Research - Doctoral Consortium (ICER)*, August 2019.

**A. M. Kazerouni**, R. S. Mansur, S. H. Edwards, C. A. Shaffer. "Student Debugging Practices and Their Relationships with Project Outcomes". *ACM Technical Symposium on Computer Science Education — Poster (SIGCSE)*, February 2019.

**A. M. Kazerouni**. "Toward Continuous Assessment of the Programming Process (Abstract Only)". *ACM Technical Symposium on Computer Science Education - Student Research Competition (SIGCSE)*, **1st Place**.

## GRANT PROPOSALS

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### External

Z. Wood, **A. M. Kazerouni**, J. Lehr, M. Beheshti, S. Hooshmand, P. S. Inventado, K. Sood, K. Wortman, E. E. Kang, D. Krum, Y. Sun, F. Tang, I. Yoon, A. Kulkarni, A. Gautam. "Collaborative Research: BPC-A: Socially Responsible Computing: Promoting Latinx Student Retention Via Community Engagement in Early CS Courses". 2022. (Total amount: \$1.8M, Cal Poly share: \$513K).

### Internal

\* indicates a student author.

**A. M. Kazerouni**, J. B. Clements. "SURP: A Comparative Analysis of Software Test Adequacy Criteria". 2024. (2 funded undergraduate students).

A. Shin\*, **A. M. Kazerouni**. "Baker Koob Award: A Cost Effective Way of Measuring Software Test Success". 2022. (Amount: \$1400).

**A. M. Kazerouni**. "SURP: Computer-supported Programmer Cognition". 2022. (1 funded undergraduate student).

## HONORS AND AWARDS

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<b>Outstanding Reviewer Award</b> <i>Koli Calling Conference on Computing Education Research (given to 6 out of 80 reviewers)</i>	2024
<b>Don and Paula Heye Annual Award for Outstanding Club Advisor (Hack4Impact Cal Poly)</b> <i>College of Engineering, Cal Poly</i>	2024
<b>Graduate Student Service Award</b> <i>Department of Computer Science, Virginia Tech</i>	2020
<b>2nd Best Paper Award, Research Track</b> <i>ACM SIGCSE Technical Symposium</i>	2019
<b>1st Place in the SIGCSE Student Research Competition</b> <i>ACM SIGCSE Technical Symposium</i>	2018
<b>2nd Place in the College of Math and Science Research Day</b> <i>University of West Georgia</i>	2015
<b>Outstanding Honors Sophomore, Junior</b> <i>University of West Georgia</i>	2013, 2014

## GRADUATE ADVISING

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### Master's students

<b>Noah Ravetch</b> <i>Networks of Peer-to-Peer Help-Seeking.</i>	expected September 2024
<b>Saurav Gupta</b> <i>A Comparative Study of the NPM, PyPI, Maven, and RubyGems Open-source Communities.</i>	June 2024
<b>Austin Shin</b> <i>Examining Introductory Computer Science Student Cognition When Testing Software Under Different Test Adequacy Criteria.</i>	Sep 2022
<b>Will Fuchs</b> <i>Evaluating and Improving Domain-Specific Programming Education: A Case Study with Cal Poly Chemistry Courses.</i>	Jun 2022
<b>August Doebling</b> <i>Patterns Of Academic Help-Seeking In Undergraduate Computing Students.</i>	Mar 2022
<b>Kevin Yoo</b> <i>A Study of Non-computing Majors' Growth Mindset, Self-efficacy and Perceived CS Relevance in CS1.</i>	Sep 2021

## SERVICE

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### External service

<b>Program Committee</b> <i>Koli Calling Computing Education Research Conference (Koli Calling)</i>	2024
<b>Senior Program Committee</b> <i>SIGCSE Technical Symposium</i>	2022–present
<b>Program Committee</b> <i>International Computing Education Research Conference (ICER)</i>	2022–present
<b>Reviewer</b> <i>Computer Science Education, Taylor &amp; Francis</i>	2024
<b>Reviewer</b> <i>Transactions on Computing Education (TOCE)</i>	2022–present
<b>Program Committee</b> <i>Conference on Innovation and Technology in Computer Science Education (ITiCSE)</i>	2020, 2022, 2023
<b>Artefact Evaluation Program Committee</b> <i>Foundations of Software Engineering Conference (FSE)</i>	2020–2022
<b>Artefact Evaluation Program Committee</b> <i>Automated Software Engineering Conference (ASE)</i>	2021, 2022
<b>Demonstrations Track Program Committee</b> <i>International Conference on Software Engineering (ICSE)</i>	2021
<b>Program Committee</b> <i>SIGCSE Technical Symposium</i>	2019–2021
<b>Reviewer</b> <i>ASEE Computers in Education Journal</i>	2020

### Institutional Service

<b>CSSE tutoring centre advisor</b> <i>California Polytechnic State University</i>	2021–present
<b>Club advisor: Hack4Impact</b> <i>California Polytechnic State University</i>	2021–present
<b>General Engineering Director Search Committee Member</b> <i>California Polytechnic State University</i>	2024
<b>CSSE Lecturer Search Committee Member</b> <i>California Polytechnic State University</i>	2024
<b>CSSE Tenure-track Search Committee Member</b> <i>California Polytechnic State University</i>	2021
<b>Working Group Member</b> <i>CSSPLICE Programming Snapshot Data Working Group</i>	2018–present
<b>President, Vice President, Treasurer/Cofounder</b> <i>CS Graduate Student Council, Virginia Tech</i>	2017–2020