MUSTAFA AL LAIL

School of Engineering ◇ Texas A&M International University
5201 University Boulevard, Lamar Bruni Vergara Science Center 324-E, Laredo, TX 78041
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EDUCATION

Colorado State University, Fort Collins, Colorado *August 2018*
Doctor of Philosophy in Computer Science
GPA: 3.9 out of 4.0
Advisers: Professor Dr. Robert B. France and Professor Dr. Indrakshi Ray

Colorado State University, Fort Collins, Colorado *August 2009*
Master of Computer Science

King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia *May 2004*
Bachelor of Science in Computer Engineering

ACADEMIC POSITIONS

Assistant Professor of Computer Science & Engineering *August 2018 - present*
School of Engineering, Texas A&M International University

Visiting Faculty Researcher *June 2023 - August 2023*
Advanced Computing Systems Research, Oak Ridge National Laboratory

Visiting Scholar *June 2022 - August 2022*
Department of Computer Information Systems, Colorado State University

Lecturer *September 2016 - June 2017*
Department of Computer Science and Software Engineering, Seattle University

RESEARCH INTERESTS

- Software Engineering
- Model-Driven Software Development
- Cybersecurity
- High Performance Computing
- Machine Learning Applications
- Software Verification and Validation

SCHOLARSHIPS AND HONORS

Doctoral Degree Scholarship August 2009 - May 2015
The Ministry of Higher Education, Kingdom of Saudi Arabia

Master Degree Scholarship August 2007 - May 2009
The Ministry of Higher Education, Kingdom of Saudi Arabia

Gamma Beta Phi Honor Society May 2013 - present
Colorado State University, Fort Collins, CO

UPE International Honor Society for the Computing Sciences April 2010 - present
Colorado State University, Fort Collins, CO

PUBLICATION WHILE AT TAMIU

Notes:

1. The names of undergraduate researchers are underlined and the names of outside and international collaborators are in *italic font* and designated with asterisks *.

Refereed Journal Articles

1. **Al Lail, Mustafa**, Alejandro Garcia, and Saul Olivo. "Machine Learning for Network Intrusion Detection—A Comparative Study." Future Internet 15, no. 7 (2023): 243.
2. **Al Lail, Mustafa**, Marshal Moncivais, and Miguelangel Trevino, "Towards a Software System for Spatio-Temporal Authorization," The Journal of Computing Sciences in Colleges, (36, 7 2021).
3. Miguelangel Trevino and **Mustafa Al Lail**. "Database Web Application for Administering Spatio-Temporal Access Control Policies". American Journal of Advanced Research 5 (2021): 1.

