

# BHANUKIRAN GURIJALA

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## PERSONAL INFORMATION

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Website: <https://www.gurijalas.com>  
LinkedIn: <https://www.linkedin.com/in/drbbhanukirangurijala>

## PROFESSIONAL INFORMATION

Computer Science Department  
The University of Texas at El Paso  
500 West University Avenue  
El Paso, Texas – 79968  
Phone: +1-(915)-747-5827  
E-mail: [bgurijala@utep.edu](mailto:bgurijala@utep.edu)

## EDUCATION

Ph.D. in Computer Science, The University of Texas at El Paso (UTEP), TX, USA	2016
M.S. in Software Engineering, The University of Houston Clear-Lake (UHCL), TX, USA	2008
B.E. (Bachelor of Engineering) in Computer Science and Engineering, Rashtreeya Vidyalyaya College of Engineering (RVCE), Bangalore, India	2005

## PROFESSIONAL EXPERIENCE

Visiting Professor, Computer Science Department, The University of Texas at El Paso (UTEP)	2022 –
Assistant Professor (tenure-track), Computer Science (CS) and Information Systems (IS) Department, West Virginia University Institute of Technology (WVU Tech)	2019 – 2022
Assistant Professor (non-tenure-track), Computer Science, North American University (NAU)	2017 – 2019
Quality Assurance Analyst, Heavy Construction Systems Specialists, Inc. (HCSS)	2016 – 2017
Programmer Analyst, UR International Inc.	2008 – 2009
Senior Software Engineer, iGate Global Solutions Pvt. Ltd.	2005 – 2006

## HONORS AND AWARDS

2017 Outstanding Graduate Student in Computer Science, UTEP  
2012 Excellent Summer Intern (including cash award \$1000), HCSS  
2007 – 2008 Dollars for Scholars Scholarship (\$2000 for exceptional merit), UHCL  
2001 Excellence in Education (for exceptional merit, standing 2<sup>nd</sup> in district for class 12 along with cash award), Akhil Bharatiya Vidyarthi Parishad (ABVP), India

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## CERTIFICATIONS AND LICENSURES

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Certified Ethical Hacker (CEH), EC-Council; Preparation in progress

Effective Teaching Practices, Association of College and University Educators (ACUE) and The American Council on Education (ACE); Issued – 04/28/2021. [See Credential here](#). No Expiration

Inclusive Teaching for Equitable Learning, Association of College and University Educators (ACUE) and The American Council on Education (ACE); Issued – 10/30/2022. [See Credential here](#). No Expiration.

Scrum Master Certified (SMC), SCRUMstudy; Issued – 09/22/2020; Expires – 09/22/2023. [See Credential here](#).

Scrum Fundamentals Certified (SFC), SCRUMstudy; Issued – 09/20/2020. [See Credential here](#). No Expiration

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## MEDIA APPEARANCES

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Article published in The Conversation, an independent non-profit news organization “What is Pegasus? A Cybersecurity expert explains how the spyware invades phones and what it does when it gets in”, 8/9/2021, <https://theconversation.com/what-is-pegasus-a-cybersecurity-expert-explains-how-the-spyware-invades-phones-and-what-it-does-when-it-gets-in-165382>

Interviewed by WVNS TV News following the Colonial Pipeline Attack, “Explainer: what is a cyber-attack?”, 5/12/2021, <https://www.wvnstv.com/top-news/explainer-what-is-a-cyber-attack/>

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## PROFESSIONAL MEMBERSHIPS

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Project Management Institute (PMI), Member, 2017 –

Honor Society, Member, 2015 –

Text and Academic Authors Association (TAA), Member, 2013 –

American Society for Quality (ASQ), Member, 2011 –

Association for Computing Machinery (ACM), Member, 2010 –

IEEE Computer Society, **Senior Member**, 2009 –

Institute of Electrical and Electronics Engineers (IEEE), **Senior Member**, 2008 –

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## RESEARCH AND TEACHING INTERESTS

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My research interest lies in cyber-security and software engineering, especially in quality assurance, formalisms and applying principles of software engineering to cyber-security.

Experience teaching face-to-face, online, and hybrid undergraduate and graduate-level diverse computer science, software engineering, and cybersecurity courses.

Interested in teaching Computer Science, Software Engineering, and Cyber-Security courses for undergraduates and graduates.

