MUHANNA A. MUHANNA, PH.D.

Dean of Admissions and Registration
Associate Professor, Computer Graphics and Animation
Princess Sumaya University for Technology, Amman, Jordan
m.muhanna@psut.edu.jo

A results-driven academic leader, researcher, and UX expert with over 15 years of experience in higher education and user experience. Proven expertise in curriculum development and quality assurance with a strong record of securing research funding and leading interdisciplinary projects. Passionate about enhancing user experience through innovative design methodologies, technology-driven learning, and strategic leadership. Proficient at mentoring students, collaborating with industry partners, and driving institutional excellence through data-driven decision-making.

EDUCATION

PhD	Computer Science and Engineering (Focus: HCI and UX) University of Nevada, Reno, USA	August 2011
MS	Computer Science (Focus: SE and HCI) University of Nevada, Reno, USA	May 2007
BSc	Information Technology Balqa Applied University, Salt, Jordan	August 2004

EMPLOYMENT

Princess Sumaya University for Technology, Amman, Jordan

Dean of Admissions and Registration	09/2023 – Present
Associate Professor, Computer Graphics and Animation	12/2024 – Present
Director of Quality Assurance and Accreditation Center	09/2021 – 09/2023
Assistant Professor, Computer Graphics and Animation	02/2021 – 12/2024

Luminus Technical University College, Amman, Jordan

Vice Dean for Bachelor Programs	03/2019 – 02/2021
Founding Head of Quality Assurance and Accreditation	09/2017 – 03/2019
Assistant Professor, School of Advanced Computing	09/2017 – 02/2021

Princess Sumaya University for Technology, Amman, Jordan

Founding Director of Quality Assurance and Accreditation Center	09/2013 – 09/2017
Assistant Professor, Computer Graphics and Animation	07/2013 – 09/2017
Acting Chair, Department of Computer Graphics and Animation	07/2016 – 10/2016
Acting Chair, Department of Computer Graphics and Animation	07/2015 – 10/2015
Assistant Professor, Department of Computer Science	07/2013 – 09/2017

Solid Softs Corporation, Amman, Jordan

User Experience Advisor	05/2014 – 09/2024

ESI Security Services and Sherd-it, Reno, NV, USA

IT Manager and UI/UX Designer	08/2007 – 08/2011

Ideal Systems, Amman, Jordan

Software Engineer (Visual Basic, Visual C++, Java, and Oracle)	06/1999 – 06/2004

INDUSTRY CONSULTATION AND APPLIED PROJECTS

Team Lead for UX/UI Research and Design
Amman is Listening Participatory Platform, Bloomberg Philanthropies Global Mayors Challenge, Greater Amman Municipality and UNDP, Jordan.

08/2023 – 12/2025

UX Design and Consultation
Reflect Banking Mobile App, Arab Bank, Jordan.

10/2022 – 02/2023

UX/UI Design and Evaluation
Carblee Platform, a revolutionary new-car buying platform that helps customers get the best new car deals, Hungary.

05/2020 – 10/2022

UX/UI Design and Consultation
Ketabi Mobile App, a mobile app that provides children with a safe space to navigate and browse through the internet, UAE.

09/2019 – 02/2020

Team Lead for UX Research and Design
GoHarz Platform, a prospective yet exclusive platform for trading in all agricultural products and wholesale, Egypt.

09/2016 – 09/2017

UX Research and Design
Bayt.com, a leading job site in the Middle East and North Africa, connecting job seekers with employers looking to hire, Jordan and UAE.

11/2015 – 03/2016

UX Design and Consultation
Solid Soft Smart UMS, a comprehensive university management system that serves as a student information system, Jordan and Oman.

05/2012 – 09/2015

Team Lead for UX/UI Design
Shred-it Website, an information security solution provided by Stericycle Inc. for document destruction, USA.

08/2009 – 09/2011

RESEARCH PROJECTS

Principle Investigator
Comparing the Impact of Virtual Reality and Traditional Commercial Films on Consumer Engagement and Purchase Intent, Princess Sumaya University for Technology, Seed Fund, $ 33,840.