Refereed Conference Papers in Proceedings

1. **Al Lail, Mustafa**, Antonio Rosales, Hector Cardenas, $MohammadZarour^*$, and $AlfredoPerez^*$, "TPV: A Tool for Validating Temporal Properties in UML Class Diagrams". In the proceedings of the 46th International Conference on Software Engineering (ICSE 2024).
2. $Pedro\,Valero-Lara^*$, Alexis Huante, **Mustafa Al Lail**, $William\,Godoy^*$, $Keita\,Teranishi^*$, $Prasanna\,Balaprakash^*$, and $Jeffrey\,Vetter^*$. "Comparing Llama-2 and GPT-3 LLMs for HPC kernels generation". In the proceedings of the 36th International Workshop on Languages and Compilers for Parallel Computing (LCPC2023).
3. Hector Cardenas, and **Mustafa Al Lail**, "Specifying Temporal Properties in UML Using Patterns: A Tool-supported Approach". In the proceedings of the ACM/IEEE 26th International Conference on Model-Driven Engineering Languages and Systems (MODELS 2023).
4. Antonio Rosales, and **Mustafa Al Lail**, "Automated Mitigation of Frame Problem in UML Class Diagram Verification". In the proceedings of the ACM/IEEE 26th International Conference on Model-Driven Engineering Languages and Systems (MODELS 2023).
5. Moncivais, Marshal, and **Mustafa Al Lail**. "Poster: Integrating Spatio-temporal Authorization with Generic Cloud-based Software Architecture for Internet of Things Devices." In Proceedings of the 28th ACM Symposium on Access Control Models and Technologies, pp. 59-61. 2023.
6. Cervantes, Erick, **Mustafa Al Lail**, Edwin Torres, and Khaled Enab. "Performance Evaluation of Supervised Machine Learning Algorithms to Predict Shale Oil Production.." In IISE Annual Conference and Expo. IISE, 2023.
7. $Lars\,Hamann^*$, $Martin\,Gogolla^*$, and **Mustafa Al Lail**. "Categorization of Approaches to Extend and Reuse OCL". In Proceedings of the 25th International Conference on Model Driven Engineering Languages and Systems: Companion Proceedings, pp. 847-851. 2022.
8. **Al Lail, Mustafa**, Antonio Rosales, Hector Cardenas, $Lars\,Hamann^*$, and $Alfredo\,Perez^*$. "Transformation of TOCL Temporal Properties into OCL". In Proceedings of the 25th International Conference on Model Driven Engineering Languages and Systems: Companion Proceedings, pp. 847-851. 2022.
9. Hector Cardenas, Ryan Zimmerman, Antonio Rosales, **Mustafa Al Lail**, and $Alfredo\,Perez^*$, "Formal UML-based Modeling and Analysis for Securing Location-based IoT Applications". In 2022 IEEE 19th International Conference on Mobile Ad Hoc and Smart Systems (MASS), pp. 722-723. IEEE, 2022.

10. **Al Lail, Mustafa**, Alejandro Garcia, and Saul Olivo, "Machine Learning for Network Intrusion Detection- A Comparative Study". Presented at IISE Lean Six Sigma & Data Science Conference 2022. Atlanta, Gorgia, September 19 – 21, 2022.

11. **Al Lail, Mustafa**, "Towards Cloud-Based Software for Incorporating Time and Location into Access Control Decisions", In Proceedings of the 26th ACM Symposium on Access Control Models and Technologies, pp. 55-57. 2021.

Pending Publication: Submitted Journal Articles and Conference Papers

1. **Al Lail, Mustafa**,Cervantes, Erick, Khaled Enab, Edwin Torres, and Khaled Almustafa . "Predicting Shale Oil Production with Supervised Machine Learning Algorithms: A Performance Evaluation." Submitted to the ACM Transactions on Intelligent Systems and Technology Journal (TIST).

2. Antonio Rosales and **Mustafa Al Lail**," Taming the Frame Problem– An Automated Approach for Robust UML Class Diagram Specification and Verification". Submitted to the Innovations in Systems and Software Engineering journal.

3. **Al Lail, Mustafa**, Marshal Moncivais, Robert Benton, Carlos Delgado, and *Alfredo Perez**. "Secure Cloud-based Software System Incorporating Time and Location into Access Control Decisions". Submitted for publication in the Journal of ACM Transactions on Privacy and Security.

4. Antonio Rosales and **Mustafa Al Lail**,"Advancing Interoperability for UML Tools– An Experience Report". Submitted to the ACM/IEEE 27th International Conference on Model-Driven Engineering Languages and Systems (MODELS 2024).

5. Antonio Rosales and **Mustafa Al Lail**, *Omar Alam** "Tool Demo: Bridging the Interoperability Gap between UML Tools with XMI Import/Export Support". Submitted to the IEEE 27th International Symposium on Real-Time Distributed Computing (ISORC 2024).

6. Moncivais, Marshal, and **Mustafa Al Lail**. 'Enhancing IoT Security with Context-Aware RBAC in Cloud Architectures." Submitted to the 33rd International Conference on Computer Communications and Networks (ICCCN 2024).

7. Huante, Alexis, and **Mustafa Al Lail**. "Network Data Complexity and Its Impact on Machine Learning Performance" Submitted to the 33rd International Conference on Computer Communications and Networks (ICCCN 2024).