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Interested in teaching special topic courses geared towards specialization topics in Software Engineering and Cyber-Security for undergraduates and graduates.

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## PROFESSIONAL SKILLS

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Good written and oral communication skills as evidenced by articles published and presentations given to wide range of audience.

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### Programming Languages

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Java, JSPs, SQL, ASP.NET, C#, Python, C, C++, 8086 Assembly Language, and ARM Assembly Language.

Logic: Prolog.

Statistical: Basic SAS 9.2 and R.

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### Security Tools

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ZAP 2.6.0, Burp suite v1.7.24.

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### Web Technologies

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JDBC, Servlets, EJBs, Struts Framework, HTML.

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### IDEs

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Eclipse 3.1, Jdeveloper, Visual Studio 2017, PyCharm, µVision.

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### Database

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MS SQL Server 2014, IBM DB2 8.1, Oracle 9i, MS Access.

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### Tools

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Ranorex 7.1, Rational Rose Enterprise Edition, Crystal Reports XI, SQL Server Reporting Services 2005 (SSRS), Microsoft FrontPage, Microsoft Visio 2013, Microsoft Visual Source Safe (VSS) 6.0, Tortoise SVN subversion, Junit, OnTime, Jira.

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### Servers

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Weblogic 8.1, Tomcat 5.X, JBoss 4.2.1.

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### Design

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Unified Modeling Language (UML) diagrams (use case, class, sequence, component, and deployment diagrams).

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### Software Metrics

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COCOMO, COCOMO II, CMMI Levels.

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### Content Management Framework

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Drupal 7.

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## Hypervisors

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VMware, VirtualBox.

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## PROFESSIONAL EXPERIENCE

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### Industry Experience

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Quality Assurance Analyst, HCSS, Houston, TX Aug 2016 – Aug 2017

Actively involved and co-managed the cyber-security initiative.

As scrum master, facilitated sprint planning, daily scrums, retrospectives, stakeholder meetings, and software demonstrations.

Part of the team involved in automating and managing test suite for testing all products.

Actively involved in developing content and teaching quality assurance and quality control concepts to developers and quality personnel.

Software Testing Intern,

May 2013 – Aug 2013

HCSS, Houston, TX

Jun 2012 – Aug 2012

Actively involved in automating regression testing for one of the major products.

Guided and led a team of four interns to generate automated scripts for regression testing.

Created test case specifications, designed, and wrote test cases.

Involved in the design meetings for adding new features to the product.

Helped improve organization of software artifacts for easier access and maintainability.

Data-warehousing Intern, Vigna Inc., Lawrenceville, GA

Apr 2009 – Dec 2009

Created reports using SSRS and Crystal Reports XI for financial firm

Programmer Analyst, UR International Inc., Houston, TX

May 2008 – Feb 2009

Created reports using SSRS and Crystal Reports XI for Texas State Government.

Programming using Java

Student Tech II,

Jan 2007 – Aug 2007

University Computing and Telecommunications, UHCL

Involved in requirements gathering and creating Software Requirements Specification (SRS) document, and user manual documentation.

Programming using UIX and performed Unit testing using Junit.

Senior Software Engineer, iGate Global Solutions Pvt. Ltd., India Sep 2005 – Dec 2006

Programming using J2EE and Struts

Involved in client calls and helped in updating SRS and Design documents.

Conducted Knowledge Transfer (KT) Sessions to the team members.

Involved in writing test cases and integration testing of the application.

Intern, USi Internetworking Pvt. Ltd., India

Jan 2005 – Jun 2005

Part of team involved in requirements gathering and creating SRS.

Actively involved in programming and testing (unit and integration level) the application.

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## TEACHING EXPERIENCE

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Experience teaching undergraduate and graduate level diverse computer science, software engineering, and cybersecurity courses. Experience in offering courses using face-to-face, online, and hybrid modes.

