Abdel-Karim Al-Tamimi

Phone: +44 758 492 7611

Email: abdelkarim.tamimi@gmail.com

LinkedIn: https://linkedin.com/in/artamimi

Google Scholar: https://goo.gl/71N0Z2

Summary

I am a Senior Lecturer of Computer Science and Machine Learning at Sheffield Hallam University, a Senior Fellow (SFHEA), and an expert in digital teaching and learning. I lead the Conversational AI Cluster in collaboration with the Advanced Wellbeing Research Centre (AWRC). I earned my PhD in Computer Engineering from Washington University in St. Louis. My research spans Machine Learning, Cybersecurity, IoT, and Computer Networking, yielding 60+ publications with 2000+ citations (h-index: 20, i-index: 29). I bridge academia and industry through advising companies like Berri, SimplyConnect, and Priorzon and co-founding startups like Phyllis chatbot (phyllis.chat) and CyberMATI (supported by CyberASAP/DSIT/IUK). My portfolio showcases strong leadership and effective collaboration on high-impact EU and UK-funded projects, securing grants exceeding £1 million over the past three years. Throughout my career, my projects have received funding from prestigious organizations, including Innovate UK, EMERGENCE/EPSRC, The Royal Marsden NHS Trust, RTN+/EPSRC, H2020, DFG, TEMPUS, and HOPES-MADAD.

Research Interests

Machine Learning (ML), Cybersecurity, Affective Computing, Multimedia Networking, and the Internet of Things (IoT).

Education

Ph.D. in Computer Engineering, Washington University in St. Louis, USA
M.Sc. in Computer Engineering, Washington University in St. Louis, USA
B.Sc. in Computer Engineering, Yarmouk University, Jordan

Current Position

Senior Lecturer, Online Program Leader, Sheffield-Hallam University, UK

> As Program Lead for five online MSc courses, I orchestrated curriculum innovation and quality assurance in partnership with Higher Education Partners (HEP), ensuring world-class online learning experiences aligned with industry demands. Spearheaded the development and delivery of cutting-edge graduate and postgraduate programs in Computer Science, including specialized tracks in AI, Cybersecurity, Machine Learning, and Software Engineering. Lead two dynamic research clusters: the interactive Data Analytics Group (iDAG) and the Conversational AI Research Cluster (CAIRC), while actively contributing to the Smart Interactive Technologies (SIT) Research Laboratory. Drive technological innovation through the Digital Innovation for Growth (DIfG) and Advancing Digital programmes, delivering high-impact consultancy to SMEs in emerging technologies including digital transformation, and bespoke machine learning applications. Leveraging my SFHEA and digital teaching and learning expert status, I pioneer pedagogical excellence in technology education. Leverage 20+ years of international academic leadership experience to foster interdisciplinary collaboration, particularly as a mentor for AWRC Startup Programme, where I bridge academic research with commercial innovation.

Recent Positions

Program Team Leader (Department Chair), Higher Colleges of Technology (HCT), UAE

Spearheaded development and instruction of bachelor-level courses in application development, networking, and cyber-security domains. Led critical delivery transformations during COVID-19 pandemic, resulting in multiple international awards for HCt. Led students to win prestigious awards in national and international competitions, including SAS Data Science Hackathon and HCT COVID-19 Invent-A-Thon. Fostered industry partnerships, driving collaborative research and innovation. As a recognized expert in my field, I was invited to participate as a panelist in the Industrial IoT Session at the HTU Going STEM Industry 4.0 Conference in Amman, Jordan, and was a member of the system-wide HCT's Faculty-Task-Force.

Data Science Consultant for T2, Saudi Arabia

Spearheaded an experienced multinational data science team delivering breakthrough AI solutions across industry verticals. Architected cutting-edge machine learning systems for Availo's flagship product, achieving unprecedented accuracy in biometric authentication through advanced liveliness detection, behavioral profiling, and multi-modal recognition algorithms (facial and speech). Pioneered a groundbreaking Arabic chatbot using state-of-the-art NLP technologies.

Associate Professor, Computer Engineering Department, Yarmouk University, Jordan

Spearheaded the design and delivery of undergraduate and postgraduate courses in Computer Engineering, Embedded Systems, and Industrial Engineering programs. Secured multiple national and international scientific grants, including DFG, H2020, HOPES, and OpenMED. Successfully supervised several M.Sc. projects and theses at both Yarmouk University and Jordan University of Science and Technology (JUST). Spearheaded and led several student initiatives and startups such as Katabjy that won the second prize in Orange Startup Competition. Served as a technical expert on the Economic and Social Commission for Western Asia (ESCWA-UN) team, driving innovation and collaboration. Demonstrated expertise in hackathons, participating in the NYUAD (2013) Hackathon and the prestigious Al-Jazeera News Network (2014) Hackathon, where I showcased my skills in creative problem-solving and coding.

Consultant for Hijjawi Scientific Foundation, Amman, Jordan

Spearheaded the training and development of a team of engineers at Hijjawi Foundation incubator, equipping them with expertise in cutting-edge web and AI technologies to drive innovative solutions. Successfully managed the development of multiple web applications and bespoke business portals, utilizing Agile/Scrum methodologies to ensure efficient and streamlined software development. Designed and implemented personalized 6-month training programs for computer science and computer engineering students, providing comprehensive internships in diverse fields, including web development, game development, and mobile development. Key areas of focus included Full-Stack and Open Source E-Commerce Frameworks, Unity game development, and mobile development for iOS and Android platforms.

Director of the Entrepreneurship and Innovation Center (EIC), YU, Jordan

Spearheaded the development of strategic academia-industry partnerships, driving innovation and entrepreneurship through cutting-edge technologies. Led a high-performing team of 20+ engineers, designing and delivering forward-thinking training programs that empowered students, faculty, and staff with the skills and expertise required to thrive in a rapidly evolving job market. Successfully established three new incubators, fostering a culture of innovation and entrepreneurship among Yarmouk University students and equipping them with the technical and soft skills necessary to succeed in the industry.

Consultant for Modern Business Systems (MBS), Jeddah, KSA

Conducted comprehensive evaluations and executed SAST and DAST penetration tests, proficiently utilizing a range of commercial and open-source tools such as w3af, Nessus, Netsparker, ZAP, IBM AppScan, NMap, and Burp Suite. Developed thorough documentation of test results and findings. Assumed the responsibility of training security professionals and enthusiasts, imparting knowledge on digital forensics concepts and techniques, including topics relevant to the CCFP certificate.

