

Khalid Hussain, PhD

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<https://scholar.google.com/citations?user=RKXN78IAAAJ&hl=en>
<https://www.scopus.com/authid/detail.uri?authorId=57192205008>
<https://orcid.org/my-orcid?orcid=0000-0002-3714-8696>
<https://www.researchgate.net/profile/Khalid-Hussain-53>



Career Objective

My aim in being an experienced Professor in an educational organization would be to render my knowledge, experience, and expertise in all aspects starting from organizational management, academic quality (accreditation), and policy-making to proper molding of students in terms of teaching them the values and principles of life.

Summary

Dr. Khalid Hussain has completed his PhD. in Computer Science from Universiti Teknologi Malaysia, Malaysia. He has 33 years of teaching, industrial, and administrative experience nationally and internationally. He has an intensive background in the industry as well as academic quality accreditation in higher education besides scientific research activities, he has worked as convener with the higher education commission of Pakistan for academic accreditation (National Computing Education Accreditation Council) for more than a decade and earned NCEAC accreditation five times for two programs at computer science and information technology department The University of Lahore. He also worked for the National Computing Education Accreditation Council (NCEAC) Pakistan to evaluate other universities' computing programs. Up till now, he has evaluated approximately 31 universities He has experience teaching advanced technological courses including, advanced Networks, Cryptography, Network Security, Operating Systems, Research Methods, and Cloud Computing besides other undergraduate and postgraduate courses, graduation projects, and thesis supervision.

Dr. Khalid Hussain is an active researcher in the domain of cyber security. He is a reviewer of several well-reputed indexed journals. He has authored several research papers in ISI-indexed and impact factor research journals|IEEE international conferences seven books and 16 book chapters. He has completed more than **09** national and internationally funded applied research projects. He also served as a Keynote speaker for several conferences around the globe. He also chaired international conference sessions and presented session talks internationally. He has strong analytical, problem-solving, interpersonal, and communication skills. His areas of interest include Cyber Security, Wireless Sensor Network (WSN), Internet of Things (IoT), Mobile Application Development, Ad hoc Networks, Cloud Computing, Big Data, Mobile Computing.

Academics

- Dec 2010 – March 2013** **PhD. (CS) Universiti Teknologi Malaysia, Malaysia**
CGPA. 4/4, *International Doctorate Fellowship and HEC Scholarship throughout for PhD*
- Jul 2004 – Feb 2007** **Master of Science (Computer Science) COMSATS Institute of Information Technology Islamabad.**
71%, *NESCOM Scholarship throughout for Masters*

Career History

Academic Experience

- Dec 2022 to Date** **Albukhary International University Alor Setar Kedah Malaysia**
Currently serving as **Professor** in the School of Computing and Informatics (SCI).

Director Research and Innovation

1. Develop and implement the Centre's strategic plan, aligning with the AIU's mission and goals.
2. Foster a culture of innovation, collaboration, and research excellence at AIU.
3. Stay informed about the latest research and innovation trends, opportunities, and challenges.
4. Oversee the planning, execution, and evaluation of research projects and programs.
5. Ensure compliance with ethical standards and funding requirements.
6. Develop policies and procedures to support research activities.
7. Identify and secure funding from diverse sources, including Yayasan Albukhary, government, industry, and non-profits.
8. Build and maintain strategic partnerships with academic, industry, and government stakeholders.
9. Promote collaborative research opportunities.
10. Lead, mentor, and inspire a team of research and administrative professionals.
11. Encourage professional development and continuous learning within the team.
12. Promote the Centre's research and innovation achievements through various communication channels.
13. Organize and participate in conferences, seminars, and workshops.
14. Manage the Centre's budget and resources efficiently.
15. Oversee the maintenance and development of research infrastructure and facilities.
16. To ensure and monitor the publishing of Albukhary Social Business Journal (ASBJ) within the allocated time.
17. Foster 5A's core values and culture of excellence by aligning individual staff performance with the university's strategic direction and performance expectations.
18. To carry out additional related responsibilities as assigned by the

Deputy ViceChancellor of Research and Innovation (DVCRI) or a designated representative on behalf of AIU.

