HUMAIRA ARSHAD

Associate Professor

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PROFESSIONAL SUMMARY

Distinguished Scientist ranked in the Stanford University–Elsevier "World's Top 2% Scientists" list (2023, 2024), compiled by the Meta-Research Innovation Center at Stanford University (METRICS) in collaboration with Elsevier, recognizing sustained global research impact in Networking & Telecommunications and related fields. Academic leader with 20+ years of expertise in cybersecurity research, digital forensics, and AI-driven threat detection. Currently heading one of Pakistan's largest Computer Science departments, serving over 4,000 students.

Research Excellence: Author of high-impact publications with 5,284+ citations (h-index 16) in leading journals such as IEEE Access, Computers & Security, and Sensors, focusing on IoT security, forensic automation, and multilingual NLP.

Strategic Leadership: Spearheads curriculum modernization, policy implementation, and the "Women in Tech" initiative to bridge gender gaps in STEM.

Real-World Impact: Developer of AI-powered forensic tools adopted in cybercrime investigations and critical infrastructure protection.

WORK EXPERIENCE

**The Islamia University of Bahawalpir
2022 - Present**

CHAIRPERSON
Oversee 40+ faculty members and 4,000+ students across BS/MS/PhD programs. Implemented effective policies and procedures, fostered a collaborative and supportive environment, and actively engaged with stakeholders to drive continuous improvement and meet organizational goals

**The Islamia University of Bahawalpir
2021 - Present**

ASSOCIATE PROFESSOR
Engaged in scholarly research and publication, contributed to academic conferences, and served on committees, advancing knowledge in the field and actively participating in the academic and research community. ·**Published 30+ Q1/Q2 journal papers;** supervised 8 PhD dissertations on cybersecurity.

**The Islamia University of Bahawalpir
2015- 2021**

ASSISTANT PROFESSOR
Designed and assessed course materials, provided constructive feedback and mentored students, Fostering a positive and inclusive learning environment conducive to academic growth and achievement. Actively participated in research domain and supervised various postgraduate students.

**The Islamia University of Bahawalpir
2004- 2015**

LECTURER
Implemented dynamic teaching methods to deliver engaging lectures, in facilitate interactive discussions, inspire student learning and alignment with the curriculum objectives. Developed 10+ courses on information security and digital forensics.

EDUCATION

UNIVERSITI SAINS MALAYSIA 2016-2019

PhD. Computer Science

Dissertation: "A Multilayer Forensics Model for Online Social Networks "

NUST 2007-2009

MSIT Specialization in information Security
Thesis: "Analysis of Program Machine Code and Applications to Data Security"

The Islamia University of Bahawalpur 2002

Msc in Computer Science (Graduation)
Thesis: "Analysis of Program Machine Code and Applications to Data Security"

ACHIEVEMENTS

2025
Launched "Women in Tech 2025" (featured in InternationalWomen's Day events), providing 50+ female students with internships/freelancing training via Women Chamber of Commerce

2024
Nominated in Stanford University's Top 2% Most-Cited Scientists Worldwide

2023
Nominated in Stanford University's Top 2% Most-Cited Scientists Worldwide

2002
Silver Medal in MSc (Computer Science)

RESEARCH CONTRIBUTIONS

Digital Forensics: Pioneered multilayer forensic models for social networks (Computers & Security 2020, Sensors 2022).
IoT Security: Designed energy-aware fault-tolerant systems (IEEE Access 2021) and contributed to national IoT security standards.
AI/ML Applications: Advanced Urdu authorship verification (hyper-tuned CNNs) and smishing detection (IEEE Access 2024).