Work Experiences

2024 - Present	Research, Innovation, and Knowledge Exchange (RIKE) Executive Committee Member. Sheffield Hallam University, UK
2023 - Present	Advanced Wellbeing Research Centre (AWRC) Accelerator Programme Mentor
2023 - Present	Cognitive Frailty Interdisciplinary Network (CFIN) Mentor
2022 - Present	Senior Lecturer, Department of Computing, Sheffield-Hallam University, UK
2023 - 2024	Program/Courses Leader for the Online MSc courses in Computer Science, Sheffield Hallam University, UK
2021 - 2022	Program Team Leader, CIS Department, HCT, Al-Ain Campuses, UAE
2019 - 2022	Data Science Consultant, T2, Saudi Arabia
2018 - 2022	Faculty Staff, CIS Department, HCT, Al-Ain Campuses, UAE
2017 - 2018	Associate Professor, Computer Eng. Dept, Yarmouk University, Jordan
2017 - 2018	Director of Entrepreneurship and Innovation Center (EIC), YU, Jordan
2017 - 2020	HijjawiTech Technical Consultant, Jordan
Summer 2018	Visiting Professor, TKN Group, Technische Universitat Berlin, Germany
2015 - 2017	Big Data Consultant for Orange-Jordan, Amman, Jordan
2013 - 2017	Security Consultant, Modern Business Systems (MBS), Jeddah, KSA
2010 - 2017	Assistant Professor, Computer Eng. Dept, Yarmouk University, Jordan
April 2016	Visiting Professor, UCLM, Alabacete, Spain
Summer 2014	Visiting Professor, TKN Group, Technische Universitat Berlin, Germany
Summer 2013	Visiting Professor, TKN Group, Technische Universitat Berlin, Germany
2006-2010	Full Stack Web Developer and Web Admin, Washington Univ. in St. Louis.
Summer 2009	Senior Web Developer for Confluen Medical Start up, St. Louis, USA
Summer 2007	C++/Intel IPP Developer, ComTrak Technologies, St. Louis, USA
2005-2006	Web Developer, Washington University in St. Louis, USA
Fall 2005	Teaching Assistant, Washington University in St. Louis, USA
2004-2005	Teaching Assistant and Lab Instructor, Yarmouk University, Irbid, Jordan

Professional Experiences

2025	Distinguished Member of the Board of Studies (BoS). UIE-CSE Specialization Programs. Chandigarh University. India.
	International Academic Panel Member to review *MSc in Information Systems with Computing* programme based on QQI standards. Dublin Business School. Ireland.

2024	International Advisory Committee Member of *Latest Advancements in Science, Management, Commerce and Educational Research (LASMCER-2024) conference.* 2nd-3rd November 2024. Montreal, Canada.
	Keynote Speaker at the *Beyond Intelligence: AI for a Changing Planet* conference. 26-27th October 2024. Beijing, China.
	Keynote Speaker at the *AI & Its Applications : Transforming Industries and Society* conference. 21-22nd September 2024. Dubai, UAE.
	Invited Speaker and Panelist at the ACII 2024 conference, *From Lab to Life: Realising the Potential of Affective Computing*, University of Glasgow, UK.
	GISEC Global Registered Attendee, (23-25 April) Dubai, UAE.
	Participant of the N-CODE study Group Workshop.(15-18 April) UK.
	Member of the Science Media Centre (SMC). UK.
	Invited speaker to EMERGENCE workshop to present CIREI project.Tackling Challenges in Getting Robots out of the Lab and into the Real World. University of Nottingham, UK. 20th of Feb. 2024.
2023	Co-organizer of the first Workshop on the Readability for Low resourced Languages (RLRL2023) with Lancaster University and King Saud University.
	Invited speaker and panelist at the *The impact of AI in Finance* event hosted by PryceWilliams consultation firm. Sheffield, UK.
	Invited speaker at *Discover: What business can do with Artificial Intelligence.* Advancing Digital. Sheffield. UK
	Poster Presentation at the BTE Green Day. Pedagogic research that enhances learning, engagement, and the student experience Track. *EDUChat: Exploring the Role of Chatbots in Education and Uncovering Student Preferences for Enhanced Classroom Interactions.* Sheffield Hallam University. UK.
	Grand Challenge Workshop Participant. Rehab Technologies Network. Neurological Rehabilitation. Nottingham. UK
	Member of the *Rehab Technologies Network.* UK
	Member of the *Systems, Services and Strategy in Health and Care* Research Group, Advanced Wellbeing Research Centre (AWRC), SHU, UK
	Member of the Board of Studies of the AIT-CSE department at Chandigarh University, Punjab, India
	Participant in the Engineering and Physical Sciences Research Council (EPSRC) bootcamp, organized by GrantCraft and Sheffield Hallam University.
2022	Editorial Board Member of *PLOS ONE Journal.* ISSN: 1932-6203 (Online)
	Editorial Board Member of *Research Reports on Computer Science.* ISSN: 2811-0005 (Print) 2811-0013 (Online)
	Co-Founder of Phyllis (phyllis.chat), an AI-based conversational agent to help youth overcome mental and physical barriers to partaking in physical activities
	Invited Talk: DIfG Success Stories, SHU, UK
	Invited Talk: Blockchain in Healthcare, Sheffield Digital Festival, SHU, UK

