Fadi Muheidat

EIT, ACUE, IEEE SM

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Academic Preparation

PhD	Electrical and Computer Engineering University of Missouri, Columbia, Missouri	May 2017
MS	Electrical and Computer Engineering University of Missouri, Columbia, Missouri	December 2015
BS	Electrical and Computer Engineering Jordan University of Science and Technology, Jordan	June 2000

Academic Experience

Associate Professor, California State University San Bernardino	Sept 2019- Present
Assistant Professor, University of the Pacific. ECE Dept.	Aug 2017-Aug 2019
Teaching Fellow/Graduate Instructor/Teaching Assistant, University of Missouri	Fall 2010- Spring 2017

Teaching Interests and Competencies

I believe in student-centered active learning, a strategy known as team-based learning (TBL), which enables students to develop generic professional skills such as problem-solving and interpersonal team skills while learning the course conceptual material. I focus on teaching students the foundational concepts: "how it works" and encourage them to work collaboratively. I believe that **a good teacher is always willing to improve and grow**, **explore new ideas, teaching skills, and innovations to adjust to practices that work best in each course setting and learning styles**. I **enriched and enhanced my skills** to achieve my teaching excellence by completing short courses and workshops and participating in other teaching excellence activities. At CSUSB, I finished a yearlong course on effective teaching skills, ACUE (Association of College and University Educators) cohort C course in **Effective Teaching Practices**. I completed the *Independent Applying the QM Rubric (APPQMR): (Statewide Systems) course,* and more such as:

- ***A self-paced course on learning about learning****:* Five-part online class
- ***Entering Mentoring***: a 10-session workshop series for graduate students, postdoctoral fellows, and science staff. Through discussion-based small group seminars, reviewing effective mentoring strategies, learning how to identify students' needs, evaluate progress, and develop a mentoring philosophy.
- ***Preparing Advanced Professionals, I and II****:* The courses highlight the importance of communication skills, team building skills, pedagogy, and an understanding of global issues in advanced careers of engineering professionals.
- ***Diversity 101 online course***: intensive discussion-based course

- ***ABET accreditation participation***: reporting the outcomes of the courses I taught and designing assignments to collect data for ABET outcomes.
- ***Effective Teaching Practices*****:** Design an effective course and class session. Apply research-based practices to establish a productive learning environment. Use active learning techniques that engage students in their learning, in both lecture and discussion formats as well as large and smaller classes.
- ***Diversity, Equity, and Inclusion Faculty Learning Community:*** investigate in interdisciplinary, collaborative setting questions regarding diversity and inclusion in the classroom, departments, colleges, and university.

Teaching Experience

Associate Professor, CSUSB:

- Artificial Intelligence CSE 5210
- Computer Network and Security, CSE 4100
- Embedded Systems (TI-MSP), CSE 4560
- Operating Systems, CSE 4600
- Seminar on Ethics, CSE 4880
- Digital Logic Design, CSE 3100
- Advanced Computer Architecture (Graduate); CSE6100
- Computer Architecture; CSE4010
- Computer Engineering Design CSE 208/308/408 (CSE5208, 5408)
- Algorithm Analysis: CSE4310
- Intelligent Wireless Sensor Networks CSE 594

Assistant Professor, UOP,

Since I joined the University of the Pacific (UOP) as an assistant professor, I was fully responsible for my classes and led the teaching of the following courses:

- Digital Design and lab ECPE 71/71L: F17, SP18, F18
- Circuits Theory and lab ECPE 41/41L: SP18, S18, F18, SP19
- Embedded Systems ECPE293B (Graduate and upper division undergraduate): SP18
- Computer systems and Networks (ECPE 170): SP19

Adjunct Professor, private school

I taught Master level courses:

- Systems Programming
- Software Engineering
- Reliability Engineering
- Networking Management
- Machine Learning
- Automata and Algorithms (Theory of computations)
- Introduction to Data Science
- Discrete Mathematics
- Cyber Security Forensics and Attack Analysis

- Cyber Security and Information Assurance

While I was Ph.D student at the University of Missouri (MU), I was fully responsible for my classes as a Teaching Fellow, as a Graduate Instructor, and as an Instructor in the list given below. Only when I served as a Teaching Assistant, I assisted a professor who led the course:

Graduate Instructor, Electrical and Computer Engineering, University of Missouri, Spring 2017:

- ECE 4250/7250 VHDL and Programmable Logic Devices

Teaching Assistant, Electrical and Computer Engineering Department, University of Missouri, Spring 2016 – Fall 2016:

- ECE 3210: Microprocessor Engineering, *TA*

Teaching Fellow, Electrical and Computer Engineering Department, University of Missouri, Fall 2011 – Fall 2015:

- ENGR 2100: Circuit theory for Engineers (large class size)
- ECE 2100: Circuit Theory I
- ECE 3220: Computing for Embedded Systems
- ECE 4270: Computer Organization

Graduate Instructor, Electrical and Computer Engineering Department, University of Missouri, Summer 2011

- ECE 3830: Signals and Linear Systems

Teaching Assistant, Electrical and Computer Engineering Department, University of Missouri, Spring 2008- Spring 2010:

- ECE 4270: Microcomputer Architecture and Interfacing, *TA*
- ECE 4250/7250 VHDL and Programmable Logic Devices, *TA*

Instructor, School of Medicine-Health Informatics, Jordan University of Science and Technology, Spring 2007:

- HAS208: Computer Applications in Management

Research Experience

My research focuses on emergent technologies and applications. My focus is on **older adults** promoting successful aging, enhancing the overall quality of life by **early illness recognition**, **providing adequate medical care, and keeping health care costs under control**. A significant advancement is **linking their sensors data into the connected health system.** This continues to be an area of interest to the research community. *My goal is to build a practical system that would utilize existing sensors technology (floor-based, wearable, video-based i.e., Kinect …etc.) and the fusion of their data to solve such problems*. Recently, I joined the **xREAL lab** (extended Reality Lab), I am investigating the use of **virtual/augmented reality** in studying the **social belonging** of the **elderly aging in place.**

The era of the **Internet** of **Things (IoT),** and the unprecedented volume of **sensors data** collected from various sensors, motivates me to discover the **insights from this data and extract useful information** about **Early Illness Recognition** and daily human activities. The advanced use of computational **intelligence algorithms**, side-by-side with **high-performance computing** technologies; GPUs, and **heterogeneous architecture** tools, will help build complete **intelligence and big data-enabled** systems. One venue I am investigating and working on is developing and implementing a Secure IoT model to ensure data integrity and privacy. The convergence of **Artificial Intelligence and Blockchain**

is growing very fast in everyday applications and industry. Together they can mitigate the **hacking risks** to integral data.

My passion for **engineering education** began when I was a teaching fellow while in the Ph.D. program, I developed my teaching philosophy and worked hard on my **teaching pedagogies**. The pandemic gave us more opportunities to study **best practices in engineering courses and laboratories**. I collaborated with my colleagues from the school of computer science and engineering and the CSUSB at large and external collaborators on some projects and ideas. I am planning to continue this research seeking more collaborations to **secure external funding**.

Academic Research, California State University San Bernardino. Fall 2019 – Present:

- Work on different topics; CyberPhysical Systems, Embedded Systems, security, eldercare technology, high performance computing, AI and ML. The use of xReality in education and social belonging.
- I work with group of students on developing robot that students can utilize their skills in Hardware design, embedded systems, SOC, FPGA, Artificial Intelligence, computer vision and Natural language Processing (NLP) to build more of social agents.
- Continue my passion for engineering Education and the use of teaching pedagogies to help and support the students critical thinking and develop curiosity and hence creativity.
- Investigate the power of new RISC-V in the field of processor design.

Research Internship, Universal Research Solution LLC. http://www.oberd.com, Spring 2012 – Fall2017:

- Worked for multiple semesters as a Research scientist; Data analysis, Patient-reported outcomes.
- Build Communication Server, Asterisk Phone Engine for in house PBX.
- Developed software to modify existing Data Mining software "Cubist rule-based predictive model" to generate Decision Tree for CAT (Computer Adaptive Testing) Patient-reported Outcomes.
- Software and tools: Cubist- RuleQuest, C4.5, C5.0, C, PHP, MYSQL, jMetriK for (Item Response Theory) and RASCH Model.

Research Internship – Data Security, Missouri Orthopedic Institute (MOI), Columbia, MO, http://medicine.missouri.edu/ortho/moi.html, May 2010 - January 2011:

- Worked as a liaison with Universal Research Solution for deploying their outcome-based research solution in Orthopedics, and assisting in research studies. Worked on securing iPad Kiosk.

Networks and Systems Engineer, http://www.kauh.jo, February 2002 – August 2007

- Responsible for maintaining and enhancing the Hospital network hardware and services, Active Directory, DNS, DHCP, Wireless Network.
- Assisted in writing procedures for the ISO 9001:2000 accreditations.
- ISO 9001:2000 internal Auditor

Networks Engineer, MEC communications, Jordan, January 2001- February 2002:

- Administered company Internet Services, PIX firewall, Cisco switches, and routers.

Research & projects

Lab Name: Emerging Applications and Technologies Lab

Research Areas:

- Eldercare technology, context-aware sensors: floor-based personnel detecting systems.
- Cyber-Physical Systems and IoT.
- Computational Intelligence, and machine learning
- Engineering Education
- Data Science and Analytics
- Extended Reality, and the role of ML/AI in Education
- Parallel Computing, Algorithm Acceleration, Irregular Applications, GPUs, and Computer Architecture, HDL design.
- Health care patient-reported outcomes (PRO) and computer adaptive testing (CAT).