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Visiting Professor, Jan 2022 –  
Computer Science Department,  
The University of Texas at El Paso (UTEP)  
Software Engineering: Design and Implementation (undergraduate level) (Spring 2023)  
Advanced Object-Oriented Programming (undergraduate level) (Fall 2022)  
Introduction to Computer Science (undergraduate level) (Fall 2022)  
Software Construction (undergraduate and graduate level) (Fall 2022)  
Software Integration and Verification and Validation (undergraduate and graduate level –  
Spring 2023) (graduate level – Spring 2022)  
Wireless Networks (undergraduate and graduate level) (Spring 2023 & 2022)

Assistant Professor (tenure-track), Aug 2019 – Jan 2022  
Computer Science and Information Systems Department,  
West Virginia University Institute of Technology (WVU Tech)  
Foundation of Cybersecurity (sophomore level) (Fall 2021)  
Cybersecurity Principles and Practice (senior level) (Spring 2021 & 2020)  
Computer System Concepts (junior level) (Spring 2021 & 2020)  
Operating Systems Structure (senior level) (Fall 2021, 2020 & 2019)  
C# (junior level) (Fall 2020)  
Data Structures (sophomore level) (Fall 2020 & 2019)  
Computer Languages – Python (junior level) (Fall 2020)  
Computer Science II – Java (freshman level) (Spring 2020)  
Computer Science I – Java (freshman level) (Fall 2019)

Experience mentoring capstone project teams during their senior year.  
Experience in advising undergraduate Computer Science and Information Systems students.  
Actively assisted in setting up new Cybersecurity minor and Area of Emphasis (AoE) in the Computer Science and Information Systems Department.

Assistant Professor, Aug 2017 – Aug 2019  
Computer Science, North American University (NAU)  
Advanced Computer and Network Security (graduate level, online) (Summer 2019)  
Advanced Operating Systems (graduate level, online) (Summer 2019)  
Business Intelligence (graduate level, online) (Summer 2019 & 2018)  
Advanced Algorithms (graduate level, online) (Spring 2019 & 2018)  
Computer Organization (sophomore level) (Spring 2019 & 2018 and Fall 2018 & 2017)  
Systems Programming using UNIX and C (sophomore level) (Spring 2019 & 2018)  
Introduction to Computer Science II – Java (freshman level) (Spring 2019 & 2018 and Fall 2018 & 2017)  
Introduction to Computer Science I – Python (freshman level) (Spring 2019 & 2018 and Fall 2018 & 2017)  
Computer Architecture (graduate level, online) (Fall 2018)  
Algorithms (junior level) (Fall 2018 & 2017)  
Data Structures (sophomore level, online) (Summer 2018)  
Operating Systems (junior level) (Fall 2017)

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Experience in advising undergraduate and graduate Computer Science students

Lecturer, Aug 2014 – Dec 2014  
Computer Science, UTEP Jun 2010 – Aug 2010  
Computer Programming for Scientists and Engineers (sophomore level course) (Fall 2014) co-taught as co-instructor  
Software Testing, Verification, and Validation (graduate level core course) (Summer 2010), Software Engineering program co-taught as principal instructor

Lead Graduate Teaching Assistant, Computer Science, UTEP Jan 2010 – May 2014  
Software Architecture (graduate level core course) (Fall 2010)  
Software Engineering Requirements (senior level course) (Fall 2013)  
Software Engineering Design and Implementation (senior level course) (Spring 2014)  
Advanced Object-Oriented Programming (junior level course) (Fall 2011 and Fall 2012)  
Computer Architecture II (junior level course) (Spring 2010)  
Automata, Computability and Formal Languages (junior level course) (Fall 2011)  
Data Structures (sophomore level course) (Spring 2011)  
Elementary Data Structures (freshman level course) (Spring 2012)

Supervised all TAs as lead TA from Fall 2010. Supervised around 20 TAs each semester. Conducted evaluations of all TAs from both faculty and students. Proposed and implemented new ways of accountability for both TAs and students that resulted in promoted better learning experience and optimal utilization of TAs.

Graduate Teaching Assistant, Software Engineering, UHCL Sep 2007 – Dec 2007  
Personal Software Processes (graduate level course) (Fall 2007)

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## RESEARCH EXPERIENCE

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Research Associate, Cyber-shARE, UTEP Jun 2014 – May 2016  
Conducted research and developed a metadata management system to support and promote interdisciplinary research (IDR).

Other Research Experience:

Developed an approach for detecting and preventing Cross-Site Scripting (XSS) attacks on Web applications as part of my dissertation research. Currently working on protecting the intellectual property that resulted from my dissertation work.

Assisted in writing a grant proposal for NSF.

Experience writing mini grants for equipment and promoting undergraduate research.

Involved as Co-PI and submitted grant proposal for Innovation Grants Program.

Conducted preliminary research work on using model-based testing (MBT) for testing aspect-oriented programs (AOP).