	DigiHealth Bootcamp Programme Participant. Phyllis Chatbot MVP Development and Market Research. SHU, UK.
	Member of Digital Innovation for Growth (DIFG) Consultation Team to help support SMEs in the South Yorkshire region, SHU, UK
	Member of Applied Software Engineering Research Group (ASERG), SHU, UK
2021	Member of Program Academic Committee (PAC), HCT, UAE
2020	Member of the system-wide HCT's Faculty-Task-Force, HCT, UAE
2019	Panelist in Industrial IoT Session, HTU Going STEM Industry 4.0 Conference, Amman, Jordan
2018	Invited Lead Guest Editor of Advances in Multimedia Journal, special issue "Multimedia Streaming Analysis in Internet-of-Thing Era"
	Keynote Speaker and panelist at "Towards Fostering Innovation & Job Creation in the North: Utilizing Latest Technology Trends" Conference, Irbid, Jordan.
2017	Organizing Committee Member and Session Chair in AEECT Conference
	Multimedia Streaming Consultant for www.10EQS.com
	Participant in Open Education Training Week (OpenMed Project) held in Torino, Italy (24-30 Sept. 2017)
2011-2017	Judge and Reviewer for the National Technology Parade (NTP) contest
2015-2017	ACM International Collegiate Programming Contest Coach
2016-2017	Programming Club Supervisor
2012-2017	Web Development and Front-End Engineering Training Course Instructor, Queen Rania Center, Yarmouk University, Jordan
2014-2016	Member of The Academic Entrepreneurship Center of Excellence (AECE) Steering Committee
2011-2016	.NET Club Supervisor
2012-2016	Co-Founder and Mentor in Orange-Yarmouk Innovation Lab (OYIL)
2016	Seminar "Personal Digital Privacy", Yarmouk University, Jordan
	Seminar "Social Skills for Engineers", Yarmouk University, Jordan
	Digital Forensics Instructor, MBS, Amman, Jordan
2015	Program Committee Member, IEEE International Conference on Open Source Software Computing, OSSCOM 2015, Jordan
	OSSCOM R-Workshop Instructor, Notre Dame University, Lebanon. (R Crash Course,16-19 Mar. 2015) http://osscom.org/r-crash-course
2012-2015	Founder of the Research and Industry (RnI) Incubator
2014	Selected Participant (Top 6% among 1500 applicants) at *Canvas: Innovation in Media Hackathon* by Al-Jazeera News Agency. Doha, Qatar.
2013-2014	Technical Team Member of Economic and Social Commission for Western Asia ESCWA-UN, Amman, Jordan.
2013	Participant of ToT Entrepreneurship Workshop Organized by Intel and Queen Rania Center for Entrepreneurship
2013	Mentor at New York University-Abu Dhabi (NYUAD) Hackathon, UAE.

2012-2013	Department Representative and a member of the Engineering Faculty Council Committee.
2009-2010	Member of the Executive Board of the Student Council at Washington University in St. Louis
2010-2018	Served as a member of many advisory and curriculum committees on faculty level, YU, Jordan.
2007-Present	Served as a program committee member for many international journals and workshops including: IEEE Com. Letters, IEEE Trans. on Multimedia, IEEE Access, Information Processing and Management, Wireless Communications and Mobile Computing, PLOS One, PeerJ, IJCDNS, IEEE BigComp 2025, WISE-2024, IMCL2023, IEEE BigComp 2023, BigComp 2022, MIC-Telecom 2021, SEMAPRO 2021, WiSPNET 2021, BigComp 2021, ITT 2019, AICCSA 2018, AEECT 2017, CSIT 2016, ICICS 2015, AEECT 2013, ICAIS 2013, ICCIT MCC 2013, CCECE 2011, EMERGING 2010, ACCESSNETS 2010, EDOC 2010, MOPAS 2010, AICCSA 2010, AINA 2010, ADCOM 2010, ICC'09 CISS 2009, ICFIN 2009, DRCN 2009, EDOC 2009, HotACIV 2009, NetEval 2009, ICCCN 2009, COMCOM 2009, AICCSA 2009, AINA 2009, CIS 2008, ICCNB 2008, HPCNCS 2008, IASTED AsiaCSN 2008, CSN 2007

Certificates

2024	*Good Clinical Practice (CGP).* NIHR, UK.
2022	*Senior Fellowship of the Higher Education Academy (SFHEA) .* Advance HE, UK.
	Leading into the Future programme. SHU, UK.
	Certified Expert in Digital Teaching and Learning. Blackboard Academy.
	Doctoral Supervisor Development Course. SHU, UK.
2021	*Huawei HCIA-AI Certified.* Huawei.
	Certified Specialist in Digital Teaching and Learning. Blackboard Academy.
	Certified Practitioner in Digital Teaching and Learning. Blackboard Academy.
	Fellowship of the Higher Education Academy (FHEA) . Advance HE.
	Certified Associate in Digital Teaching and Learning. Blackboard Academy.
	Data Visualization with Tableau Desktop. HCT.
	Microsoft Power BI Developer. Microsoft.
2020	*IBM Blockchain Developer. Explorer Award.* IBM.
	Leading Through Emotional Intelligence. (CPE) Becker Professional Education.
	Stress Management at Work. (CPE) Becker Professional Education.
	Change Management. (CPE) Becker Professional Education.
	Managing a Virtual Team. (CPE) Becker Professional Education.
	Essentials of Instructions. HCT.
	Essentials of Teaching with Technology. HCT.
2019	*Advanced Cisco Routing: RIPv2, EIGRP, and OSPF.* LinkedIn Learning.
	Essentials of Blackboard. HCT.
	IBM Security Intelligence - IBM Q Radar. HCT.

	IBM Application Security Engineer Mastery Award for Educators. IBM.
2017	*Open Education Training Week.* Politecnico di Torino, Torino, Italy. OpenMed project.
2009	*Illinois Wireless Summer School.* Illinois Center for Wireless Systems. University of Illinois, Urbana-Champaign.
	Responding to Student Writing. Washington University in St. Louis
2008	*Grades and Grading.* Washington University in St. Louis
	The Graduate Student Summer Workshops. Washington University in St. Louis
2007	*Teaching with Lectures.* Washington University in St. Louis
	Writing a Teaching Philosophy Statement and Creating a Teaching Portfolio. Washington University in St. Louis
2005	*CCNA: Cisco Certified Network Associate.* Cisco 2007.