Project : iCody-Pack Leader) – Current **Objective**: Educational guide robot that is user friendly capable of giving live and virtual tour with Natural language processing capabilities	NLP, NVIDIA SDK and Embedded hardware, OpenCV, gps, internet access, voice controlled, visual language
Collaborative research with the department of Biology- Current **Quantifying Mice Movement:** We are building a real-time data acquisition system to quantify the Mice Movement in cages. Our goal is to build a modular and customizable system to fit other functionalities in the Lab.	Electronics, Python, Raspberry Pi, Arduino, Nodejs
Recent Project: ***Deriving Information from Low-resolution Spatial Sampling System***	Eldercare and Signal Scavenging lab
2017 -2019 tasks: Personnel profiling, and distinguishing different people • Design and enhance electronics required to scavenge the signal • Develop code to analyze the data. 2014-2016 tasks: • Walking Characteristics and GAIT Estimation. • Fall Detection using formal Computational Intelligence technique. • Use NVIDIA Jetson TK1and CUDA Parallel Computing Platform and API to enhance performance	Two papers; EMBC2016, SAS2017, Two abstract/poster; AAIC2016 and AAIC2017 Tools and skills: Machine learning techniques, Weka Framework, Microprocessor, C, Java, MySQL, PHP, PSPICE, and MATLAB.

2013 – 2014 Project: ***Kepler GPU new feature "Dynamic Level Parallelism*** • Study the use of concurrent streams and the feature of Dynamic Parallelism (DP) in the new NVIDIA GPUs, mainly focusing on the recursion depth and performance on different algorithms and datasets. • Used Mandelbrot Set as a case study. Results proved that Dynamic Level Parallelism adds more overhead, and further fine-tuning required in Data structure like using buffers.	Networking and Parallel Systems Lab. Proof of concept and Analytical Study Tools and skills: C/C++, CUDA, Parallel Computing, OpenMP, Pthreads, and GPU
2012 Project: ***GPU Implementation of Protein Interaction Optimization*** • Enhanced and parallelized a serial implementation of an abstract model of protein interaction in the cell using Tesla 2050/2070 GPGPU.	Networking and Parallel Systems Lab. Advanced/ Parallel Computer architecture
2009-2011 Project*:* ***Quantum Computing*** • Investigated the opportunity to do research in a novel area of quantum computing. • Gained knowledge and skills through attending Summer school on quantum computing, self-study, basic and advanced Quantum and Classical Mechanics classes in the physics department and discussion with an academic adviser. • Gave a series of lectures to our Lab members in the theory and the potential hardware used to build a quantum computer.	Eldercare and Signal Scavenging lab Tools and skills: Qubit, Quantum Circuits simulators, Quantum Algorithms analysis.

Awards, Honors and Recognitions		
Award from the Office of High Energy Physics (HEP) within the Department of Energy (DOE) Office of Science for the amount of $125,000. (Co-PI, PI: Dr. Sarah Callori)	Project: "Reaching a New Energy Sciences workforce for High Energy Physics (RENEW-HEP)"	Spring 2023
a Grant of $10,000 from California State University Office of the Chancellor, (Co-PI, PI: Dr. Mihaela Popescu)	Project: *Better learning with Smart VR avatars*	AY 2021-2022
Vital Technology Innovation Grant for E-Learning Academy, California State University, San Bernardino (PI; $57,500)	College to career readiness through shadowing internships	AY2021-2022
Affordable Solutions Grant -CSUSB (PI; $700)	The grant compensates faculty for the time they will invest in locating and adopting more affordable instructional materials for their students	AY 2020-2021
OSR Undergraduate Summer Research- $5,500	Project "*Aging in Place project utilizing the power of AWS IoT services*". The funds supported teams of two students engaged in undergraduate summer research while being mentored by a faculty member. The students published their work *at Computational Science and Computational Intelligence CSCI 2020* conference	Summer 2020
Nomination to Donald K. Anderson Graduate Teaching Assistant Award	Electrical and Computer Engineering, University of Missouri	February 2015
ECE Outstanding Students Award	College of Engineering, University of Missouri.	March 2014
A recognition of the outstanding students in their department or individuals among their peers by the college of engineering during the Annual Engineers' Week.		
Breipohl Family Teaching scholarship	Art & Shirley Breipohl. University of Missouri Alumnus	2014
One academic year fund for teaching fellow program, initiated by the Electrical and Computer Engineering department, at the University of Missouri.		
Teaching Fellow Award	Electrical and Computer Engineering, University of Missouri	2011-2013

Publications

As of this writing, Google Scholar shows **my research has been cited 497 times**. **My h-index is 8, and my i10-index is 7**. (Web Link: Google Scholar)

Book Chapter

Muheidat F., Tawalbeh L. (2023) Computational Intelligence for Medical Internet of Things (MIoT) Applications. Machine Intelligence Applications for IoT in Healthcare. Paperback ISBN: 9780323994217, eBook ISBN: 9780323950978

https://www.elsevier.com/books/computational-intelligence-for-medical-internet-of-things-miot-applications/maleh/978-0-323-99421-7

Muheidat F., Tawalbeh L. (2021) **Artificial Intelligence and Blockchain for Cybersecurity Applications**. In: Maleh Y., Baddi Y., Alazab M., Tawalbeh L., Romdhani I. (eds) Artificial Intelligence and Blockchain for Future Cybersecurity Applications. Studies in Big Data, vol 90. Springer, Cham. https://doi.org/10.1007/978-3-030-74575-2_1