8. Huante, Alexis, and **Mustafa Al Lail**. "Unveiling Dataset Complexity's Impact on Deep Learning Network Intrusion Detection" Submitted to the 33rd International Conference on Computer Communications and Networks (ICCCN 2024).

9. **Al Lail, Mustafa**, Pinto, Daniela, Almanza, Luis Alvarez, Salazar, Francisco, and Rizzi, Carolina . "Beyond Traditional Methods: Deep Learning with Data Augmentation for Robust Access Control."Submitted to the 33rd International Conference on Computer Communications and Networks (ICCCN 2024).

Pending Submission: Journal Articles and Conference Papers Under Preparation

1. **Al Lail, Mustafa**, "A Tool-supported Framework for Specifying and Analyzing Temporal Properties of UML Class Models". To be submitted for publication in IEEE Transactions on Software Engineering.

2. *Ramadan Abdulnabi**, **Mustafa Al-Lail**, and *Rejina Basnet**, "Integration of Task-Attribute Based Access Control Model for mobile Workflow Authorization and Management", To be submitted for consideration in the Journal of Security and Privacy.

3. **Al Lail, Mustafa** and Huante, Alexis "Unraveling the Hidden Depths: Intrinsic Dimensionality Analysis for Computer Network Intrusion Detection". To be submitted for publication in the Electronics Journal.

4. **Al Lail, Mustafa**, Pinto, Daniela, Almanza, Luis Alvarez, Salazar, Francisco, and Rizzi, Carolina . 'Machine Learning vs. Deep Learning: A Comparative Study for AI Access Control Supremacy."To be submitted for publication in the Electronics Journal.

5. **Al Lail, Mustafa**, and Jacob Flores. "Preemptive IoT botnet detection using machine learning model". To be submitted for presentation and publication in The 2025 International Workshop on AI-Driven Trustworthy, Secure, and Privacy-Preserving Computing (AidTSP 2025).

6. **Al Lail, Mustafa**, Jhonny Gonzales, and Jose Gonzales, "Graphical User Interface to Design UML Class Diagrams for Analysis". To be submitted for presentation and publication at the 21th Workshop on Model Driven Engineering, Verification and Validation.

Non-Published Conferences Presentations

1. **Al Lail, Mustafa**, "Innovative Ideas for Implementing Active Learning Using Top Hat," Presented at Top Hat Engage Conference 2020, New Orleans, LA, March 5-7, 2020.

PUBLICATION PRIOR TO TAMIU

Refereed Journal Articles

1. Ramadan Abdulnabi, **Mustafa Al-Lail**, Indrakshi Ray, Robert B. France, "Specification, Validation, and Enforcement of a Generalized Spatio-Temporal Role-Based Access Control Model" IEEE Systems Journal 7(3), 501-515 (2013)

Refereed Conference Papers in Proceedings

1. **Mustafa Al-Lail**, Wuliang Sun, Robert B. France, "Analyzing Behavioral Aspects of UML Design Class Models Against Temporal Properties", in Proceedings of The 14th International Conference on Quality Software (QSIC 2014), Dallas, Texas, USA October 2014, 196-201

2. **Mustafa Al-Lail**, Ramadan Abdunabi, Robert B. France, Indrakshi Ray : "An Approach to Analyzing Temporal Properties in UML Class Models", in Proceedings of MoDeVVa@MoDELS 2013: 77-86

3. **Mustafa Al-Lail**,"A Framework for Specifying and Analyzing Temporal Properties of UML Class Models". Demos/Posters/StudentResearch@MoDELS 2013: 112-117

4. **Mustafa Al-Lail**, Ramadan Abdunabi, Robert B France, Indrakshi Ray, 2013,"Rigorous Analysis of Temporal Access Control Properties in Mobile Systems", in Proceedings of 18th IEEE International Conference on the Engineering of Complex Computer Systems, Singapore July 2013, 246-251

GRANTS AND FUNDING WHILE AT TAMIU

External Funding

1. PD: Alfredo Ramirez, Co-PD:Kameron Jorgensen, Senior Faculty: **Mustafa Al Lail**, "Academic Recovery and Data Analysis (ARDA)", USA Department of Education, $2,999,783.00.