Journals

2025	M. Salem and A. Al-Tamimi, "Transforming Professional Re-engagement Through Internet-Enabled Inclusive Learning Models", Submitted to The Internet and Higher Education. **IF: 6.4**
	A. Rodan, O. Al-Kadi, A. Al-Tamimi, Y. Javed and P. Tino, "Ensembles of RNNs Negatively Correlated Through Time using BPTT and RTRL", Submitted to Neural Computing and Applications. **IF: 4.5**
	A. Rodan, A. Mirjalili, A. Al-Tamimi, and L. Alnemer, "Enzyme Action Optimizer: A Novel Bio-inspired Optimization Algorithm Knowledge-Based Systems", Submitted to The Journal of Supercomputing. **IF: 2.5**
	A. Al-Tamimi et. al, "Challenges of Integrating Robots with Embodied Intelligence in the Homes of Older People Living with Frailty: CIREI Framework". Submitted to IEEE Access Journal. 2024. https://github.com/A-Al-Tamimi/CIREI **IF: 3.9**
	A. Rodan, A. Al-Tamimi, L. Al-Alnemer, and S. Mirjalili, "Stellar Oscillation Optimizer: A novel meta-heuristic optimization algorithm", Accepted in Cluster Computing. **IF: 3.6**
2024	M. Salem, K. Samara and A. Al-Tamimi, "Navigating Challenges in Online Cybersecurity Education: Insights from Postgraduate Students and Prospects for a Standardized Framework". ACM Transactions on Computing Education. https://doi.org/10.1145/3703163 **IF: 3.2**
	R. Moore, A. Al-Tamimi, and E. Freeman, "Investigating the Potential of a Conversational Agent (Phyllis) to Support Adolescent Health and Overcome Barriers to Physical Activity: Co-Design Study". JMIR Formative Research. 22/11/2023:51571. DOI: 10.2196/51571. PMID: 38294857 **IF: 2.2**

A. Hanif, Z. Saleem, Y. Javeed, and A. Al-Tamimi, "The Impact of Game-Based Learning (GBL) On Learners' Academic Performance, Social Skills and Academic Emotions in Computer Studies",International Journal of Learning Technology. *(in press)* DOI:10.1504/IJLT.2024.10065083 **IF: 0.7**

2023   R. Moore, A. Al-Tamimi, L. Lazuras, "Breaking Down Barriers to Adolescent Physical Activity Participation: A Philosophical and Theoretical Framework for the Design of Conversational Agents." Submitted to Cognitive Systems Research **IF: 3.9**

T. Alwada'n, A. Al-Tamimi, A. Mohammad, M. Salem, and Y. Muhammad, "Dynamic Congestion Management System for Cloud Service Broker", International Journal of Electrical and Computer Engineering (IJECE) 13.1: 872-883. **IF: 1.94**

M. Al-Jarrah, A. Al-Jarrah, A. Jarrah, M. Sharbaji, S. K. Magableh, A. Al-Tamimi, N. Bzoor, M. O. Al-Shamali, "Accurate Reader Identification for the Arabic Holy Quran Recitations Based on an Enhanced VQ Algorithm", Revue d'Intelligence Artificielle Journal. DOI: https://doi.org/10.18280/ria.360601 **IF: 1.94**

2022   M. Salem and A. Al-Tamimi, "A Novel Threat Intelligence Detection Model using Neural Networks", IEEE Access, vol. 10, pp. 131229-131245, 2022. **IF: 3.9**

2021   A. Al-Tamimi et. al, "Offline Signature Recognition System Using Oriented FAST and Rotated BRIEF (ORB)", in International Journal of Electrical and Computer Engineering (IJECE) (2088-8708) 11, no. 5 (2021). **IF: 1.938**

2018   A. Al-Sobeh, R. Hammad, and A. Al-Tamimi, "A Modular Cloud-based Ontological Framework for Context-aware EHR Services", in International Journal of Computer Applications in Technology (2018). Inderscience Publishers. **IF: 1.55**

2017   A. Jarrah, A. Al-Tamimi, and T. Albashir, "Optimized Parallel Implementation of Extended Kalman Filter Using FPGA", in Journal of Circuits, Systems, and Computers. Vol. 27, No. 1 (2018). World Scientific Publishing Company. **IF: 1.56**

2016   K. Miller, A. Al-Tamimi, and A. Wolisz, "QoE-Based Low-Delay Live Streaming Using Throughput Predictions," in the ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM), Volume 13 Issue 1, November 2016. **IF: 5.1**

I. Abu-Doush, S. Alshatnawi, A. Al-Tamimi, B. AlHasan, and S. Hamasha "ISAB: Integrated Indoor Navigation System for the Blind," in Interacting with Computers 2016, doi: 10.1093/iwc/iww016. **IF: 1.3**

M. A. Alzubaidi, M. Otoom and A. Al-Tamimi, "Parallel Scheme for Real-Time Detection of Photosensitive Seizures," in Computers in Biology and Medicine. Vol. 70, pp 139-147. Elsevier 2016. **IF: 4.589**

2015   K. Miller, A. Al-Tamimi, and A. Wolisz, "Low-Delay Adaptive Video Streaming Based on Short-Term TCP Throughput Prediction", Telecommunication Networks Group, Technische Universität Berlin no. TKN-15-001, March, 2015. online: arXiv preprint. arXiv:1503.02955, 2015

2014	A. Al-Tamimi, M. Jaradat, N. Aljarrah, and S. Ghanem. "AARI: Automatic Arabic Readability Index." The International Arab Journal of Information Technology 11, no. 4 (2014). **IF: 0.96**
2013	H. W. Marar, K. Abugharabieh, A. Al-Tamimi, "A 1.8 V low power 5 Gbps PMOS-based LVDS output driver with good return loss performance," Analog Integrated Circuits and Signal Processing Volume 79, Issue 1 , pp 1-13. Springer 2013. **IF: 1.4**
2012	A. Al-Tamimi, R. Jain, and C. So-In, "High-Definition Video Streams Analysis, Modeling, and Prediction," Advances in Multimedia, vol. 2012, Article ID 539396, 13 pages, 2012. doi:10.1155/2012/539396 **IF: 1.7**
2010	C. So-In, R. Jain, and A. Al-Tamimi, "A Scheduler for Unsolicited Grant Service (UGS) in IEEE 802.16e Mobile WiMAX Networks" IEEE Systems J., vol. 4, no. 4. pp.487-494, Dec. 2010. **IF: 4.4**
	A. Al-Tamimi, C. So-In, and R. Jain, "Modeling and Resource Allocation for Mobile Video over WiMAX Broadband Wireless Networks," IEEE Journal on Selected Areas in Communications (JSAC), Special Issue on Wireless Video Transmission, vol. 28, no. 3, pp. 354-365, April 2010. **IF: 11.42**
	C. So-In, R. Jain, and A. Al-Tamimi, "Capacity Evaluation for IEEE 802.16e Mobile WiMAX," Journal of Computer Systems, Networks, and Communications, Special issue on WiMAX, LTE, and WiFi Interworking, Vol. 1, No. 1, April 2010. **IF: 2.74**
	C. So-In, R. Jain, and A. Al-Tamimi, "Deficit Round Robin with Fragmentation Scheduling to Achieve Generalized Weighted Fairness for Resource Allocation in IEEE 802.16e Mobile WiMAX Networks," J. of Future Internet, Special Issue on QoS in Wired and Wireless IP networks, vol. 2, no. 4, pp. 446-468, Oct. 2010. **IF: 3.4**
	A. Al-Tamimi, C. So-In, and R. Jain, "Modeling and Resource Allocation for HD Videos over WiMAX Broadband Wireless Networks," IEEE COMSOC MMTC E-Letter, Vol.5, No.3, May 2010. **IF: 3.419**
2009	B. Kim, J. Yun, Y. Hur, ,C. So-In, R. Jain, A. Al-Tamimi, "Capacity estimation and TCP performance enhancement over mobile WiMAX networks," IEEE Communications Magazine, special issue on Mobile WiMAX, Vol. 47, Issue 6, June 2009, pp. 132-141 **IF: 11.83**
	C. So-In, R. Jain, and A. Al Tamimi, "Scheduling in IEEE 802.16e Mobile WiMAX Networks: Key Issues and a Survey," IEEE Journal on Selected Areas in Communications (JSAC), Vol.27, No. 2, Feb 2009 **IF: 11.42**
2008	R. Jain, C. So-In, and A. Al Tamimi , "System Level Modeling of IEEE 802.16e Mobile WiMAX Networks: Key Issues," IEEE Wireless Comm. Mag., Oct. 2008. **IF: 14.5**

