

# Nasir U. Eisty

**Assistant Professor**  
Computer Science Department  
Boise State University  
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## Research Interests

- Software Engineering
- Software Quality
- Empirical Software Engineering
- Research Software Engineering
- Machine Learning

## Experience

- **Assistant Professor - Tenure Track** (August 2021 to Present)  
Department of Computer Science  
Boise State University, Boise, ID, USA
- **Assistant Professor - Tenure Track** (September 2020 to July 2021)  
Dept. of Computer Science & Software Engineering  
California Polytechnic State University, San Luis Obispo, CA, USA
- **Postdoctoral Researcher** (June 2020 to August 2020)  
Software Engineering lab, Dept. of Computer Science  
University of Alabama, Tuscaloosa, AL, USA
- **Research Assistant** (August 2016 to May 2020)  
Software Engineering lab, Dept. of Computer Science  
University of Alabama, Tuscaloosa, AL, USA
- **Research Intern** (Summer 2019)  
Los Alamos National Laboratory (LANL)  
Los Alamos, NM, USA
- **Research Intern** (Summer 2017)  
National Center for Supercomputing Applications (NCSA)  
University of Illinois at Urbana-Champaign, IL, USA
- **Lecturer** (January 2015 to July 2016)  
Department of Computer Science & Engineering.  
Daffodil International University, Dhaka, Bangladesh

## Education

- **Ph.D. in Computer Science (May 2020)**  
Department of Computer Science  
The University of Alabama, Tuscaloosa, AL, USA
- **MS in Computer Science (August 2018)**  
Department of Computer Science  
The University of Alabama, Tuscaloosa, AL, USA
- **B.Sc. in Computer Science & Engineering (December 2014)**  
Department of Computer Science & Engineering  
Rajshahi University of Engineering & Technology  
Rajshahi, Bangladesh

## Awards & Grants

- **Research, Economic Development and Graduate Education (R-EDGE) at Cal Poly**
  - Awarded grant \$18,000 for the calendar year 2021
- **BSSw (Better Scientific Software) Fellowship 2020**
  - Awarded grant \$35,489 for the calendar year 2020
- **1st Prize in Graduate Poster Competition at the University of Alabama - 2019**
- **BSSw (Better Scientific Software) Fellowship Honorable Mention - 2019**
- **Travel Scholarship to Einstein Toolkit Meeting 2017**

## Publications

1. Nasir U. Eisty, George K. Thiruvathukal, Jeffrey C. Carver “**A Survey of Software Metric Use in Research Software Development**” *14th eScience IEEE International Conference at Amsterdam, Netherlands, Oct 29 - Nov 1, 2018.*
2. Nasir U. Eisty, George K. Thiruvathukal, Jeffrey C. Carver “**Use of Software Process in Research Software development: A Survey**” *In Evaluation and Assessment in Software Engineering (EASE'19) Conference at Copenhagen, Denmark, April 15 - 17, 2019.*
3. Nasir U. Eisty, Danny Perez, Jeffrey C. Carver, J. David Moulton, Hai Ah Nam “**Testing Research Software: A Case Study**” *International Workshop on Software Engineering for Computational Science at Amsterdam, Netherlands, June 3-5, 2020.*
4. Nasir U. Eisty, Jeffrey C. Carver “**Peer Code Review in Research Software development**” *Empirical Software Engineering journal 27, 13 (2022)*
5. Shashank B. Lakshman, Nasir U. Eisty, “**Software Engineering Approaches for TinyML based IOT Embedded Vision: A Systematic Literature Review**” *4th International Workshop on Software Engineering Research & Practices for the Internet of Things (SERP4IoT 2022) Colocated with ICSE 2022, May 10, 2022*
6. Sharif Ahmed, Arif Ahmed, Nasir U. Eisty, “**Automatic Transformation of Natural to Unified Modeling Language: A Systematic Review**”, 20th IEEE/ACIS International

Conference on Software Engineering Research, Management, and Applications (SERA 2022), May 25-27, Las Vegas, USA

7. Nasir U. Eisty, Jeffrey C. Carver “**A Survey about Testing of Research Software**” *Empirical Software Engineering Journal* 2022
8. Md Athikul Islam, Rizbanul Hasan, Nasir U. Eisty, “**A Systematic Literature Review on Optimizing Documentation Effort in Agile Software Development**” (Submitted)

## Invited Talks

- **Webinar: Testing and Code Review Practices in Research Software Development ([Link](#))**  
The IDEAS Productivity Webinar Series of DOE Exascale Computing Project  
September 9, 2020
- **Collaboration Opportunities with the 2020 BSSw Fellows**  
2021 Exascale Computing Project Annual Meeting  
April 13, 2021 (Virtual)
- **Automatic Testing for Scientific Software Development ([Link](#))**  
SIAM Conference on Computational Science and Engineering (CSE 21)  
March 01, 2021 (Virtual)
- **Guest Lecture on Peer Code Review Practices**  
Spring 2021, Ball State University, Muncie, IN, USA

