# Nasir U. Eisty

**Assistant Professor** 

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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 2020)

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" (Revision submitted to the Empirical Software Engineering Journal)
- 5. Nasir U. Eisty, Jeffrey C. Carver "A Survey about Testing of Research Software" (Revision submitted to the IEEE Transactions on Software Engineering Journal)

### **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 (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)

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

University of Alabama Research Software Initiative

## **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**

➤ 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

## **Other Achievements**

- **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