Conferences, Posters and Technical Papers

2025	A. Al-Tamimi et al.,"R-Speak: Empowering Communication for Individuals with Aphasia through Knowledgeable -AI," the 11th European Stroke Organisation Conference. 21-23 May 2025, Helsinki, Finland. 2025.
	C. Sweby, A. Al-Tamimi et al.,"R-Speak: Empowering Communication for Individuals with Aphasia through Knowledgeable Artificial Intelligence (AI)," SRR Conference. The Society for Research in Rehabilitation Winter Conference: Rehabilitation Technology for Societal Participation. The University of Essex. UK. 15th of January 2025.
2024	A. Al-Tamimi and M. Brock, "EMOLight: Immersive Visual Experience for the Audibly Impaired", In Proceedings of Affective Computing & Intelligent Interaction (ACII 2024) Conference. Glasgow, Scotland. September 15-18, 2024.
	A. Al-Tamimi et al., "R-SPEAK: Revolutionsing Speech Enhancement in Aphasia Using Knowledgable-AI", NRC-Rehabilitation Technologies Conference. University of Nottingham, UK. September 17-18, 2024.
	J. Andrews, A. Al-Tamimi et al., "R-SPEAK: Revolutionizing Speech Enhancement in Aphasia Using Knowledgable-AI", The International Society for Research on Internet Interventions (ISRII) Conference. Ireland. June 2-5, 2024.
	L. A. Barker, A. Zolubak, S. Fowler-Davis, A. Al-Tamimi, M. Shafizadeh, A. Winterbotham, C. Craig, "Building A.D.A. (the Automated Dementia Assistant): Working with people with dementia and care partners to co-design and co-create a bespoke multimodal wearable product to enhance autonomy, independence and quality of life", Presented in the 36th Global Conference of Alzheimer's Disease International, Krakow, Poland, 24-26 April. 2024.
	L. A. Barker, A. Winterbotham, A. Al-Tamimi, A. Zolubak, S. Fowler-Davis, M. Shafizadeh, Y. Jee & A. Stone. "Building A.D.A: Developing the automated dementia assistant with, and for, people with dementia". (2024).EPSRC and NIHR Event. The Department of Health and Social Care, Quarry House, Leeds, LS2 7UE on Wednesday 17 April 2024
2023	R. Moore, E. Freeman, and A. Al-Tamimi, "A theoretical framework and conversational agent (Phyllis) to support adolescents overcome barriers to physical activity", Poster Submission in Child Health Technology Conference CHT2023, UK
	A. Al-Tamimi et. al, "EDUChat: Exploring the Role of Chatbots in Education and Uncovering Student Preferences for Enhanced Classroom Interactions", Poster Submission, Learning, Teaching and Assessment Conference (LTA 2023). UK

2021   A. Al-Tamimi, E. Bani-Issa and A. Alami, "Active Learning for Arabic Text Classification", in the Proceedings of the 2nd International Conference on Computational Intelligence and Knowledge Economy (ICCIKE) 2021, Dubai, UAE.

2020   A. Al-Tamimi et. al, "On the Use of Feature Selection for Music Genre Classification", in the Proceedings of IEEE ITT 2020 conference, Abu Dhabi, UAE.

2020   D. Alsbeih, M. Daoud, A. Al-Tamimi and M. Jarrah, "A Dynamic System for Tracking Biopsy Needle in Two Dimensional Ultrasound Images", in the Prcoeedings of the 5th IEEE Middle East and Africa Conference on Biomedical Engineering (MECBME2020), Amman, Jordan.

2019   M. A. Hassonah, A. Rodan, A. Al-Tamimi and J. Alsakran, "Churn Prediction: A Comparative Study Using KNN and Decision Trees", in the Proceedings of IEEE ITT 2019 conference, RAK, UAE.

2017   A. Al-Tamimi, A. Shatnawi and E. Bani Issa, "Arabic Sentiment Analysis of YouTube Comments", in Proceedings of IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT 2017), Amman, Jordan.

       A. Khalifeh, A. Al-Tamimi, and K. Darabkh, "Perceptual Evaluation of Audio Quality Under Lossy Networks", in Proceedings of International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET 2017), Chennai, India.

2016   A. Al-Tamimi et. al, "Towards Designing a Portable Online Assessment System", in Proceedings of the 2nd Biennial International Conference on the use of iPads in Higher Education (ihe2016), San Francisco, USA. March 2016.

2014   A. Al-Tamimi and A. Khalifeh, "Mobile Mules: Modular E-Health Information Synchronization Framework", Medical Information and Communication Technology (ISMICT), 2014 8th International Symposium on, pp. 1-5. IEEE, 2014.