2. Visiting Faculty Researcher: **Mustafa Al Lail**, Student team: Erick Cervantes and Jhonny Gonzalez, "Building Software and Data Analytic Applications for Solving DOE Scientific Problems", Sustainable Horizons Institute, 06/23 - 08/23, Faculty $25,800, each student $12,000, Total $49,800.

Pending Approval: Submitted Grant proposal

1. PI: Khaled Enab, **co-PI: Mustafa Al Lail**, co-PI: Kenneth Tobin, co-PI: Deepak Ganta, "CAP-[PBAI] Physics-Based AI Institute for Engineering at Texas A&M International University", Department of Education (DOE), Submitted in October 2023, $300,000.

Pending Submission: Grant Proposals Under Preparation

1. Mustafa Al Lail, "Tackling the Software Crisis by the Integration of Formal Methods and Model-Driven Engineering through Developing a Lightweight Formal Specification and Validation Tool with Code Generation Capabilities ", NSF CAREER, submission deadline 07/24/24, $400,000.

2. Mustafa Al Lail, "Access Control Model for Cloud Computing and Internet-of-Things Applications", University Research Grant, Texas A&M International University, submission deadline 10/01/24, $10,000.

Not-Awarded Grant Proposals

1. **PI: Mustafa Al Lail**, Co-PIs: Abdullah Muzahid, Nguyen Khanh, Pedro Valero Lara, and Mohammad Zarour, "FMitF: Track II: Developing A Usable, Robust, and Accessible Lightweight Model Driven Engineering Tool for the Analysis of UML Class Diagram", NSF, Submitted on 2/15/23, $100,000.

2. PI: Oscar Hernandez (ORNL), **co-PI: Mustafa Al Lail** (TAMIU), co-PI: Catherine Schuma, co-PI: Ganesh Sivaraman (UTK), co-PI: Noushin Ghaffari (Prairie View A$M), and co-PI: Todd Gary (Mehary Medical College), "Building a Diverse Workforce in Computer Science: A Multidisciplinary Leadership Computing Institute (DIVERSITY-CS)", Department of Energy (DOE) , Submitted on 3/15/2023, $5,950,000.

Internal Funding:

1. Al Lail, Mustafa, "Class Diagram Analyzer (CDA): Tackling the Software Crisis by the Integration of Formal Methods and Model-Driven Engineering Through the Development of a Novel, Effective, Efficient, and Usable Tool ", Texas A&M International University Presidential Research Development Grant, 09/23 - 02/25, $50,000.

2. Al Lail, Mustafa, "Improvements of The Tool Support for Uncovering Faults in Software Design Models", University Research Grant, Texas A&M International University, 9/22 - 8/24, $10,000.

3. Al Lail, Mustafa, "A Tool Support for Uncovering Faults in Software Design Models", University Research Grant, Texas A&M International University, 9/21 - 8/22, $10,000.

4. Faculty Mentor: Al Lail, Mustafa, Student Team: Felipe Rivas, Mario Juarez, and Luis Moreno, "Building Heart Rhythms Classification Device for Human", TAMIU AIRES The Incubatorship Experience Program, Texas A&M International University, 1/23 - 5/23, Faculty share $4,500, each student $3,500, Total $15,000.

5. Faculty Mentor: Al Lail, Mustafa, Student Team: Miguel Achoy, Alejandro Aguilar, Jacob Lopez, Gabriel Torres, and Alberto Villarreal, "Live Parking Lot Maps using Computer Vision", TAMIU AIRES The Incubatorship Experience Program, Texas A&M International University, 9/23 - 12/23, Faculty share $4,500, each student $3,500, Total $22,000.

6. Al Lail, Mustafa, "Phishing Detection Using Machine Learning", ACT on IDEAS Fellowship Mini Grant, Texas A&M International University, 1/23 - 5/23, $3,000.

7. Al Lail, Mustafa, "Secure Cloud-based Software System Incorporating Time and Location Into Access Control Decisions" , ACT on IDEAS Fellowship Mini Grant, Texas A&M International University, 1/22 - 5/22, $3,000.