08/2024 – 08/2025

Project Manager for LTUC
Towards Internationalization at Home, Erasmus+ Program of the European Union, Capacity building in Higher Education, ~1M Euros.

01/2020 – 01/2023

Member of the Consortium Partner Team
Creating Digital Access to the Arts and Culture of the Areas Shaped by Islam, DAAD Research Project.

03/2017 – 03/2019

Member of the Consortium Partner Team
Enhancing Quality of Technology-Enhanced Learning at Jordanian Universities, eQTeL, TEMPUS project, European Commission, ~1M Euros.

12/2013 – 05/2017

Principle Investigator   10/2012 – 03/2016
Enhancing Quality Assurance Management in Jordanian Universities,
Tempus Project, ~1M Euros.

Member of the Consortium Partner Team   09/2012 – 10/2015
Promoting ICT Dialogue and Cooperation with the MPC, Towards Horizon
2020, Co-funded by European Union, Framework Program 7, ICT, Grant
Agreement 611433.

PUBLICATIONS

Journal Publications

[12] **Muhanna, M.** and Saleh, Y., The Impact of Serious Games on Learning User Interface Design Guidelines, International Journal of Computing and Digital Systems, Vol. 15 (1), pp. 1853-1865, July 2024.

[11] Saleh, Y. and **Muhanna, M.,** Archeological Sites Classification through Partial Imaging and Convolutional Neural Networks, International Journal of Online & Biomedical Engineering, Vol. 19 (7), pp. 26-38, July 2023.

[10] Murad, S., Qusef, A., and **Muhanna, M.,** CHR vs. Human-Computer Interaction Design for Emerging Technologies: Two Case Studies, Journal of Advances in Human-Computer Interaction, Vol. 2023, pp. 1-11, Feb. 2023.

[09] **Muhanna, M.,** Masoud, A., and Qusef, A., Usability Heuristics for Evaluating Arabic Mobile Games, International Journal of Computer Games Technology, Vol. 2022, pp. 1-7, Aug. 2022.

[08] Qusef, A., Albadarneh, A., Elish, S., and **Muhanna, M.,** Mitigating Personalization Challenges in Mobile Commerce: An Empirical Study, Journal of Computers & Electrical Engineering, Vol. 89(1), Jan. 2021.

[07] **Muhanna, M.,** Amro, R., and Qusef, A., Using a New Set of Heuristics in Evaluating Arabic Interfaces, Journal of King Saud University - Computer and Information Sciences, Elsevier, Vol. 32(2), Feb. 2020, pp. 248 – 253.

[06] **Muhanna, M.,** Mobile Game Usability Practices in Arab Game Companies, International Journal of Innovative Technology and Exploring Engineering, Vol. 9 (4), Feb. 2020, pp. 1780-1785.

[05] Qusef, A., Ayasrah, A., Shaout, A., and **Muhanna, M.,** By Two: A Two-Dimensional Mobile Game Model for Novice Developers, Indonesian Journal of Electrical Engineering and Computer Science, Vol. 14 (3), June 2019, pp. 1336-1344.

[04] Wu, R., **Muhanna, M.,** Dascalu, S. M., Barford, L., and Harris, F. C., Data Lossless Compression Using Improved GFC Algorithm with Multiple GPUs, International Journal of Computers and Their Applications, vol. 23 (4), December 2016.

[03] Turabieh, H. and **Muhanna, M.,** GA-based Feature Selection with ANFIS Approach to Breast Cancer Recurrence, International Journal of Computer Science Issues, vol. 13 (1), , 2016, pp. 11-21.

[02] **Muhanna, M.,** Virtual Reality and the CAVE: Taxonomy, Interaction Challenges, and Research Directions, Elsevier Journal of King Saud University - Computer and Information Sciences, vol. 27 (3), July 2015, pp. 344-361.