2013   J. Alzoubi, A. Al-Tamimi, A. Alquday, and S. Alboon, "Performance Analysis for the Piezoelectric Actuator Parameters", The 8th Jordan International Electrical and Electronics Engineering Conference. JIEEEC. 2013.

2012   A. Al-Tamimi,"Modeling VP8/WebM Encoded Video Traces." Computer Modeling and Simulation (EMS), 2012 Sixth UKSim/AMSS European Symposium on, pp. 439-443. IEEE, 2012.

       H. W. Marar, K. Abugharbieh, A. Al-Tamimi, "A power efficient 3-Gbits/s 1.8 V PMOS-based LVDS output driver." In Electronics, Circuits and Systems (ICECS), 2012 19th IEEE International Conference on, pp. 240-243. IEEE, 2012.

2010	A. Al-Tamimi, R. Jain, and C. So-In, "Dynamic resource allocation based on online traffic prediction for video streams." In Internet Multimedia Services Architecture and Application (IMSAA), 2010 IEEE 4th International Conference on, pp. 1-6. IEEE, 2010.
	A. Al Tamimi, R. Jain, and C. So-In, "Modeling and generation of AVC and SVC-TS mobile video traces for broadband access networks". In Proceedings of the First Annual ACM SIGMM Conference on Multimedia Systems (Phoenix, Arizona, USA, February 22 - 23, 2010). MMSys'10.
	A. Al-Tamimi, R. Jain, and C. So-In, "Modeling and prediction of high definition video traffic: A real-world case study." In Advances in Multimedia (MMEDIA), 2010 Second International Conferences on, pp. 168-173. IEEE, 2010.
	A. Al-Tamimi, R. Jain, C. So-in, "Statistical Analysis and Modeling of High Definition Video Traces," in Proc. Int. Conf. on Multimedia & Expo (ICME), pp. 596-601, July 2010.
	C. So-in, R. Jain, A. Al-Tamimi, "SWIM: A Scheduler for Unsolicited Grant Service (UGS) in IEEE 802.16 e Mobile WiMAX Networks." In Access Networks, pp. 40-51. Springer Berlin Heidelberg, 2010.
2009	C. So-In, R. Jain, and A. Al Tamimi, "A Deficit Round Robin with Fragmentation Scheduler for IEEE 802.16e Mobile WiMAX," Proceedings 2009 IEEE Sarnoff Symposium, Princeton, NJ, Mar 30-Apr 1, 2009
	C. So-In, R. Jain, and A. Al-Tamimi, "OCSA: An algorithm for burst mapping in IEEE 802.16 e mobile WiMAX networks." In Communications, 2009. APCC 2009. 15th Asia-Pacific Conference on, pp. 52-58. IEEE, 2009.
	C. So-In, R. Jain, A. Al-Tamimi, "eOCSA: an algorithm for burst mapping with strict QoS requirements in IEEE 802.16 e mobile WiMAX networks." In Wireless Days (WD), 2009 2nd IFIP, pp. 1-5. IEEE, 2009.
2008	A. Al-Tamimi, R. Jain, C. So-in, "SAM: A Simplified Seasonal ARIMA Model for Mobile Video over Wireless Broadband Networks," Proceedings of IEEE Tenth International Symposium on Multimedia, ISM2008, pp 178-183, ISBN: 978-0-7695-3454-1.
	A. Al-Tamimi, "Performance Analysis of Data Encryption Algorithms", Washington University Technical Papers, http://www.cs.wustl.edu/∼jain/cse567-06/ftp/encryption perf/index.html. 2008.
2006	A. Al-Tamimi, "Security in Wireless Data Networks: A Survey Paper", Washington University Technical Papers, http://www.cs.wustl.edu/∼jain/cse574-06/ftp/wireless_security.pdf. 2006.

M. Al-Jarrah and A. Al-Tamimi, "A Thin Security Layer Protocol over IP Protocol on TCP/IP Suite for Security Enhancement." In Innovations in Information Technology, 2006, pp. 1-5. IEEE, 2006.

Book Chapters

2024	A. Al-Tamimi et al., "Chatbots in Education: Meeting Evolving Student Needs and Transforming Learning Paradigms in the Post-COVID-19 Era," Building Resiliency in Higher Education: Globalization, Digital Skills, and Student Wellness. IGI Global. DOI: 10.4018/979-8-3693-5483-4. ISBN13: 9798369354834
2017	A. Al-Tamimi, "Open Source Software Market Analysis," Prospects of Open Source Software.The OSSCOM Consortium.
	A. Al-Tamimi, E. Aria, B. Caminero and C. Carrión, "OSS Learning Resources," Prospects of Open Source Software. The OSSCOM Consortium.
2011	A. Al-Tamimi and R. Jain, "Security in Wireless Data Networks," Handbook on Security and Networks Edited by Prof. Yang Xiao, Prof. Frank H. Li, and Prof. Hui Chen, published by World Scientific Publishing Co., ISBN:9814273031, April 2011.
2010	C. So-In, R. Jain, and A. Al-Tamimi, "Resource Allocation in IEEE 802.16e Mobile WiMAX," Orthogonal Frequency Division Multiple Access Fundamentals and Applications, Editors: Tao Jiang; Lingyang Song; Yan Zhang, CRC Press, 9781420088243, 608 pp, April 2010.

Books

2020	E. Bani-Issa, A. Al-Tamimi, and A. Shatanawi, "Sentiment Analysis for Arabic YouTube Comments", ISBN: 978-620-2-79955-3, Lambert Academic Publishing. 2020.
2010	A. Al-Tamimi, "Mobile and High Definition Video Streams: Analysis, Modeling, Generation, and Dynamic Resource Allocation", ISBN: 978-3-8443-2740-3, Lambert Academic Publishing. 2010.