Muheidat, L. Tawalbeh**, "Mobile and Cloud Computing Security",** Chapter published in the book, pages 461-483: **"Machine Intelligence and Big Data Analytics for Cybersecurity Applications**". Springer-978-3-030-57023-1, 1st Edition 2021**.** Editors: Maleh, Y., Shojafar, M., Alazab, M., Baddi, Y. (Eds.)
https://www.springer.com/gp/book/9783030570231

C. Diaz–Ledezma, A. Hussam, **F. Muheidat**, and A. Wood. **Chapter 8:** Assessment Tools: Health-Related Quality of Life Measurement and Other Hip-Specific Scores in Hip Surgery, 2015, **http://www.datatrace.com/media/wysiwyg/pdf/Hip-TOC.pdf**
From the book**: The Hip: Preservation, Replacement, and Revision** by James Cashman, MD; Nitin Goyal, MD; Javad Parvizi, MD, FRCS (2015).

Papers and Journals

CSUSB

Fadi Muheidat, Khalil Dajani, Lo'ai A. Tawalbeh, **Security Concerns for 5G/6G Mobile Network Technology and Quantum Communication**, Procedia Computer Science, Volume 203, 2022, Pages 32-40, ISSN 1877-0509, https://doi.org/10.1016/j.procs.2022.07.007.

Muammer Eren Sahin, Lo'ai Tawalbeh, **Fadi Muheidat**, **The Security Concerns On Cyber-Physical Systems And Potential Risks Analysis Using Machine Learning**, Procedia Computer Science, Volume 201, 2022, Pages 527-534, ISSN 1877-0509, https://doi.org/10.1016/j.procs.2022.03.068.

Lo'ai Tawalbeh, **Fadi Muheidat**, Mais Tawalbeh, Muhannad Quwaider, Ahmed A. Abd El-Latif, **Edge enabled IoT system model for secure healthcare**, *Measurement*, Volume 191, 2022, 110792, ISSN 0263-2241, https://doi.org/10.1016/j.measurement.2022.110792.

F. Muheidat and L. Tawalbeh, "**ZOOM Sandwich: An Adaptable Model for Distance Learning**," *2020 International Conference on Computational Science and Computational Intelligence (CSCI)*, Las Vegas, NV, USA, 2020, pp. 1004-1008, doi: 10.1109/CSCI51800.2020.00186.
Hou, Y., **Muheidat, F**., Ghasemkhani, A., Sun, Q., Qiao, H., McIntyre, M., Van Wart M.,(2021). **The Adaptation of Online Project-based Learning in Computer Engineering Education Settings.** ICL **2021.**
Y. Hou, **F. Muheidat,** T. Usher, W. Prado, X. Guo, and M. V. Wart, "**Evaluation of the COVID-19 Shock on STEM Laboratory Courses**," 2021 IEEE Global Engineering Education Conference (EDUCON), **2021**, pp. 86-93, doi: 10.1109/EDUCON46332.2021.9453900.
F. Muheidat and L. Tawalbeh, "**ZOOM Sandwich: An Adaptable Model for Distance Learning**," 2020 International Conference on Computational Science and Computational Intelligence (CSCI), **2020**, pp. 1004-1008, doi: 10.1109/CSCI51800.2020.00186.
N. Elia, D. Monge, C. Kinz, el and **F. Muheidat**, "**StimulEye: A Computer Vision-Based Concussion Detector**," 2020 International Conference on Computational Science and Computational Intelligence (CSCI), 2020, pp. 1624-1628, doi: 10.1109/CSCI51800.2020.00299
J. Waterman, H. Yang, and **F. Muheidat**, "**AWS IoT and the Interconnected World – Aging in Place**," 2020 International Conference on Computational Science and Computational Intelligence (CSCI), 2020, pp. 1126-1129, doi: 10.1109/CSCI51800.2020.00209.
L. Tawalbeh, **F. Muheidat**, M. Tawalbeh, M. Quwaider, and G. Saldamli, "**Predicting and Preventing Cyber Attacks During COVID-19 Time Using Data Analysis and Proposed Secure IoT layered Model**," 2020 Fourth International Conference on Multimedia Computing, Networking and Applications (MCNA), 2020, pp. 113-118, doi: 10.1109/MCNA50957.2020.9264301.
F. Muheidat and L. A. Tawalbeh, "In-Home Floor Based Sensor System-Smart Carpet- to Facilitate Healthy Aging in Place (AIP)," in IEEE Access, vol. 8, pp. 178627-178638, 2020, doi: 10.1109/ACCESS.2020.3027535.
D. Zaldivar, L. Tawalbeh, **F. Muheidat**, "I**nvestigating the Security Threats on Networked Medical Devices**". *The 10th IEEE Annual Computing and Communication Workshop and Conference (IEEE CCWC 2020)* University of Nevada Las Vegas, USA, January **2020**.
R. Casillas, B. Touchette, L. Tawalbeh, **F. Muheidat, "5G Technology Architecture: Network Implementation, Challenges and Visibility",** *International Journal of Computer Science and Information Security (IJCSIS), Vol.18, Issue 1*(January **2020**)
F. Muheidat, L. Tawalbeh, "*In-Home Floor Based Sensor System-Smart Carpet- to Facilitate Healthy Aging in Place (AIP)*," *IEEE Access Journal***,** *Access-2020-43044. DOI: 10.1109/ACCESS.2020.3027535*
L. Tawalbeh, **F. Muheidat**, M. Tawalbeh, M. Quwaider, "IoT Privacy and Security: Challenges and solutions. Appl. Sci. **2020**, 10, 4102. DOI: https://doi.org/10.3390/app10124102
Muheidat, Fadi A., "ACUE Certificate in Effective College Instruction Reflections: Cohort C" (**2020**). Q2S Enhancing Pedagogy.
University of the Pacific