[01] Tackitt, B., **Muhanna, M.** and Dascalu, S., Prototype Details of the Smartphone Based Researcher's Companion Software (RCS), Journal of Computational Methods in Sciences and Engineering (JCMSE), vol. 9(2), 2009, pp. 191-201.

Conference Papers

[16]   Salah, M. S., Jusoh, S., and **Muhanna, M.,** The Development of Usability Heuristics For Arabic M-Commerce Applications, 2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT), April 2019, Amman, Jordan, pp. 779-784.

[15]   Amro, R., Dhama, S., **Muhanna, M.,** and Koczy, L. K., Prioritization of Nielsen's Usability Heuristics for User Interface Design Using Fuzzy Cognitive Maps, Proceedings of the Springer 7th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems (IPMU 2018), Cadiz, Spain, June 2018, pp. 511-522.

[14]   Kiswani, J., Dascalu, S., **Muhanna, M.,** Harris, F. C., Clowiz: A Model-driven Development Platform for Cloud-based Information Systems, Proceedings of the 6th IEEE International Conference on Multimedia Computing and Systems (ICMCS), Rabat, Morocco, pp. 1-6, May 2018.

[13]   Kiswani, J., **Muhanna, M.,** Dascalu, S. M., and Harria, F. C., Software Infrastructure to Reduce the Cost and Time of Building Enterprise Software Applications: Practices and Case Studies, Proceedings of the 26th International Conference on Software Engineering and Data Engineering, San Diego, USA, October 2017.

[12]   Qusef, A., Baker, C., and **Muhanna, M.,** Social Commerce Quality Service from the Customer's Persective, Proceedings of the IEEE 2017 International Conference on Engineering and MIS (ICEMIS 2017), Monastir, Tunisia, May 2017, pp. 1-5.

[11]   Kiswani, J., **Muhanna, M.,** and Qusef, A., Using Metadata in Optimizing the Design and Development of Enterprise Information Systems, Proceedings of the IEEE International Conference on Information and Communication Systems (ICICS 2017), Irbid, Jordan, April 2017, pp. 188-193.

[10]   Zawati, S., and **Muhanna, M.,** Arabic Mobile Applications: Challenges of Interaction Design and Development, Proceedings of the 10th IEEE Wireless Communications and Mobile Computing Conference (IWCMC), Nicosia, Cyprus, Aug. 2014, pp. 134-139.

[09]   **Muhanna, M.** and Jaser, E., HCI-Based Guidelines for Electronic and Mobile Learning for Arabic Speaking Users: Do They Effectively Exist?, Proceedings of the Springer HCI International Conference (HCII'2014), Universal Access in Human-Computer Interaction, Heraklion, Crete, Greece, June 2014, Springer International Publishing, pp. 378-387.

[08]   **Muhanna, M.** and Ghazaleh, H., Interactive Environment for Command and Control Simulation Scenarios inside the CAVE, Proceedings of the 2012 IEEE International Conference on Systems and Informatics, Yantai, China, IEEE Computer Society Press, May 2012, pp. 2113-2119.

[07]   **Muhanna, M.,** Buntha S., Okamoto, S., McMahon, M. J., Dascalu, S., and Harris, F. C., CAVEMANDER: Creating 3D Command and Control Scenarios for the Cave Automatic Virtual Environment, Proceedings of the 16th International Conference on Distributed Multimedia Systems (DMS'10), Oak Brook, IL, USA, Oct. 2010, pp. 300-305.

[06]   Buntha, S., **Muhanna, M.,** Dascalu, S., Harris, F. C., and Okamoto, S., A GUI Wizard for Developing Command and Control Applications in CAVE, Proceedings of the 4th IASTED International Conference on Human-Computer Interaction, St. Thomas, US Virgin Islands, USA, Nov. 2009, pp. 301-308.

[05]   Ghazaleh, H. and **Muhanna, M.,** Enhancement of Throughput Time Using MSTCP Transport Layer Protocol for 4G Mobiles, Proceedings of the 5th IEEE International Multi-Conference on Systems, Signals, and Devices, Amman, Jordan, IEEE Computer Society Press, July 2008, pp. 105-111.