Patents

A. Al-Tamimi, "Apparatus and Method for Detection of Malicious Websites", GB2308223.3, PCT/GB2024/051415. Sheffield Hallam University. 2023. *Patent Pending*

Memberships

Institute of Electrical and Electronics Engineers (IEEE) Member
Open Source Software Communities (OSSCOM) Member
Jordan Engineers Association (JEA) Member
Rehabilitation Technologies Network (RTN+) Member

Achievements and Awards

2020	Mentor of the 3rd place winners of HCT COVID-19 Invent-A-Thon: Solutions for a better life during & after the pandemic. UAE.
2019	Mentor of the 1st, 2nd and 3rd place winners of SAS Data Science Hackathon, UAE.
2018	Recognized among the top IT researchers in Jordan with more than 1400 citations
2017	Recognized among the top IT researchers in Jordan with more than 1300 citations
2016	Recognized among the top IT researchers in Jordan with more than 930 citations
2015	2nd Place in Orange Developer Challenge (KATABjy startup)
2014	2nd Place in the national Jordanian Engineers Association (JEA) challenge for Electrical Engineering projects implemented in the industry (with Amman Commerce Chamber)
2013	2nd Place in the national Jordanian Engineers Association (JEA) challenge for Electrical Engineering projects
2012	1st Place in the international Universities Robotic Competition (URC)-*Military Track*
	3rd Place in the national Jordanian Engineers Association (JEA) challenge for Electrical Engineering projects
2011	Nomination for Who's Who among Executives and Professionals *Jan 2011*
2010	Nomination for Marquis Who's Who in Science and Engineering *Dec 2010*

Grants and Scholarships

- [**Co-I**] Innovate-UK Design Foundations Round 6. *Adaptive Family Engagement in Digital Systemic Therapy Platform Powered by Synergistic Small Language Models.* UK. 2025 . (Total of £**80,000** [fEC]). *Pending*
- [**Co-I**] N-CODE Study Group Follow on Pump Prime Funding. *CoCoA-PAD: The Development and Evaluation of Automated Cognitive Assessments.* UK. 2024 . (Total of £**35,000** [fEC]). *Successful*
- [**PI**] Cyber security academic startup accelerator programme (CyberASAP) - Phase II. *CyberMATI.* UK. 2024 . (Total of £**44,391** [fEC]). *Successful*
- [**PI**] Computing Department Funded Research Project. *Scam Call Detection Using Transformers and Generative AI.* UK. 2024 . (Total of £**4,299** [fEC]). *Successful*
- [**PI**] Cyber security academic startup accelerator programme (CyberASAP). *EyeGuardChain: Detecting malicious websites using AI.* UK. 2024 . (Total of £**50,105** [fEC]). *Successful*
- [**Co-I**] Royal Marsden. *Enhancing Outcomes for People with a Cancer Diagnosis..* UK. 2023 . (Total of £**634,353** [fEC]). *Successful*
- [**PI**] Rehab Technology Network/EPSRC. *R-SPEAK: Revolutionizing Speech Enhancement in Aphasia Using Knowledgeable-AI.* Rehab Technologies Network (RTN).UK. 2023 .(Total of £**40,027**)*Successful*
- [**Co-I**] SHU Research and Innovation Fund (SHRIF). *Phyllis - Design and development of conversational AI physical activity interventions.* UK. 2023 . (Total of £**28,654.67**). *Successful*

- [**PI**] Student Engagement, Evaluation and Research (STEER) Evaluation Bursary. *EDUChat: Your Virtual AI Tutor.* Directorate of Student Experience, Teaching and Learning (SETL). Sheffield Hallam University. UK. 2023 . (Total of £**1,000**). *Successful*

- [**PI**] Graduate Training Assistant PhD Scholarship. *A conversational AI Agent for Overcoming Barriers to Learning in Higher Education Using Machine Learning (ML) and Natural Language Processing (NLP) Techniques.* Sheffield Hallam University. UK. 2023 . *Successful*

- [**Co-I**] Graduate Training Assistant PhD Scholarship. *Detection of Cognitive Frailty Based on Text Readability Features Using Natural Language Processing (NLP) Techniques.* Sheffield Hallam University. UK. 2023 . *Successful*

- [**PI**] Innovate UK. Feasibility studies for Artificial Intelligence solutions. *Unlocking the Potential of Recycled Fibre Reinforcements in Construction: Automating Quality Assessment through Machine Learning (ML).* (Partner: Zero Waste Works). UK. 2023 . (Total of £**50,000**). *Successful*

- [**Co-I**] The Longitude Prize on Dementia. *A.D.A. - Automated Dementia Assistant.* UK (Total of £**80,000**). 2023 . *Successful*

- [**PI**] EMERGENCE Healthcare Technologies Network+ Robotics for Frailty Challenge. *(CIREI) - Challenges of Integrating Robots with Embodied Intelligence in the Homes of Older People Living with Frailty: Towards a Smart Middleware Architecture .* UK. (Total of £**49,233**). 2022 . *Successful.*

- [**PI**] Sheffield Hallam University-Department of Computing Internal Fund. *EmoLight: Immersive TV Experience for the Audibly Impaired.* UK. (Total of £**5,000**). 2022 .*Successful*

- [**Co-I**] SHU/Sheffield Children'S Hospital Charity Complications from Excess Weight Innovation Challenge. *Phyllis – a chatbot to support children who are obese or overweight to move more.*, UK. (Total of £**10,000**). 2022 .*Successful*

- [**Co-I**] Sheffield Hallam University Leveling Up Challenge *The development and delivery of a whole systems implementation and evaluation research collaborative, focusing on older adult population health and wellbeing, across the Sheffield City Region. SHU, UK.* (Total of £**9,825**). 2022 . *Successful*

- [**PI**] Teaching, Learning & Student Experience Enhancement project. *EduChat : A conversational agent to improve the learning environment* (Total of £**1,800**). 2022 . *Successful*

- [**PI**] SEED Grant from Higher Colleges of Technology (HCT), UAE, Arabic Learning Framework for Arabic Text Classification (Total of **10,000 AED**). 2019 . *Successful*

- [**Co-I**] H2020-RAISD (Reshaping Attention and Inclusion Strategies for Distinctively Vulnerable People Among the Forcibly Displaced) (Total budget˜**€2.7million Euro**). 2018 . *Successful*

- [**PI**] DFG Initiation of International Collaboration Scholarship in collaboration with Dr. Suzan Bayhan from TU-Berlin on Project: "Leveraging Deep Learning Techniques to Model, Generate and Optimize Video Streaming" (Total of **€7850 Euro**). Germany. 2018 . *Successful*

- [**PI**] HOPES (Higher and Further Education for Opportunities and Perspectives for Syrians) Grant for PFISR (Providing Fundamental ICT Skills for Syrian Refugees) Project Funded by EU (Total of **€53,000 Euro**). 2017 . *Successful*