## Short Courses Taught

- **Tutorial: Contemporary Peer Code Review Practices**  
2019 Exascale Computing Project Annual Meeting  
January 17, 2019, at Houston, Texas
- **Tutorial: Contemporary Peer Code Review in Scientific Software Development ([Link](#))**  
14th eScience IEEE International Conference  
October 29, 2018, at Amsterdam, Netherlands
- **Summer Camp: Student Introduction to Engineering (Computer Science)**  
SITE III Summer Camp  
July 22 - 27, 2018 at The University of Alabama
- **Summer Camp: Student Introduction to Engineering (Computer Science)**  
SITE II Summer Camp  
July 15 - 20, 2018 at The University of Alabama
- **Summer Camp: Student Introduction to Engineering (Computer Science)**  
SITE I Summer Camp  
July 8 - 13, 2018 at The University of Alabama
- **Tutorial: Contemporary Peer Code Review, A Lightweight, Asynchronous Method for Ensuring High-Quality Code**  
SEA Software Engineering Conference and Tutorial  
April 4, 2018 at UCAR - Boulder, CO, USA

## Workshops Organized

- **Software Engineering and Reuse in Modeling, Simulation, and Data Analytics for Science and Engineering ([Link](#))**  
The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC21)  
November 16, 2021 (Virtual)
- **Software Engineering and Reuse in Modeling, Simulation and Data Analytics for Science and Engineering ([Link](#))**  
The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC20)  
November 19, 2020 (Virtual)
- **2019 International Workshop on Software Engineering for Science ([Link](#))**  
International Conference on Software Engineering (ICSE)  
May 28, 2019 at Montreal, Canada
- **Understanding Challenges and Solutions for the Development of Modeling & Simulation Software in Defense and Medicine**  
AlaSim International Conference  
October 25, 2017 at Huntsville, AL, USA

## Professional Services

- **Program Committee Member ([Link](#))**  
2022 International Workshop on Software Engineering for Computational Science  
June 21-23, 2022 at London, UK
- **Journal Reviewer**  
Software Quality Journal  
August 2021 - Present
- **Journal Reviewer**  
Nature Scientific Reports  
January 2022 - Present
- **PhD Admission Committee Member**  
PhD in Computing, Boise State University  
August 2021 - Present
- **Undergraduate Success Committee Member**  
Dept. of Computer Science, Boise State University  
August 2021 - Present
- **Program Committee Member ([Link](#))**  
2021 International Workshop on Software Engineering for Computational Science  
June 16-18, 2021 at Krakow, Poland
- **Software Engineering Lecturer Search Committee Member**  
Fall 2020 in CSSE Department at Cal Poly
- **Scholarship Award Committee Member**  
Fall 2020 - Winter 2021 in CSSE Department at Cal Poly
- **Software Engineering Curriculum Committee Member**  
Fall 2020 - Winter 2021 in CSSE Department at Cal Poly
- **Research Software Engineer (RSE) Search Committee Member**

## Blogs

- **Use of Software Metrics in Research Software ([Link](#))**  
Published on Better Scientific Software Blog by DOE on April 10, 2021
- **Testing Non-Deterministic Research Software ([Link](#))**  
Published on Better Scientific Software Blog by DOE on October 13, 2020
- **Making Software a First-Class Citizen in Research ([Link](#))**  
Software Sustainability Institute Blog on November 28, 2018

## Notable Participations

- **Course Design Institute (CDI) by CTL at Boise State**  
May 16 - 20, 2022 at Boise State University
- **US-RSE Community Building Workshop**  
April 25 - 26, 2022 at Princeton University
- **Judge at 2022 Graduate Student Showcase Awards**  
At Boise State University
- **University of Alabama System Scholars Institute 2019**  
May 14, 2019 at University of Alabama in Huntsville, AL, USA
- **Judge at Alabama Robotics Competition**  
April 6, 2019 at University of Alabama, Tuscaloosa, AL, USA
- **Judge at Undergraduate Research and Creative Activity Conference 2019**  
March 27, 2019 at University of Alabama, Tuscaloosa, AL, USA
- **ALEPSCOR NSF Day**  
May 1, 2018 at University of Alabama at Birmingham, AL, USA
- **Judge at Alabama Robotics Competition**  
April 7, 2018, at The University of Alabama
- **Judge at 2018 Undergraduate Research and Creative Activity Conference**  
March 28-30, 2018, at The University of Alabama
- **2018 Alabama Computer Science Education Summit**  
March 14, 2018, Montgomery, AL, USA
- **2017 International Workshop on Software Engineering for High Performance Computing in Computational and Data-Enabled Science and Engineering**  
SC17 International Conference, November 12, 2017, Denver, CO, USA
- **2017 North American Einstein Toolkit School and Workshop**  
Jul 31 - Aug 4 at National Center for Supercomputing Applications, Urbana, IL, USA
- **Scaling to Petascale Institute - BLUE WATERS Sustained Petascale Computing**  
June 26 - 30, 2017 at Beckman Institute for Advanced Science and Technology, Urbana, IL
- **Volunteer at Alabama Robotics Competition**  
April 8, 2017 at University of Alabama, Tuscaloosa, AL, USA

## **Others**

- **Excellent Performance Award** from Dept. of CSE, RUET in 2013
- **Excellent Performance Award** from Dept. of CSE, RUET in 2014
- **Champion** prize at inter university software/project contest at BUET CSE-FEST 2013
- **Champion** prize in software category at digital innovation fair 2013.
- **7th position** at EATL-Prothomalo Apps contest 2014
- **7th position** in IT Business Idea challenge at IUT CSE Carnival 2014
- **5th Position** at Inter-University Programming Contest at RUET CSE-FEST in 2012
- **Runner up** at programming contest at RUET in 2011
- **Jury Board member** at “**National Mobile apps contest**” in Bangladesh for the year 2015