[04]   Tackitt, B., **Muhanna, M.** and Dascalu, S., Prototype Details of the Smartphone Based Researcher's Companion Software (RCS), Proceedings of the ISCA 17th International Conference on Software Engineering and Data Engineering (SEDE-2008), Los Angeles, CA, USA, July 2008, pp. 30-35.

[03] **Muhanna, M.,** Dascalu, S., Harris, F. C., Elfass, S., and Karam, M., Specification and Design Aspects of the Academic Researcher's Assistant (ARA) Software for Mobile Devices, Proceedings of the 1st IEEE International Conference on Advances in Computer-Human Interaction (ACHI'08), S.L. Martinique, France, Feb. 2008, IEEE Computer Society press, pp. 95-100.

[02] Dascalu, S., Karam, M., **Muhanna, M.,** and Reed, S., Using UML in a Non-Software Design Task: Creating an Electronic Software Engineering Handbook, Proceedings of the 15th International Conference on Software Engineering and Data Engineering (SEDE'06), Los Angeles, CA, USA, July 2006, pp. 98-103.

[01] **Muhanna, M.,** Turabieh, H., Aljarrah, O., and Elsayad, A., Steganalysis of LSB Encoding in Digital Images Using GLCM and Neural Networks, Proceedings of the 3rd International Conference on Informatics and Systems (INFOS2005), Cairo, Egypt, March 2005, pp. 131-137.

AWARDS AND SCHOLARSHIPS

— Princess Sumaya University for Technology Trophy of Excellence, Amman, Jordan, 2012, and 2015.

— Outstanding International Graduate Student Award and Scholarship, Graduate Student Association, University of Nevada, Reno, 2008, 2009, and 2010.

— Outstanding Teaching Assistant Award in Science, Technology, Engineering, and Mathematics (STEM), Excellence in Teaching Program, Core Curriculum Office, and Graduate Student Association, University of Nevada, Reno, 2008.

— Teaching Recognition Award, Excellence in Teaching Program, Core Curriculum Office and Graduate Student Association, University of Nevada, Reno, 2006.

— Award of Honor Certificate for Individual Creativity, Jordan Computer Society 1997 and 2001.

— Golden Trophy Award for Excellence in Essay Writing, United Nations Environment Program, Bahrain, 1999.

UNIVERSITY SERVICE AND LEADERSHIP

National Committees & Accreditation Contributions (Ministry of Higher Education & AQACHEI)
— Chair, Accreditation Committee, Arab Community College, 2024
— Chair, Accreditation Committee, German Jordanian University, 2023
— Member, Quality Assurance for Faculty of IT, Alahliya Amman University, 2021
— Member, Quality Assurance for IT College, Applied Science University, 2018
— Chair, Accreditation Committee, Alkhawrismi University College, 2018
— Member, Advisory committee for the Institutional Quality Assurance Framework, 2017
— Member, Review team of National Accreditation Standards, 2016
— Member, Accreditation Committee, Balqa Applied University, 2016

Quality Assurance & Accreditation
— Member, Joint Accreditation Committee, PSUT, 2022 – 2023.
— Member, Higher Committee for Quality Assurance, PSUT, 2014 – 2022.
— Chair, Spreading Quality Assurance Culture Initiative, PSUT, 2016 – 2017.
— Member, Committee of Employee Evaluation and Assessment Review, PSUT, 2016.
— Member, QA Higher Committee, LTUC, 2020 – 2022.
— Chair, QA Observation Team for Online and In-Person Classes, LTUC, 2020 – 2022.

Academic Development & Institutional Strategy
- Member, Steering Committee for the University Strategy 2030, PSUT, 2023 – 2025.
- Member, eLearning Instructions Committee, PSUT, 2023 – 2024.
- Member, Institutional Review Board (IRB), PSUT, 2023 – 2024.
- Member, University Budget Committee, PSUT, 2022 – present.
- Chair, Implementing SDGs on Campus Committee, PSUT, 2022 – 2024.
- Member, Local Ranking Committee, PSUT, 2017 – present.
- Member, Enhancing QS Ranking, PSUT, 2015 – present.
- Member, PSUT Curricula Review and Evaluation Committee, PSUT, 2016 – present
- Member, PSUT Master Plan Committee, PSUT, 2016 – 2017.
- Chair, Student and Faculty Evaluation Committee, LTUC, 2017 – 2021.