Additional Responsibilities

- **Member Board of Governors AIU** (The Objective of the appointment of members is to assist, advise, and provide guidance to the Board of Governors of AIU in the decision-making process).
 - Providing leadership, and guidance as well as undertaking the advisory role in the strategic planning oversight of the educational character and mission of the university.
 - Providing input on the findings, recommendations, and solutions to prompt efficient and effective management and provide an overall review of the University operations.
 - Providing inputs on linkage with the community, corporate sector, and industry.
 - Providing inputs to faster global linkages and internationalization concerning higher education and research.
- **Member Sanet of AIU**
 - To set up Schools and Centres, and departments, units, or bodies under such Schools and Centres.
 - With the consent of the Board of Governors, to confer honorary degrees on persons who have contributed to the advancement or dissemination of knowledge, or who have rendered distinguished public service.
 - To formulate policies and methods of teaching and learning, examination, research, scholarship, and training conducted in, by, or from the University.
 - To ensure educational standards in the courses of study provided in, by, or from the University.
 - To determine the feasibility or otherwise of any possible respect of any curriculum or course of study conducted or to be conducted in, by, or from the University.
 - To determine the qualifications required for admission into any course of study provided by, or from the University.
 - To regulate the conduct of assessments and examinations, confirm examination results, and determine appeals.
 - To draft policies for the protection of academic freedom and professional excellence.
 - To do things expedient or necessary for or incidental to the performance of its function under the constitution.
- **Member Professorial Committee**
 - To advise the chairman in formulating the policies and procedures for faculty promotion
 - Design and develop the criteria for promotion
 - Present and support the developed criteria in the Senate for approval
 - Evaluate the eligibility of the Associate Professor, Assistant Professors, Lecturers, and Teachers for promotion.
 - Developing the rational criteria for hiring the new staff.

- **Member Postgraduate Committee**
 - To guide and coordinate for development of the ToRs
 - To design and develop the course material,
 - To participate in the finalization of the study material
 - To finalize the supervisor committee and recommendation for potential supervisors.
 - Finalization of the required pre-requisite courses.
 - Conduction the research seminars
 - Supervision of the postgraduate students

June 2021 to Nov 2022

National Superior Institute of Sciences (NSIST) Islamabad

Currently serving as **Professor (Cyber Security)** in the Faculty of Computer Science,
Some of the major tasks and achievements are:

Committees

- Member of the University **Research Board**, to help formulate research culture at the university level.
- Chairman **Departmental Board of Studies**, to resolve departmental academic issues.
- Member of the **Board of Studies** at the university level to discuss and represent departmental academic issues.
- Member of **Academic Council Meeting** at the university level to discuss and represent departmental academics issues.

Additionally serving as **Director Campus (Vice-Chancellor)** Some of the major tasks and responsibilities are:

Committees

- Member of the University **Research Board**, to help formulate research culture at the university level.
- Chairman **Departmental Board of Studies**, to resolve departmental academic issues.
- Member of the **Board of Studies** at the university level to discuss and represent departmental academic issues.
- Member of **Academic Council Meeting** at the university level to discuss and represent departmental academics issues.

July 2019 – March 2020

Barani Institute of Sciences Burewala Campus Jv. Pir Mehr Ali Shah ARID Agriculture University Rawalpindi

Additionally serving as **Director Campus (Vice-Chancellor)** Some of the major tasks and responsibilities are:

Committees

- Member of the University **Research Board**, to help formulate research culture at the university level.
- Chairman **Departmental Board of Studies**, to resolve departmental academic issues.
- Member of the **Board of Studies** at the university level to discuss and represent departmental academic issues.

- Member of **Academic Council Meeting** at the university level to discuss and represent departmental academics issues.

Responsibilities

Develop and implement all short-term and long-term strategies and ensure consistency in the same.