- [**PI**] HOPES (Higher and Further Education for Opportunities and Perspectives for Syrians) Grant for TEFSR (Transferring E-Business Fundamentals to Syrian Refugees) Project Funded by EU (Total of **€39,000 Euro**). 2017 . *Successful*

- [**Co-I**] Partnership with Enterprises Towards Building Open Source Software Communities and Rejuvenation of Technical Education and Innovation (OSSCOM). Project duration 36 months (Total budget ˜**€950,000 Euro**). Supported by TEMPUS IV. 2015 . *Successful*

- [**PI**] Avempace III-Erasmus Mundus staff exchange grant. 2014 .(Total of ˜8,000 JOD). *Successful*

- [**PI**] EPIC-Erasmus Mundus staff exchange grant. 2013 . (Total of ˜3,000 JOD). *Successful*

- [**PI**] Yarmouk University Scientific Research Fund Grant (Using Integrated Techniques for Developing Indoor Navigation Systems to Allow the Blind and Visually Impaired People to Reach Precise Objects). 2013 . (Total of ~7,000 JOD). *Successful*

- [**PI**] King Abdullah Design and Development Bureau (KADDB)-KAFD Grant (Paperless E-Government System with Internal and External Tracking). 2012 . (Total of ~4,300 JOD). *Successful*

- [**PI**] Applied Scientific Research Fund (ASRF) Grant (Low Cost Interactive Whiteboard). 2012 (Total of ~6,000 JOD). *Successful*

- [**PI**] King Abdullah Design and Development Bureau (KADDB)-KAFD Grant (Unmanned Vertical Auto Taking-Off and Landing (UVTOL) Quad-Copter Controller System). 2011 (Total of ~3,300 JOD). *Successful*

- [**PI**] Yarmouk University Scientific Research Fund Grant (Modeling and Prediction of VP8/H.264 Video Traffic). 2011 (Total of ~11,000 JOD).*Successful*

- Student grant to attend Software Defined Radio (SDR) 2009 Forum. Washington DC. USA.2009.

- Student grant to attend Wireless Summer School at the University of Illinois Urbana-Champaign. Illinois, USA. 2009.

- Yarmouk University full scholarship recipient for both M.Sc. and Ph.D. degrees. 2005-2010.

- Higher Education Ministry scholarship recipient (Top Students Scholarship Program) for bachelor's degree. 1999-2004.

Selected Supervised Theses and Projects

(MPhil) E. Bani-Issa, "Sentiment Analysis of YouTube Arabic Videos Comments," M.Sc. Thesis. Jordan University of Science and Technology. Jan. 2018.

(MPhil) M. Zayed, "Spoken Language Identification Using Factor Analysis and Deep Neural Networks" M.Sc. Thesis. Jordan University of Science and Technology. Jan. 2018.

(MPhil) O. Nawafleh,"Robust Video Object Tracking Using Open Source Tools," M.Sc. Thesis. Yarmouk University. August 2017.

(MPhil) M. Al-Wadi, "Video Indexing Using KAZE and LSH", M.Sc. Thesis. Yarmouk University. August 2017.

(MPhil) A. Qasaimeh, "Offline Signature Recognition Using Oriented FAST and Rotated BRIEF (ORB) Detector and Descriptor," M.Sc. Thesis. Yarmouk University. May 2016.

(MPhil) W. Aljondi, "Forecasting Jordanian Household Power Demands Incorporating Renewable Energy Sources using Artificial Neural Networks in Smart Grid Environment," M.Sc. Thesis. Yarmouk University. August 2015.

(MPhil) S. M. Al-Batayneh, "Modeling and Prediction of Desertification Phenomenon in the North-East of Jordan," M.Sc. Thesis. Yarmouk University. May 2014.

(MPhil) H. W. Marar, "A High Performance 1.8 PMOS-Based LVDS Driver," M.Sc. Thesis. Yarmouk University. Dec. 2012.

(MSc) T. Al-Htamlh, A. Al-Roomi, and T. Al-Btoush, "Peer to Peer Emergency Communications Using Hybrid ZigBee and WiFi Networks," Master Degree Project, Yarmouk University, Dec. 2014.

(MSc) A. Abu-Mahfouz, "Audio Signal Capturing and Processing Using Raspberry Pi: Speech Classification Using ANN," Master Degree Project, Dec. 2014.

(MSc) I. Al-Oroad and S. Al-hamiadeh, "Video Transmission Over ZigBee Networks," Master Degree Project. Dec. 2012.

E. Al-Asem, H. Abu-Dheleh, and E. Qudeisat, "Night Traffic Congestion Control Using Zigbee Based Monitoring System," BSc. Graduation Project. Dec 2012. Winner of the 2nd place of the JEA-graduation projects.

Teaching Experience

Undergraduate Level

Advanced Computer Networks	Database Administration and Design
Computer Networks	Computational Thinking and Coding
Software Engineering	Web Applications and E-Commerce Security
Project Management and Quality Control	Routing Protocols
Multimedia Systems and Technology	Artificial Intelligence
Object Oriented Modeling and Applications	Routing Solutions for the Enterprise
Web Design and Application Development	Human Computer Interaction
Designing and Developing Enterprise Systems	System Architecture and Integration
Principles of Information Assurance, Security, and Privacy	Professional Software Projects
Distributed Programming and Technologies	Work Based Investigation (Apprenticeship)
Designing and Developing Enterprise Solutions	

Postgraduate Level

Advanced Operating Systems	Digital Logic Design Using VHDL
Advanced Digital Logic Design Using FPGA	System Modeling and Simulation
Object Oriented Prog. and Design	Advanced Computer Networks
Software Engineering Practices	Research Skills for Computing
Group Project	

Technical Skills

Proficient and familiar with a wide spectrum of technologies and development tools:
R-Language Azure Cloud/Cognitive Services Microsoft Bot Framework LangChain Python Keras TensorFlow Ollama RASA .NET(C#) C/C++ Agile CI/CD Power-BI Tableau Blockchain HyperLedger Hive Hadoop ASP.NET ASP XSLT XML PHP GWT AJAX JavaScript jQuery Bootstrap Leaflet VHDL Verilog MS-SQL MySQL SQLite CCNA Linux

Languages

Arabic (Native), English (Fluent), French (Basic)