R. Hughes, **F. Muheidat,** M. Lee and L. A. Tawalbeh**, "Floor Based Sensors Walk Identification System Using Dynamic Time Warping with Cloudlet Support,"** *2019 IEEE 13th International Conference on Semantic Computing (ICSC)*, Newport Beach, CA, USA, 2019, pp. 440-444. doi: 10.1109/ICOSC.2019.8665560

Fadi Muheidat, Harry Tyrer**,** Mihail Popescu. ***"Walk Identification using a smart carpet and Mel-Frequency Cepstral Coefficient (MFCC) features***." the 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'18) to be held at the Honolulu, HI, the USA, July 17-21, 2018.

Fadi Muheidat, Lo'ai Tawalbeh***. "Team-Based Learning: the Role of Equity, Diversity, and Inclusion in Team Formation"***. Conference: RESPECT 2018 – 3rd Annual Conference for Research on Equity and Sustained Participation in Computing, Engineering, and technology. Baltimore, MD. Wednesday, February 21st, 2018.

http://respect2018.stcbp.org/draft-conference-program/

Fadi Muheidat, Harry Tyrer, Lo'ai Tawalbeh***. "Context-Aware, Accurate, and Real-Time Fall Detection System for Elderly People."*** Conference: The 12th IEEE International Conference on Semantic Computing, Sixth International Workshop on Semantic Computing for Social Networks and Organization Sciences: from the user information to social knowledge (SCSN 2018): January 31 - February 02, 2018 Laguna Hills, California USA. https://ieeexplore.ieee.org/document/8334491/

University of Missouri

F. Muheidat, H. W. Tyrer. "Deriving Information from Low Spatial Resolution Floor-Based Personnel Detection System". *CHASE'17- The Second IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technology, Philadelphia, Penn., USA, 2017.*

F. Muheidat, H. W. Tyrer. "Floor Based Sensor System: Additional Intelligence, Gait Estimation, and Scavenging Charging Characteristics". *ICOMP'17- The 18th International Conference on Internet Computing and Internet of Things*. Las Vegas, Nevada, USA, 2017. *pp. 105-111,* ISBN: 1-60132-461-8, CSREA Press ©. *Publisher: World Congress in Computer Science Computer Engineering & Applied Computing | CSCE'17*

F. Muheidat, H. W. Tyrer. "Counting Multiple People on a Floor Based Array sensor system". *HIMS'17 - The 3rd International Conference on Health Informatics and Medical Systems*. Las Vegas, Nevada, USA, 2017. pp. 21-27, ISBN: 1-60132-459-6, CSREA Press ©. *Publisher: World Congress in Computer Science Computer Engineering & Applied Computing | CSCE'17*

F. Muheidat, H. W. Tyrer, M. Popescu and M. Rantz, "Estimating walking speed, stride length, and stride time using a passive floor based electronic scavenging system,"*2017 IEEE Sensors Applications Symposium (SAS), Glassboro, NJ, USA, March, 2017, pp. 1-5. doi: 10.1109/SAS.2017.7894112.*

F. Muheidat and H. W. Tyrer, "Can we make a carpet smart enough to detect falls?", *38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Orlando, FL, USA, August, 2016, pp. 5356-5359. doi: 10.1109/EMBC.2016.7591937*

R. O'Connell, T. Banerjee, **F. Muheidat**, C. Kirkendall, D. Mueller. Spreading Student-Centered Active Learning Through a Teaching Fellows Program, *American Society for Engineering Education (ASEE) Midwest Section Conference, 2014. University of Arkansas-Fort Smith*. September 2014.

Abstracts and posters

Ryan Santiago, Miles Valencia, Angela Horner, and **Fadi Muheidat,**" **Monitoring Forced Jump Activity in Rodent Home Cages Using Wireless IR Sensors**." SEB 2021 Annual Conference July 2021.

Mihaela Popescu, Fadi Muheidat, Yue Zhou, James Trotter, Yutong Li," **Designing accessible XR experiences: Concerns and strategies**" 2021 Cal State Tech Connect Virtual Conference, July 26 - 29, 2021.