Assist management with accurate information as required for all campus associate activities and initiate decisions.

Determine and ensure effective maintenance of organized structure on campus.

Supervise the effective working of all subordinates provide business and managerial assistance to all and develop an effective team.

Analyze all fiscal requirements for campus and execute strategies to achieve the same.

Ensure adherence to all statutory and regulatory regulations.

Develop and implement various business plans on a quarterly and monthly basis to ensure the effective working of everyday operations.

Monitor all objectives and strategic goals for operations and finances and ensure achievement of same.

Develop various new academic programs and provide modifications to all current programs.

Administer all student recruitment and ensure achievement of all objectives.

Coordinate with human resource departments and develop various succession plans for management.

Monitor all work and ensure compliance with all federal and state regulations.

Provide support to all services and ensure completion of all student demands.

Supervise all administrative functions for campus and ensure a neat and clean appearance.

Supervise and provide required training to middle-level management.

April 2019 - March 2020

Barani Institute of Sciences Sahiwal / Burewala Campus Jv. Pir Mehr Ali Shah ARID Agriculture University Rawalpindi

Currently serving as **Professor** and **Dean** in the Faculty of Computer Science,

Some of the major tasks and achievements are:

Committees

- Member of the University **Research Board**, to help formulate research culture at the university level.

- Chairman **Departmental Board of Studies**, to resolve departmental academic issues.
- Member of the **Board of Studies** at the university level to discuss and represent departmental academic issues.
- Member of **Academic Council Meeting** at the university level to discuss and represent departmental academics issues.

Program Accreditation

- Synchronized BSCS/IT curriculum according to the HEC guideline.
- Supervise and guide faculty in filling forms, course folders, and lab manuals according to the NCEAC guideline
- Establish labs, library classrooms, and faculty to achieve the best category from NCEAC

March 2016 – April 2019 The University of Lahore

Served as **Professor** and **Dean** in the Faculty of Computer Science, and IT at the University of Lahore.

Some of the major tasks and achievements are:

Research and Development & Achievements

- Secured a national grant from Ignite “A Real-Time Caller ID Spoofing Prevention System” as **Principal Investigator**.
- An active member of the Faculty Research Committee
- Supervising and Co supervising PhD and MS research students.
- An active member of the Ministry grants application
- Actively involved in research grant writing at national and international levels.

Information Retrieval and Knowledge Representation (IRKR)

Lab Head

This lab is built to provide a data mining, AI, and machine learning platform to MS and PhD students at the University of Lahore, Islamabad, Pakistan. The following are the main objectives of the lab.

- Reviewing, analyzing, and building state-of-the-art techniques in:
 - o Information Retrieval (IR)
 - o Information Extraction (IE)
 - o Knowledge Representation and Management (KRM)
- Application of Data mining in general and text mining in specific for IR, IE, and KRM
- Reviewing, analyzing, and developing efficient Machine Learning Algorithms for IR, IE and KRM
- Publishing the outcomes of the above-mentioned work in reputable venues.

- Collaborating at local, national, and international level venues.
- Building customized software tools and systems for IR, IE, and KRM

Committees

- Member of the University Research Board, to help formulate research culture at the university level.
- Chairman Departmental Board of Studies, to resolve departmental academic issues.
- Member of the Board of Studies at the university level to discuss and represent departmental academic issues.
- Member of Academic Council Meeting at the university level to discuss and represent departmental academics issues.

Program Accreditation

- Synchronized BSCS/SE curriculum according to the HEC guideline.
- Supervise and guide faculty in filling forms, course folders, and lab manuals according to the NCEAC guideline
- Establish labs, library classrooms, and faculty to achieve the best category from NCEAC.