Conducted an extensive literature study on MBT by surveying over 100 papers and wrote extended abstracts for 45 of those.

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## SERVICE

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### Leadership

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Faculty Advisor, IEEE Student Organization, WVU Tech, Beckley, WV, USA	2021 – 2022
Member of the Advisory Council, Academy of Careers and Technology, Beckley, WV, USA	2021 – 2022
Member of the Advisory Board, Computer Science & Information Systems, WVU Tech, Beckley, WV, USA	2019 –
Faculty Mentor, ACM ICPC Programming Competition, WVU Tech, Beckley, WV, USA	2019
Faculty Advisor, ACM Chapter, NAU, Stafford, TX, USA	2018 – 2019
Strategic Planning Committee Member, NAU, Stafford, TX, USA	2018 – 2019
Steering Committee Member, Distance Education, NAU, Stafford, TX, USA	2018 – 2019
Steering Committee Member, Student Success Office, NAU, Stafford, TX, USA	2018 – 2019
Member of the advisory board, Computer Science, NAU, Stafford, TX, USA	2017 – 2019
Faculty Advisor, ACM-W Chapter, NAU, Stafford, TX, USA	2017 – 2019
Member of the advisory board, Office of International Programs (OIP), UTEP, TX, USA	2012 – 2013
Member of the advisory board, Masters in Software Engineering, UTEP, TX, USA	2010 – 2011

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### University Service

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Member of the Faculty Evaluation Committee, College of Engineering, WVU Tech, Beckley, WV, USA	2021 – 2022
Member of the Faculty Search Committee, Computer Science, WVU Tech, Beckley, WV, USA	2019 – 2022
Awards Committee Member, NAU, Stafford, TX, USA	2018 – 2019
Liaison, Institutional Assessment and Improvement Planning, Computer Science Department, NAU, Stafford, TX, USA	2017 – 2019
Webmaster, Indian Student Association (ISA), UTEP, El Paso, TX, USA	2013 – 2016

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### Professional Service

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External Reviewer for Promotion and Tenure, Missouri Western State University	2021
Judge, TAA Textbook Awards Program, TAA Special Session Organizer and Chair, The 5th International Conference on Communication, Management, and Information Technology	2019 – 2020 2018

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Member of the Technical Program Committee, 2017 –  
GSTF Journal on Computing (JoC)  
Journal Reviewer, 2015 –  
Athens Institute for Education and Research (ATINER)

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## Volunteer/Outreach/Community Service

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Cybersecurity Expert, STEMCARE, Beckley, WV, USA 2021  
Guest Speaker/Presenter, Independence High School, Sophia, WV, USA 2021  
Judge, Summer Undergraduate Research Symposium, Morgantown, WV, USA 2021  
Judge, Spring Undergraduate Research Symposium, Morgantown, WV, USA 2021  
Judge, Math Field Day, Beckley, WV, USA 2020  
Judge, First Lego League Robotics, Beckley, WV, USA 2019  
Member, American Red Cross, 2010 –

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## PUBLICATIONS

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Gurijala, Bhanukiran, "A unified cyber-enhanced approach for detecting cross-site scripting attacks on Web applications" (2016). *ETD Collection for University of Texas, El Paso*. AAI10152104.

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## Conference Publications

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Osuna, F., Gurijala, B., Esparza, P., Akbar, M., and Gates, A., "A Feasibility Study of an Approach to Extend Research Footprints Using Disparate Sources," Proceedings of the First AAAI Workshop on Scholarly Big Data: AI Perspectives, Challenges, and Ideas, February 12-17, 2016, Phoenix, AZ.

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## INVITED PRESENTATIONS

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A Novel Unified Cyber-Enhanced Approach for Detecting Cross-Site Scripting Attacks on Web Applications. Invited Technical Presentation, IEEE West Virginia Section, Beckley, West Virginia, USA, November 14, 2019.

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## GRANTS

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2021 Innovation Grants Program, An Engineering Laboratory with Remote Access, Co-PI with Afrin Naz, Mingyu Lu, Stephen Goodman, Charan Litchfield, and Sanish Rai. (Submitted September 2020).

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## PROFESSIONAL DEVELOPMENT

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Participated and completed **NSF I-Corps** (entrepreneurship bootcamp).

Participated and completed Python Essentials for Instructors.

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## REFERENCES

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Available on request.