Fadi Muheidat, Harry Tyrer***. "Extending the Smart Carpet's Use from the Home to the Institution***." Conference: Alzheimer's Association International Conference (AAIC 2018, Chicago), Public Health and Psychosocial: Dementia Care Research (research projects; nonpharmacological), Wednesday, July 25, 2018: 9:30 AM - 4:15 PM.

Otho R Plummer, **Fadi Muheidat***." PROMIS: A Case-Study in Diffusion of Innovation". Promis Health Organization (PHO). Conference theme: PROMIS in Action: Clinical and Research Implementations and Implications. Philadelphia, USA, October17, 2017.*

University of Missouri

[1] H. W. Tyrer, **F. Muheidat**. A floor based motion sensing system to detect falls, assess gait, and count the number of simultaneous people on the system. Pulsus Group Inc. https://www.pulsus.com/ The 8th International Conference on Dementia and Dementia Care. *September18, 2017(Presentation)*

[2] H. W. Tyrer, **F. Muheidat**. Estimating Gait Parameters Using a Floor-Based Array Personnel Detector, *Alzheimer's Association International Conference (AAIC) 2017, London, UK.*
Alzheimer's & Dementia: The Journal of the Alzheimer's Association, Vol. 13, Issue 7, P1250–P1251

[3] **F. Muheidat**, H. W. Tyrer. Adding Intelligence to a Floor Based Array Personnel Detector, *Poster, Alzheimer's Association International Conference (AAIC) 2016, Toronto, ON, Canada, July, 2016.Alzheimer's & Dementia: The Journal of the Alzheimer's Association, Vol. 12, Issue 7, P599–P600*

Presentations and posters:

Fadi Muheidat; " **Culturally Responsive Teaching starts before the first classroom meeting: Syllabus Transformation.** CSU-FEST CSUSB May 2022. https://www.csusb.edu/issues-x/csu-forum-effective-stem-teaching-csu-fest

Hou, Yunfei; **Muheidat, Fadi**; and Prado, Wagner, "**CSUSB Pedagogy Forum 2021: "Students' Perception of COVID-19 Shock on STEM Laboratory Courses**" (**2021**). CSUSB Video Recordings. 9 https://scholarworks.lib.csusb.edu/csusb-video-recordings/9	Round Table Discussion
Ryan Santiago, Miles Valencia, Angela Horner, and **Fadi Muheidat,**" **Monitoring Forced Jump Activity in Rodent Home Cages Using Wireless IR Sensors**." SEB 2021 Annual Conference July 2021.	Presentation by coauthor
Mihaela Popescu, Fadi Muheidat, Yue Zhou, James Trotter, Yutong Li," **Designing accessible XR experiences: Concerns and strategies**" 2021 Cal State Tech Connect Virtual Conference, July 26 - 29, 2021.	Cal Tech 2021 Conference
*[1] 2016 38th Annual International **Conference** of the IEEE Engineering in Medicine and Biology Society (EMBC), Orlando, FL, August, 2016.*	Poster and Presentation
[2] Center for Eldercare and Rehabilitation Technology (**CERT**), *Jan 2016*.	Presentation (*Invited Speaker*)
*[3] American Society for Engineering Education (ASEE) Midwest Section **Conference**, 2014. University of Arkansas-Fort Smith, September 2014*.	*Presentation*
[4] Parallel Computer Architecture Lab course. Topic: "Contention Aware Execution: Online Contention Detection and Response. J. Mars et al." March 2014.	Presentation (*Invited Speaker*)

Professional Societies		
IEEE membership	Senior member	Active
Jordan Engineering Association (JEA)	Professional Member	Active
American Society for Engineering Education (ASEE)	Professional Member	Active
Engineering In Training (E.I.T), 2019	License Member	Active
Center on Aging, CSUSB. https://www.csusb.edu/aging	Member	Active
California Council on Gerontology & Geriatrics	Member	Active

Professional Development and Service

- **Member of CSUSB Strategic Plan 2023-2028 – Active**

- **Member, Division of Student Affairs Faculty Advisory Board**
  The Division of Student Affairs Faculty Advisory Board will work to bring together leadership from the Division of Student Affairs and faculty representatives from diverse areas across both the San Bernardino and Palm Desert campuses to engage in learning and dialogue about how to strengthen our collaborative efforts in support of our students. We have scheduled meetings and discussed different services and issues related to students' affairs. Great offices

and services are on campus. It is our job as faculty, staff to get our students' attention to these services and better utilize them.

- **Member, College to Career Readiness Taskforce**
  The charge: CSUSB is one of six institutions nationwide participating in an AASCU (American Association of State Colleges and Universities) pilot program on student success. As a part of this program, our campus will examine college to career readiness. The College to Career Task Force has been charged with creating a comprehensive "career readiness" plan for undergraduate students to maximize impact and reduce redundancies. [16 members]
  My role is to lead jointly with Diane Podolske, the subcommittee "Faculty and Curricular Career Delivery." We designed a survey to collect information about academic department-level "career readiness" activities.