Student Affairs & Competitions
- Member, Student Exchange Committee, PSUT, 2024 – present.
- Member, Talented Students Committee, PSUT, 2024 – present.
- Chair, Organizing Committee, Student Council Elections, PSUT, 2012, 2013, and 2015
- Member, Student Awards & Competition Committee, PSUT, 2015.

Event & Conference Organization
- Chair, Career Fair Organizing Committee, 2023 – present.
- Chair, Creativity and Innovation Organizing Committee, 2023 – 2024.
- Chair, Website Evaluation Committee, PSUT, 2023 – 2024.
- Member, Website Design and Editorial Committee, PSUT, 2022 – 2024.
- Chair, Organizing Committee, International Conference on Cloud Computing, PSUT, 2013
- Chair, Media Team, ACM Arab Collegiate Programming Contest, PSUT, 2012 – 2014
- Member, Steering Committee, ACM ACPC, PSUT, 2011 – 2014
- Chair, Editorial Committee, PSUT Website Content, PSUT, 2011 – 2015

Strategic Initiatives & Projects
- Project Director, Implementation of the New CRM and SIS System, LTUC, 2017 – 2019
- Chair, Establishing an ICT School and Coding Boot Camps, LTUC, 2018.
- Chair, Committee for Developing New BSc Regulations & Instructions, LTUC, 2018 – 2020.

PRESENTATIONS AND INVITED LECTURES

The following is a list of invited talks and presentations other than those made at conferences:

- Usable Security and Privacy, Interaction Design Foundation, Online, 2022.
- User Experience for the Youth, Interaction Design Foundation, Online, 2021.
- User Experience for Engineers, University of Jordan and the Jordanian Engineering Association, Amman, Jordan May 2019.
- Towards Better Outcomes from College to IT Industry: Challenges and Solutions, Zain Telecommunication and Applied Science University, Amman, Jordan, April, 2018.
- User Experience in the Arab World: Challenges and Directions, DAAD Digital Technologies and Cultural Heritage, Istanbul, Turkey, March 2017.

- Using User Experience Tools to Design Arabic Interfaces, Adobe InspireME 2016, Adobe Inc., Amman, Jordan, Nov. 2016
- ICT Applications in Education, 3rd International Workshop on Applications of ICT in Education, Healthcare and Agriculture, RSS Amman, Jordan, June 2016.
- Ten Skills You Need to Land Your First Job in Design, Workshop, Amman, Jordan, March 2016.
- Usability in the UX Process, Adobe InspireME 2015, Adobe Inc., Amman, Jordan, Nov. 2015.
- Quality Assurance at Princess Sumaya University for Technology: Experiences and Lessons Learned, The National Agency for Quality Assessment and Accreditation, ANECA, Madrid, Spain, Sep. 2015.
- The Culture and Model of Quality Assurance at Princess Sumaya University for Technology, Sapeinza University, Rome, Italy, June 2015.
- Interaction Design for Graphic Designers, SAE Amman, June 2010.

PROFESSIONAL TRAINING AND CERTIFICATIONS

- Innovation Management, King Abullah II Center for Excellent, June 2022.
- Coursera Foundations of User Experience by Google, 2022.
- Internal Quality Assurance Management, Sapienza University of Rome, Italy, June 2015.
- UI Design Patterns, Interaction Design Foundation, 2015.
- Building a Reviewer Capacity, Quality Assurance Agency for Higher Education (QAA), 2014.
- External Reviewer Training, Quality Assurance Agency for Higher Education (QAA), 2014.
- Java Enterprise Technologies, 2013.
- Adobe Certified Instructor – Photoshop, 2004.
- Adobe Certified Expert - Photoshop, 2004.
- Microsoft Certified Systems Engineer, Windows Server, 2003.