8. Al Lail, Mustafa, "Towards Cloud-Based Software for Incorporating Time and Location Into Access Control Decisions", ACT on IDEAS Fellowship Mini Grant, Texas A&M International University,

8/21 - 12/21, $3,000.

9. Al Lail, Mustafa, "Software Implementation of Generalized Spatio-Temporal Role-Based Access Control Model (GSTRBAC)", ACT on IDEAS Fellowship Mini Grant, Texas A&M International University, 1/21 - 5/21, $3,000.

10. Al Lail, Mustafa, "Software Implementation of Generalized Spatio-Temporal Role-Based Access Control Model (GSTRBAC)", ACT on IDEAS Fellowship Mini Grant, Texas A&M International University, 8/20 - 12/20, $3,000.

Under Preparation Grant Proposals

1. Mustafa Al Lail, "Tackling the Software Crisis by the Integration of Formal Methods and Model-Driven Engineering through Developing a Lightweight Formal Specification and Validation Tool with Code Generation Capabilities ", NSF CAREER, submission deadline 07/26/24, $400,000.

2. Mustafa Al Lail, "Access Control Model for Cloud Computing and Internet-of-Things Applications", University Research Grant, Texas A&M International University, submission deadline 10/01/23, $10,000.

STUDENT SUPERVISION WHILE AT TAMIU

Undergraduate Research Conference Oral and Poster Presentations

1. Miguelangel Trevino, Mustafa Al Lail, "Database Web Application for Administering Spatio-Temporal Access Control Policies". Accepted at the 2021 International Conference of Advanced Research in Applied Science, Engineering and Technology (ICARASET'21).

2. Antonio Rosales, Hector Cardenas and Mustafa Al Lail,, "A Tool Support for Uncovering Faults in Software Design Models". Poster presentation at the 17th Annual PATHWAYS Student Research Symposium, College Station, TX, March 3-4, 2022.

3. Edwin Torres, Erick Cervantes, Mustafa Al Lail, and Khaled Enab, "Efficient Prediction of Shale Oil Production Rates Using Machine Learning". Poster presentation at the 17th Annual PATHWAYS Student Research Symposium, College Station, TX, March 3-4, 2022.

4. Marshal Moncivais, Carlos Delgado, Robert Benton, Mustafa Al Lail, and Alfredo Perez, "Secure Cloud-based Software System Incorporating Time and Location Into Access Control Decisions ". Poster presentation at the 17th Annual PATHWAYS Student Research Symposium, College Station, TX, March 3-4, 2022.

5. Jesus Pachicano, David Haunschmied, and Mustafa Al Lail, "Detecting Network Intrusions Using Supervised Machine Learning Techniques and Feature Selection". Poster presentation at the 17th Annual PATHWAYS Student Research Symposium, College Station, TX, March 3-4, 2022.

6. Steven Rangel, Sofia Garza, and Mustafa Al Lail, "Application of Machine Learning Algorithms for Intrusion Attacks". Poster presentation at the 17th Annual PATHWAYS Student Research Symposium, College Station, TX, March 3-4, 2022.

7. Alejandro Garcia, Saul Olivo, and Mustafa Al Lail, "Machine Learning Approach to Intrusion Detection ". Poster presentation at the 17th Annual PATHWAYS Student Research Symposium, College Station, TX, March 3-4, 2022.

8. Mario Juarez, Carlos Gonzalez, and Mustafa Al Lail, "Machine Learning Technique for Intrusion Detection in Cloud Computing and Internet of Things". Poster presentation at the 17th Annual PATHWAYS Student Research Symposium, College Station, TX, March 3-4, 2022.

9. Marshal Moncivais, Miguelangel Trevino, Carlos Delgado, and Mustafa Al Lail, "Software for Incorporating Time and Location into Access Control Decisions". Poster presentation at the 2021 Texas Undergraduate Research Day Conference, Feb. 23-24, 2021.