  I have been selected to be part of the **Implementation Taskforce** for the College to Career Readiness committee. This taskforce will address the results of our career readiness surveys that we gathered this past academic year 2019-2020. Dr. Diane Podolske and I have agreed to **co-chair** the taskforce

- **Advisory Board Member, Grant Advisory Board Lewis University**
  PI: Dr. Gina Martinez. Associate Professor of Computer Engineering & Director of Electrical and Computer Engineering (ECEN)
  Dr. Martinez submitted a proposal to NSF for their ERI(NSF 21-574) solicitation earlier in the summer and they came back with an encouraging response that they are considering it for funding, however, they would like her to address a concern they have regarding engineering education research experience. NSF suggests forming an advisory board of engineering education research experts to advise on the design and evaluation of engineering education data collection and analysis.

- **Faculty Fellow, XREAL Lab**
  I joined the xREAL Lab as a faculty fellow, to be exposed more about extended reality, and how I can benefit from the services they offer, at the same time contributing to the lab's current projects and future vision and expansion. The lab is built around creativity and innovation. They welcome any idea and they can make it happen with the new technologies and skill set of the team and the participating faculty fellows.

- ***Member,* AAC&U Institute for Reframing Institutional Transformation to Include Non-Tenure Track STEM Faculty Team. Spring 2021**
  I joined a team from CNS to participate in the Project Kaleidoscope (PKAL) STEM Leadership Institute (PKAL) in “Reframing Institutional Transformation to Include Non-Tenure Track STEM Faculty.” We worked and developed a proposal that we think is very competitive and inclusive. Unfortunately, our team was not selected for one of the 20 slots available. There was more than 100+ applications.

- **Participant, Community College and CSUSB STEM Workshop on 4/27/21**
  One of the goals for the event was to strengthen our partnership with community colleges so that we can enhance the community college student transfer experience at
  CSUSB. Community colleges will be a focus in the college’s A4US grant no-cost extension in AY

2021-22. This will be an opportunity to begin to establish these partnerships with our feeder community colleges**.**

- **Host NASA Speaker on The Importance of System Engineering at NASA, Spring 2021**
  One of my students got me connected with Engineer George Salazar (NASA Engineer, P.E., ESEP, LSMIEEE), Human-Computer Interface Technical Discipline Lead) at NASA's Johnson Space Center. I invited him to our campus to give a lecture online. I filled NASA application and got the Ok from the guest speaker. We invited the campus at large and even for our local communities and extended communities. Since it was virtual, others can attend. While the topic is on systems engineering, it is of interest to CSE, Physics, and other disciplines. It was a very informative session, and the students got engaged with the speaker.

- **Member, San Bernardino County Superintendent of Schools Science Programs, Scientific Review Committee (SRC), and Institutional Review Boards (IRB), Spring 2021- Present**
  In this committee, we review and approve all projects in areas of potential hazards. In addition to reviewing all projects to ensure that the students follow all the applicable rules, and the project is eligible to compete. In addition, we serve as IRB and help review projects involving human participants

- **Steering Committee Member and Mentor, Cal-Bridge CS Summer 2020- Present**
  The Steering committee members are in charge of the overall program planning and execution, recruiting scholars (interview and monitoring), recruiting faculty mentors from CSU and UC for the program as we grow. The program is open to **any Computer Science or Computer Engineering (CS/CE) major** interested in pursuing a PhD in CS, CE, or a related field. https://www.cpp.edu/calbridge/prospective-scholars/computer-science-and-engineering.shtml

- **IEEE Access journal** reviewer **2019- present**
- **MDPI - Publisher of Open Access Journals** reviewer **2019 – present**
- **HardwareX Journal, Elsevier, Winter 2020- present**
- **AIMS Mathematical Biosciences and Engineering, Summer 2020- present**
- **ASEE (American Society for Engineering Education): Summer 2020- present**
- **Jordanian Journal of Computers and Information Technology: Summer 2020 – Present**
- **5GCM 2020** : Technical Committee
- **CCWC 2020** : Technical Committee
- **SEMAPRO 2020: The Fourteenth International Conference on Advances in Semantic Processing.** Technical Committee
- **EMBC Associate Editor and reviewer**, Biomedical & Health Informatics track. **2019- Present**
- Actively involved in the **ABET** accreditation review process: binders, outcomes assessment, and self-studies.
- **SCSN 2019** Program committee (The Seventh International Workshop on Semantic Computing for Social Networks and Organization Sciences: from user information to social knowledge). Jan30 – Feb 01, 2019, Newport beach, California. http://pa.icar.cnr.it/scsn19/
- ***HEALTHINFO 2018*** Technical Program Committee, (The Third International Conference on Informatics and Assistive Technologies for Health-Care, Medical Support and Wellbeing).

