

# Rui (Gina) Bai

ASSISTANT PROFESSOR OF THE PRACTICE

Department of Computer Science · Vanderbilt University

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## Education

### North Carolina State University

Raleigh, NC

PH.D. IN COMPUTER SCIENCE

June 2022

- Advisor: Kathryn T. Stolee
- Dissertation: Improving Student Testing Practices through a Lightweight Checklist Intervention
- Committee: Kathryn Stolee (Chair), Sarah Heckman, Thomas Price, Shiyang Jiang, Susan Fisk (External)

### Wake Forest University

Winston-Salem, NC

B.S. IN COMPUTER SCIENCE, MINOR IN MATHEMATICS

May 2016

- Magna Cum Laude

## Employment History

### Vanderbilt University

Nashville, TN

ASSISTANT PROFESSOR OF THE PRACTICE

Fall 2022 - Present

### North Carolina State University

Raleigh, NC

GRADUATE RESEARCH ASSISTANT (SUPERVISED BY DR. KATHRYN T. STOLEE)

Fall 2016 - Summer 2022

INSTRUCTOR

Summer 2020, 2021

GRADUATE TEACHING ASSISTANT

Fall 2017, 2020

### Mei & Mark LLP

Washington, DC

WEB SUPPORT SPECIALIST (VOLUNTEER)

Dec. 2016 - May 2021

### Wake Forest University

Winston-Salem, NC

UNDERGRADUATE TEACHING ASSISTANT

Spring 2015

SUMMER RESEARCH FELLOW (SUPERVISED BY DR. PAÚL PAUCA)

Summer 2014

## Teaching Experience

### Vanderbilt University

Nashville, TN

INSTRUCTOR

Fall 2022 - Present

- **CS 1101: Programming and Problem Solving - Java**, 3 credit, undergraduate core course
  - Developed and adapted lecture materials; managed 20+ undergraduate teaching assistants; designed and proctored exams
  - Designed and introduced recitation sections; developed lecture materials for recitation sections; supervised graduate and undergraduate recitation leaders
  - Provided office hours and student meetings; provided assistance to students via emails and piazza posts
  - Semesters Taught: Spring 2023 (~160 students), Fall 2022 (169 students)

### North Carolina State University

Raleigh, NC

INSTRUCTOR

Summer 2020, 2021

- **CSC 116: Introduction to Computing - Java**, 3 credit, undergraduate core course, Summer 2021, 35 students
  - Delivered lectures and supervised in-class labs synchronously online via Zoom
  - Flipped classroom; adapted course materials; managed undergraduate teaching assistant; graded group projects;
  - Provided office hours; provided assistance to students via emails and piazza posts
- **CSC 226: Discrete Mathematics for Computer Scientists**, 3 credit, undergraduate core course, Summer 2020, 21 students
  - Delivered lectures synchronously online via Zoom
  - Developed and adapted course materials; managed two graduate teaching assistants
  - Provided office hours; provided assistance to students via emails and piazza posts

GRADUATE TEACHING ASSISTANT

Fall 2017, 2020

- **CSC 712/591: Software Testing**, 3 credit, graduate elective course (for Ph.D. and M.S. students), Fall 2020, 38 students
- **CSC 216: Programming Concepts - Java**, 4 credit, undergraduate core course, Fall 2017, 200+ students (25 in lab)

## Wake Forest University

UNDERGRADUATE TEACHING ASSISTANT & STUDENT TUTOR

- TA: **CSC 101: Overview of Computer Science**, 3 credit, undergraduate course for non-CS majors/minors
- Tutor: Conducted one-on-one and group tutoring sessions on Computer Science, Mathematics, and Mandarin Chinese

Winston-Salem, NC

Fall 2013 – Spring 2016

## Publications [Peer-Reviewed]

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### Fair Enough: Searching for Sufficient Measures of Fairness

TOSEM 2022

SUVODEEP MAJUMDER, JOYMALLYA CHAKRABORTY, **GINA R. BAI**, KATHRYN T. STOLEE, TIM MENZIES.

- ACM Transactions on Software Engineering and Methodology

### Does Assertion Roulette Smell Bad? An Experiment from the Perspective of Testing Education

VL/HCC 2022

**GINA R. BAI**, KAI PRESLER-MARSHALL, SUSAN R. FISK, KATHRYN T. STOLEE.

- IEEE Symposium on Visual Languages and Human-Centric Computing

### Check It Off: Exploring the Impact of a Checklist Intervention on the Quality of Student-written Unit Tests

ITICSE 2022

**GINA R. BAI**, KAI PRESLER-MARSHALL, THOMAS PRICE, KATHRYN T. STOLEE.

- ACM Conference on Innovation and Technology in Computer Science Education

### How Students Unit Test: Perceptions, Practices, and Pitfalls

ITICSE 2021

**GINA R. BAI**, JUSTIN SMITH, KATHRYN T. STOLEE.

- ACM Conference on Innovation and Technology in Computer Science Education

### How Graduate Computing Students Search When Using an Unfamiliar Programming Language

ICPC 2020

**GINA R. BAI**, JOSHUA KAYANI, KATHRYN T. STOLEE.

- IEEE/ACM International Conference on Program Comprehension

### Improving Students' Testing Practices

ICSE Doc Sym 2020

**GINA R. BAI**.

- IEEE/ACM International Conference on Software Engineering - Doctoral Symposium

### Exploring Tools and Strategies Used During Regular Expression Composition Tasks

ICPC 2019

**GINA R. BAI**, BRIAN CLEE, NISCHAL SHRESTHA, CARL CHAPMAN, CIMONE WRIGHT, KATHRYN T. STOLEE.

- IEEE/ACM International Conference on Program Comprehension

### Investigating the Effects of Gender Bias on GitHub

ICSE 2019

NASIF IMTIAZ, JUSTIN MIDDLETON, JOYMALLYA CHAKRABORTY, NEILL ROBSON, **GINA R. BAI**, EMERSON MURPHY-HILL.

- IEEE/ACM International Conference on Software Engineering

### Exploring Regular Expression Evolution

SANER 2019

PEIPEI WANG, **GINA R. BAI**, KATHRYN T. STOLEE.

- IEEE International Conference on Software Analysis, Evolution and Reengineering

## Honors & Awards

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- 2021 **Graduate Merit Award Recipient**, College of Engineering, North Carolina State University
- 2018 **Grace Hopper Travel Scholarship Recipient**, NCSU-ACM-W (Women in Computer Science)
- 2016-2017 **Graduate Research Award Recipient**, College of Engineering, North Carolina State University
- 2014 **Research Fellowship Recipient**, Wake Forest University

## Professional Service

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### Reviewing

- 2023 **Poster Reviewer**  
ACM Special Interest Group on Computer Science Education (SIGCSE)
- 2022 **Invited Manuscript Reviewer**  
IEEE Transactions on Learning Technologies (TLT)

### University Service

2022-pres **Member**, Recitation Committee

*Vanderbilt*

2017-2020 **Graduate Relations Chair/Member**, NCSU-ACM-W (Women in Computer Science)

*NC State*

## Miscellaneous

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**Language** English (fluent), Mandarin Chinese (fluent)

**Honor Society** Upsilon Phi Epsilon (International Honor Societies for the Computing and Information Disciplines, invited 2015)