10. Omar Botello, Reynaldo Vielma, Marshal Moncivais, Jaqueline Vega, Miguelangel Trevino, and Mustafa Al Lail, "A Software Design for Mobile Applications with Spatio-Temporal Authorization,"Poster presentation at the 16th Annual PATHWAYS Student Research Symposium, Laredo, TX, Nov. 7-8, 2019.

11. Alex Aleman and Mustafa Al Lail, "An Implementation of GSTRBAC - A Novel Access Control Model for Mobile Applications". Poster presentation at Lamar Bruni Vergara Academic Conference 2019, Laredo, TX.

12. Hector Cardenas and Mustafa Al Lail,, "A Tool Support for Uncovering Faults in Software Design Models". Poster presentation at the 18th Annual PATHWAYS Student Research Symposium, Galveston, TX, March 2-3, 2023.

13. Jacob Flores, Javid Alasgarli, and Mustafa Al Lail,, "Preemptive IoT botnet detection using machine learning model". Poster presentation at the 18th Annual PATHWAYS Student Research Symposium, Galveston, TX, March 2-3, 2023.

14. Erick Cervantes, Jacob Flores, and Mustafa Al Lail,, "Domain Name-based Dataset for Detecting Phishing Attacks ". Poster presentation at the 18th Annual PATHWAYS Student Research Symposium, Galveston, TX, March 2-3, 2023.

15. Mario Juarez, Luis Moreno, Felipe Rivas and Mustafa Al Lail,, "Building Heart Rhythms Classification Device for Humans". Poster presentation at the 18th Annual PATHWAYS Student Research Symposium, Galveston, TX, March 2-3, 2023.

16. Luis Moreno, Daniel Salinas and Mustafa Al Lail,, "Machine Learning Based Detection on DDos Attacks for Iot Systems". Poster presentation at the 18th Annual PATHWAYS Student Research Symposium, Galveston, TX, March 2-3, 2023.

17. Alexis Haunte, Saul Olivo, Vilen Elliott and Mustafa Al Lail,, "Intrinsic Dimensionality for Machine Learning - A Comparative Study". Poster presentation at the 18th Annual PATHWAYS Student Research Symposium, Galveston, TX, March 2-3, 2023.

18. Jhonny Gonzalez, Jose Gonzalez and Mustafa Al Lail, "Creating a Graphical User Interface to Design UML Class Diagrams for Analysis". Poster presentation at the 18th Annual PATHWAYS Student Research Symposium, Galveston, TX, March 2-3, 2023.

19. Daniela Pinto, Luis Alvarez, Fransisco Salazar,and Mustafa Al Lail, "Machine Learning Based Access Control". Poster presentation at ARC Research Bootcamp at TAMIU, Lared, TX, July 12, 2023.

20. Jhonny Gonzalez, Erick Cervantes, Mustafa Al Lail, and Pedro Valero-Lara, "Improving programmability of C++ and Julia Software Libraries for Heterogenous Supercomputers; CUDA Implementation of the Julia Hartree Fock Proxy App". Poster Presentation for Sustainable Research Pathway at Oak Ridge National Laboratory, August 10, 2023.

TRAINING AND CERTIFICATIONS WHILE AT TAMIU

TAMIU's Leadership Experience Program *August 2019 - May 2020*
Texas A&M International University

Certificate in Effective College Instruction *August 2020 - May 2021*
Association of College and University Educators and the American Council on Education

Teaching Online- An Introduction to Online Delivery *May 2020*
Quality Matters

Advanced Teaching Techniques: Level 2 *March 2020*
Top Hat

Developing Employability Skills through Undergraduate Research *March 5 2019*
School of Business at Texas A&M International University

Miscellaneous Teaching Development and Training *August 2018 - present*
Numerous teaching seminars and workshops offered by TAMIU's Office of Information Technology Professional Development and Center for Faculty Development at Seattle University.

TRAINING AND CERTIFICATIONS PRIOR TO TAMIU

Institute for Learning and Teaching, Colorado State University January 2010-May 2016
Graduate Student *Fort Collins, CO*

· Completed the requirements for the Graduate Teaching Certificate
· Participated in over 50 workshops and training sessions in different areas of teaching, learning, and mentoring.