PUBLICATIONS (RECENT & HIGH IMPACT)

1. "Enhancing Smishing Detection: A Deep Learning Approach" IEEE Access (2024)
2. "Multi-layer Semantic Approach for OSN Forensics" Sensors (2022) (16 citations)
3. "Energy-Aware Fault-Tolerant IoT Systems" IEEE Access (2021) (22 citations)
4. "Comprehensive Review of Artificial Neural Networks" IEEE Access (2019) (741 citations)

[Complete Research Publications](#)

SKILLS

Personal
Leadership & Strategic Planning
Academic Mentorship
Research & Analytical Thinking
Effective Communication
Decision Making
Stakeholder Engagement
Public Speaking & Presentation
Team Building & Collaboration

Professional
Curriculum Design & Development
Higher Education Management
Research Supervision & Grant Writing
Policy Development & Implementation
Conference Organization & Academic Publishing
Quality Assurance & Accreditation Compliance

PUBLICATIONS

Sr	Year	Title	Journal / Publisher	IF
1	2024	**Robust Parameter Optimisation of Noise-Tolerant Clu**	MDPI Mathematics 12 (21), 3367	2.3
2	2024	RSS-LSTM: A Metaheuristic-Driven Optimization Appro	International Journal of Advanced C	0.7
3	2024	Enhancing Smishing Detection: A Deep Learning Appro	IEEE Access / Institute of	3.4
4	2024	Enhanced Parameter Estimation of DENsity CLUstEring	MDPI Mathematics 12 (17), 2790	2.3
5	2024	Towards Dimension Reduction: A Balanced Relative Dis	International Journal of Advanced C	0.7
6	2023	An Empirical Study on Authorship Verification for Low	IEEE Access	3.367
7	2023	Protection-Enhanced Watermarking Scheme Combined	IEEE Access	3.367
8	2022	Message scheduling in blockchain based IoT environme	IEEE Access	3.367
9	2022	Feature selection by multiobjective optimization: Appl	IEEE Access	3.367
10	2022	Grasshopper Optimization Algorithm Based Spam Dete	International Conference on Emergir	-
11	2022	Cyber intrusion detection system based on a multiobje	IEEE Access	3.367
12	2022	A Multi-layer Semantic Approach for Digital Forensics	Sensors 22 (3), 1115	3.576
13	2022	The internet of things security: A survey encompassing	Computers & Security Elsevier	4.8
14	2022	Traffic light detection: A cost effective approach	VFAST Transactions on Software Eng	-
15	2022	The internet of things security: A survey encompassing	Computers & Security 112, 102494	4.48
16	2021	An Energy-Aware, Highly Available, and Fault-Tolerant	IEEE Access	3.367
17	2021	A Review on the Security of the Internet of Things: Cha	Wireless Personal communications	1.2
18	2020	A semi-automated forensic investigation model for onl	Elsevier Advanced Technology	4.438
19	2020	HoneyDetails: A prototype for ensuring patient's infor	Health informatics journal	2.26
20	2020	Reinforcing the security of instant messaging systems	Wireless Personal Communications	1.671
21	2020	Formal Knowledge Model for Online Social Network Fo	Computers & Security	4.8

Sr	Year	Title	Journal / Publisher	IF
22	2019	Comprehensive Review of Artificial Neural Network Applications to Pattern Recognition	IEEE Access	3.367
23	2019	A deception model robust to eavesdropping over communication for social network systems	IEEE Access	3.367
24	2019	Fingereye: improvising security and optimizing ATM transaction time based on iris-scan authentication.	International Journal of Electrical & Computer Engineering	-
25	2019	A multilayered semantic framework for integrated forensic acquisition on social media	Digital Investigation	1.309
26	2019	Evidence collection and forensics on social networks: Research challenges and directions	Digital Investigation	1.309
27	2018	An Enhanced Practical Difficulty of One-Time Pad Algorithm Resolving the Key Management and Distribution Problem	Proceedings of the International MultiConference of Engineers and Computer	-
28	2018	COMPARATIVE STUDY BETWEEN HYPER-TUNED CNN BASED DEEP LEARNING AND HYBRID ENSEMBLE LEARNING BASED APPROACH FOR URDU TEXT AUTHORSHIP VERIFICATION	Jilin Daxue Xuebao (Gongxueban)/Journal of Jilin University	-
29	2018	An Empirical Study on Authorship Verification for Low Resource Language Using Hyper-Tuned CNN Approach	IEEE Access	3.367

EXPERTISE

Digital Forensics | IoT Security | Intrusion Detection | Blockchain Security
AI/ML Applications: Threat Detection | NLP (Urdu) | Pattern Recognition

REFERANCES

Available upon request.