PROFESSIONAL SERVICE

Associate Editor
Advances in Human-Computer Interaction, August 2018 to August 2022.
International Journal of Computers and Their Applications, May 2013 to May 2023.

Program Committee Member (selected)
IASTED HCI, USA, 2024 - HCI International, 2024 - HCI International, 2019 - CSEDU, Italy, 2018 - HCI International, Canada, 2017 - SDS, Germany, 2016 - CSEDU, Italy, 2015 - AICCSA, Morocco, 2015 - CSEDU, Spain, April 2014 - IEEE CTS, USA, 2013 - ICICS, Jordan, April 2012 - IEEEE CSE, Spain, April 2010 - IASTED HCI, USA, November 2009 - IEEE ITNG, UK, November 2007.

Journal Article Referee (selected)
IEEE Transactions on Human-Machine Systems - IEEE Access - International Journal of Human Computer Interaction - AIS Transactions on Human Computer Interaction - International Journal of Mobile Human Computer Interaction - International Journal of Computers and Their Applications - Elsevier Journal of the Science of Computer Programming.

Refereed Conference Proceedings Reviewer (selected)
SEDE 2023 - ITNG 2022 - HCII 2018 - SEDE 2018 - SEDE 2017 - SDS 2017 - HCII 2016 - SEDE 2016 - ICICS 2015 - HCII 2015 - CoVE 2013 - ICICS 2012 - CAINE 2010 - WMSCI 2010 - CTS 2010 - CHI 2010 - CSEDU 2010 - ACHI 2010 - HCI 2009 - ITA 2009 - SEDE 2009 - ICSEA 2009 - CTS 2009 - ITNG 2008 - MobileHCI 2008 - ITNG 2008 - HCI 2007 - CATA 2007.

GRADUATE SUPERVISION

Tarek Kiblawi, **Business Model Transformability in IT-based Organizations,** Master of Science Thesis, January 2019.

Rasha Aqrabawi, **User Experience for Children with ADHD, Challenges and Opportunities**, Master of Science Thesis, August 2018.

Nour Khater, **Arabic Usability Heuristics to Evaluate Arabic E-Commerce Websites**, Master of Science Thesis, January 2018.

Razan Sawalha, **Optimizing the User Experience of Social Media Platforms Using Business Intelligence Tools**, Master of Science Thesis, August 2017.

Jalal Alkiswani, **Smart EIS: Towards and End-to-End Enterprise Information System Framework**, Master of Science Thesis, August 2016.

Yaser Saleh, **Undercover Ethnography: Towards an Automated Framework to Study the Human Level of Interest**, Master of Science Thesis, May 2013.

TEACHING EXPERIENCE

Student Evaluation
— My latest average student evaluation is 96.4% .
— Detailed student evaluation is available upon request.

Courses Taught at PSUT:
— Advanced Software Engineering (Graduate Level)
— Advanced Human-Computer Interaction (Graduate Level)
— Usable Security and Privacy
— User Experience
— Human Computer Interaction
— Advanced Interaction Design
— Artificial Intelligence for Games
— Structured Programming
— Object Oriented Programming
— Application Tools for Fine Arts
— 2D and 3D Rigging and Animation
— Software Engineering

Online Courses Designed and Taught at Kwn Education
— Fundamentals of User Experience (450 international students registered)
— Computer Systems Requirements Analysis (in preparation)
— Interactive Media Design and Prototyping (in preparation)

Curricula Reviews and Updates
— Advanced Software Engineering (Graduate Level)
— 2D and 3D Rigging and Animation
— Human-Computer Interaction

Curricula Development of Courses Taught for the First Time at PSUT

- — Usable Security and Privacy
- — Advanced Interaction Design
- — User Experience
- — Advanced Software Engineering (Graduate Level)
- — Advanced Human-Computer Interaction (Graduate Level)

LANGUAGES

Arabic: Native language

English: Excellent reading, writing, listening and speaking