Center for Faculty Development, Seattle University September 2016- June 2017
Faculty *Seattle, WA*

· Participated in many faculty development training and workshops including, but not limited to, the following:

1. Teaching for Critical Thinking Workshop
2. How to Write a Lot Workshops
3. The New Academic Workshops
4. Designing writing assignments that work for your course, your students' learning, and you

Stanford Research Institute (SRI International) May 2013 & May 2011
Graduate Student Trainee *Atherton, CA*

· Third Summer School on Formal Technique
· First Summer School on Formal Technique

New Horizons Computer Learning Centers March 2003 - January 2004
IT Professional Trainee *Alkhobar, Saudi Arabia*

· CCNA: Cisco Certified Network Associate
· MCP: Microsoft Certified Professional

GRADUATE SCHOOL POSITIONS

Dept. of Computer Science, Colorado State University January 2016 - May 2016
Graduate Teaching Assistant *Fort Collins, CO*

· Assisted in teaching CS470: Computer Architecture.
· Prepared and graded quizzes, homework assignments, and midterm exams.
· Prepared and presented a number of lectures.

Dept. of Computer Science, Colorado State University August 2009- May 2016
Guest Lecturer *Fort Collins, CO*

· Prepared and presented a number of guest lectures in the security and software engineering classes at Colorado State University such as: CS 556 Computer Security, CS517 Software Specification & Design, CS414 Object Oriented Design, and CS314 Software Engineering.

· Prepared and presented numerous lectures and talks in the Security and Software Engineering research groups at Colorado State University.

School of Global Environmental Sustainability, Colorado State University April 2015-August 2015
Graduate Research Assistant *Fort Collins, CO*

· Created a website geared towards analyzing and curating time-lapse imagery of rivers using the PyBossa crowdsource framework.

Dept. of Computer Science, Colorado State University August 2011-May 2014
Graduate Research Assistant *Fort Collins, CO*

· Carried out extensive research activities on three projects:

1. Specification and Analysis of Access Control Models for Mobile Applications
2. A Framework for Specifying and Analyzing Temporal Properties
3. Lightweight Analysis of Software Models

Dept. of Philosophy, Colorado State University August 2008 - December 2008
Graduate Teaching Assistant *Fort Collins, CO*

· Assisted in teaching and grading a graduate course Classical Arabic 1: Advanced Introduction.
· Carried out the usual duties of teaching assistant such as grading, helping student to understand the course material, and test and course preparation.
· Prepared and presented several lectures and review sessions.

Dept. of Philosophy, Colorado State University May 2008 - August 2008
Graduate Research Assistant *Fort Collins, CO*

· Helped in the development of a new computer-software system for academic and scholarly typesetting and typography. The Oriental TEX project was initiated to facilitate the development of high quality typography and typesetting of academic and scholarly texts that require the Arabic script, such as critical editions and monographs.

INDUSTRY POSITIONS

Khalid Ali Alturki & Sons November 2004 - February 2006
Senior Network Engineer *Alkhobar, Saudi Arabia*

· Designed and implemented a WAN project for connecting ten sites to the company's corporate network.
· Installed, configured, and maintained the servers and services for the above project such as: DNS servers, exchange servers, DHCP, ISA, SQL, file/print, and Symantec Anti-Virus solution.
· Performed network, server, PC, and users troubleshooting to isolate and resolve problems.
· Designed and supervised a structured wiring project as project manager.
· Trained and supervised a group of IT specialists.
· Monitored various hardware and software platforms on a regular basis to ensure efficiency.
· Installed and configured wireless network services.
· Participated in managing many IT hardware, software, and network projects.
· Implemented the necessarily changes for upgrading hardware and software network components.

Amaleed Trading Est January 2001- October 2004
Network Administrator *Alkhobar, Saudi Arabia*

· Maintained, upgraded, and installed service packs on Windows 2000 servers.