October 14 - 18, 2018 Nice, France.
http://www.iaria.org/conferences2018/ComHEALTHINFO18.html

- ***SCE2018***, Technical Program Co-Chair. April 23-26, 2018 Barcelona, Spain. (http://emergingtechnet.org/SCE2018/committee.php)
- ***Guest Editor***, Advanced in Multimedia. "*Security Challenges and Solutions for Constrained Digital Environments and Technologies: Light Weight Crypto*" http://www.scimagojr.com/journalsearch.php?q=6400153142&tip=sid&clean=0
- ***HEALTHINFO 2017*** Technical Program Committee, (The Second International Conference on Informatics and Assistive Technologies for Health-Care, Medical Support and Wellbeing). October 8 - 12, 2017 Athens, Greece
  http://www.iaria.org/conferences2017/ComHEALTHINFO17.html
- **Senior Project Advisor** (High Five team: Bioengineering): The team is working on project Non-Invasive Upper Limb Prosthesis".
- Participated in the Department and College meetings
- Participated in the department senior projects presentations.
- Participated in presenting and help with ***Noche de Ciencias, SHPE.*** October 5, 2017
- Volunteered at the Annual Cardboard Boat Regatta. September 29, 2017
- Presented in Morada Middle School's 1st Annual Career Day. December 20, 2017
- Volunteered in ***Tiger Day***. April 7, 2018
- Volunteered in running High School Physics Double Pendulum workshop in ***Dia de Ciencias 2018***
- Scholarly work in reviewing papers for different conferences; IEEE BHI2017 , IEEE SENSORS2016, EMBC2016/2017 - ***University of Missouri***
- Co-Supervised ECE Students' Capstone Project, Fall 14, SP15,
- Fundamental of Engineering Exam (FE) Tutoring, Circuit Theory,
- Public School outreach, student volunteer
- Review sessions for students of Circuit Theory, Electrical and computer Engineering

Faculty Development & Training

- **Member, ACLI: The Assessment Capability Learning Institute", By nomination**
- **Next Generation Smart Classroom (NGSC) Co-synchronous Teaching Program"**
- **Accessible Documents: Word, PowerPoints, and Acrobat**", Online Training
- **Diversity, Equity, and Inclusion Faculty Learning Community**", Virtual Summer Institute 2020-2021. **August 10, 2020, through April 15, 2021**
- "**ISSUES-X Online Teaching, Cohort 3 Workshop",** ISSUES-X Summer Institute, **August 2020**
- "**Immersive Reality Applications for Virtual Course**", Faculty Learning Community, Faculty Center for Excellence and Academic Technologies and Innovation, Virtual Summer Institute, **July 13-24, 2020**
- "**QLT: Quality Learning and Teaching**", **May 10, 2020**, CSU Academic Technologies Services
- "**ACUE's Course in Effective Teaching Practices- Cohort C**", TRC/FCE, **started October 22, 2019, through May 2020.**

- **AASCU Pilot Cohort - Institute for the Future, Spring 2021**
  American Association of State Colleges and Universities (AASCU) engaged CSUSB in early 2019 in a pilot of a 2-year cohort focused on institutional transformation in service of equitable student success. AASCU partnered with IFTF (Institute For The Future) to design a futures thinking "on ramp" back into the work of deep transformation – one that simultaneously builds upon our team's Priority, creates space to potentially enhance that Priority, and provides us all with widely applicable futures thinking skills/tools.

- **GE Global Perspectives Workshop:**
  This 4-hour workshop took place February 21st, 2020.
  The objectives: to understand the role of the G designation (or global perspectives GLO) within the context of the new Q2S GE program, to be familiar with the elements of G designed by our campus, and to share ideas with other faculty regarding activities that address the learning in a small group setting.

- **IRB Training and Certificate: Human Research Social Behavioral Research Investigators and Key Personnel.** May 10, 2020 – May 09, 2020, Record Id= 36544864

- **Polyteach "Do the Flip**" Conference. **March 6, 2020**, Cal Poly Pomona University
- **Diversity Awareness, Inclusion, and Equity Workshop**", **October 8, 2019**
- "**How Students Learn: Parts 1,2,3**", facilitated by the University Faculty Mentoring Network, Fall**19/Winter 20**
- **"Quality Matter: Applying the Quality Matters Rubric (APPQMR)",** workshop **began: October 28th , 2019**
- Completed necessary training at CSUSB:
  - All New Faculty Training
  - Data Security and FERPA
  - Diversity Awareness, Inclusion, and Equity Workshop
- Attended a day-long **global citizenship certification** course. The course examines what it means to be a global citizen and the knowledge, skills, and values that are needed to aid peaceful internationalization. Through group discussion, role plays and analysis, we investigated the root of cultural misunderstandings and how to de-escalate tensions, as well as how acceptance versus tolerance affects social norms and expectations.
- Attended **RIO** workshop for faculty and Staff. UOP, September 2018.(RIO: **R**ecognition, **I**nsight, **O**penness)
- Attended **ECEDHA** workshop at University of San Diego (UCSD), July 2018
- Attended workshops/clubs in Center for Teaching and Learning:
  - Book Club: Teach Students How to Learn by Saundra Yancy McGuire
  - Spark student learning with Metacognition.
  - Teaching STEM / Teaching Students with Dr. Dave Kung.
  - Summer Course Design Workshop 2018.
  - Teaching Your Summer Course Online workshop 2018.
- Completed the following trainings at University of the Pacific
  - Information System Security Awareness training (2018)
  - Sexual Harassment and Title IX training (2017)
  - University FERPA Training (2018)

References available upon request