· Performed Active Directory and Exchange tasks such as creating new users' accounts and emails.
· Provided network, server, PCs, and users troubleshooting to isolate and resolve common problems.
· Assisted the IT technical in providing users services by addressing users' requests during peak periods.
· Evaluated, recommended and applied new technology and solutions to optimize operating efficiency.
· Installed, upgraded, and supported desktop applications on Windows 2000 and XP.
· Performed escalated users support.

King Fahd University of Petroleum and Minerals February 2003-January 2004
Student Network Administrator *Dhahran, Saudi Arabia*

· Secured, maintained, and replaced laboratory equipment, supplies, and personal computers.
· Coordinated system administration tasks including creating students' accounts and email addresses.
· Documented all network procedures of existing systems.
· Provided technical support for students and faculty.
· Installed, upgraded, and configured network printers.

International Business Machines June 2002 - August 2002
Network Engineer Intern *Alkhobar, Saudi Arabia*

· Installed and configured an IP/TV network service at King Fahd University of Petroleum and Minerals (KFUPM).
· Installed and configured a wireless network at KFUPM.
· Participated in design of Marafiq company's network infrastructure.
· Simulated and implemented File/Print server for Marafiq Company project.

PROFESSIONAL/LEADERSHIP SERVICES AND ACTIVITIES WHILE TAMIU

Scientific Community Service

Steering Committee Member

Consortium for Computing Sciences in Colleges (CCSC): South Central Region April 2021 - present

Professional Affiliations

Association for Computing Machinery (ACM), Institute of Electrical and Electronics Engineers (IEEE)

Review Activities

- ACM-IEEE International Conference on Software Engineering (ICSE)
- ACM-IEEE International Conference on Model Driven Engineering Languages and Systems (MODELS)
- Workshop on Modeling in Software Engineering at ICSE (MiSE)
- ACM-IEEE International Conference on Automated Software Engineering (ASE)
- International Conference Software Language Engineering (SLE)
- ACM-IEEE Symposium on Formal Methods and Models for System Design
- Journal of Software and System Modeling(SoSyM)
- Journal of IEEE Transactions on Software Engineering (TSE)

University, College, Department Service

Committees

- School of Engineering search committee for Endowed Full-Professor of Computer Engineering, Spring 2022
- School of Engineering search committee for Visiting Associate/Assistant Professor of Computer Engineering, Spring 2022
- School of Engineering search committee for Petroleum Engineering Assistant professor, Spring 2020
- ABET accreditation committee of System Engineering, Spring 2019
- Assessment committee of the B.S of Computer Engineering and the Computer Science minor
- B.S. Computer Engineering Curriculum committee
- Computer Science Minor Curriculum committee

Miscellaneous Service

Promotion of Excellent in Undergraduate Research : I have developed a style of mentoring undergraduate researchers and shared my experience with students and faculty at TAMIU and the Texas A&M System Louis Stokes Alliance for Minority Participation (TAMUS LSAMP) symposium.

Computer Science & Engineering Association at TAMIU: I have established and advised the Computer Science club at Texas A&M International University since Fall 2019. The club aims to build and sustain a community of students at TAMIU.

Computer Science Tutoring Program: In collaboration with the Academic Center of Excellent (ACE) at TAMIU, I have established a new tutoring program for Computer Science. This program aims to support computer science education and attract more students to Computer Science and Engineering.

Conference Judging

- 18th Annual PATHWAYS Student Research Symposium, March, 2023
- The School of Engineering and Math Conference at TAMIU, November, 2022.
- 17th Annual PATHWAYS Student Research Symposium, March, 2022
- United ISD's Annual Science Fair Science Fair 2020
- The 2019 LBV Academic Conference, April, 2019
- 16th Annual PATHWAYS Student Research Symposium, November, 2019
- The School of Engineering and Math Conference at TAMIU, November, 2021.
- The School of Engineering and Math Conference at TAMIU, November, 2020.
- The School of Engineering and Math Conference at TAMIU, November, 2019.
- The School of Engineering and Math Conference at TAMIU, November, 2018.