Research Clusters

- An active member of **Cyber Security Research Cluster** at faculty of CS&IT The University of Lahore

Training and Seminars

- Provide technical training and seminars on cyber to the corporate sector (**E-Pakistan**).
- Co / Session Chair for IBCAST 2019 Conference, Cyber Security Section
- Actively attending several Cyber Security corporate trainings.
- Actively attending several Data Science corporate trainings organized by HEC

April 2014 – March 2016 HITEC University, Taxila Cantt

Served as an **Assistant Professor**, for a period of one year and was promoted to Associate Professor, Served as an **Associate Professor, Head of Undergraduate Program, and Director Office of Research Innovation and Commercialization** in the HITEC University
Some of the major tasks and achievements are:

Program Accreditation

- Synchronized BSCS curriculum according to the HEC guideline.

- Supervise and guide faculty in filling forms, course folders, and lab manuals according to the NCEAC guideline
- Establish labs, library classrooms, and faculty to achieve the best category from NCEAC

Curriculum Development

- Contributed significantly to developing a new degree program **MS in Computer Science** for the College.
- Contributed significantly to developing a new degree program **BS in Software Engineering** for the College.
- Contributed significantly to revising the **BS in Computer Science** degree program in the light of ABET accreditation body requirements for the College.
- Worked as an active member of the expert group for curriculum development.

Research and Development & Achievements

- Fingerprinting Non-Numeric Datasets using Row Association and Pattern Generation
- A Benchmark Suit for Hard Real-time System
- Host-Based Intrusion Detection System (Funded by NESCOM)
- IP-Based Fault Tolerance and Management System (Funded by NESCOM)
- Context-Aware Jammer (Funded by Pakistan Science Foundation)

Feb 2008 – Dec 2010

Riphah International University, Islamabad

Served as **Assistant Professor & Incharge Research** in the Faculty of Computing with teaching vis-à-vis academic administrative responsibilities summarized as follows:

Research and Development & Achievements

- Coordinate and organize research as well as travel grants from multiple funding agencies in Pakistan.
- Initiate first academic partnership program in Pakistan with EC Council form establish Cyber Security Culture in Pakistan.
- Organized the **First national-level mega Information Security Seminar/workshop** funded by the Pakistan Science Foundation.
- Initiating, organizing, and managing **three new campuses** and managing IT services remotely.
- **Coordinator MS/MPhil Program:** includes all necessary management tasks for the smooth running of the MS/MPhil (SE) program starting right from conducting entry tests and interviews to course allocation, arranging and managing visiting faculty, exams, and results.

- **Member Deans Council:** The Deans Council is responsible for policy-making decisions at the highest level of management of the University.
- **Member Selection Board:** The selection board is responsible for hiring and promotions at the senior level at Rihpah International University.

Industrial Experience

Dec 1992 – Feb 2008

Advanced Engineering Research Organization, Hasanabdal

- I am the senior person in this organization and am honored to be a part of the initiation of the feasibility of this organization. I am honored to present the concept of this organization to the higher-ups of the country.
- Design logos and service cards for this strategic organization.
- Worked as **Principal Research Officer, Data Control Officer, Configuration Management Officer, and System Support Engineer** in the Department of Product Support Engineering.

Systems Analyst

- Deploy, maintain, and troubleshoot core business applications, including application servers, associated hardware, endpoints, and databases
- Meet and coordinate with internal and external stakeholders to establish project scope, system goals, and requirements
- Develop, analyze, prioritize, and organize requirement specifications, data mapping, diagrams, and flowcharts for developers and testers to follow
- Translate highly technical specifications into clear non-technical requirements
- Manage the set-up and configuration of systems
- Define and coordinate the execution of testing procedures, and develop test cases to serve the overall quality assurance process
- Provide documentation of all processes and training as needed
- Develop and implement maintenance procedures, monitor systems health, gather system statistics, and troubleshoot reported errors and alarms
- Perform design, implementation, and upgrades of information systems to meet the business and user needs
- Implement best practices for scalability, supportability, ease of maintenance, and system performance

CBT Design and Develop

- Designs curriculum and delivers training for defense offices and staff on various and specific projects, including using, mounting, and installing tools and equipment.
- Designs, develops, indexes, and maintains technical documentation

using their respective standards. Monitors end-user feedback and systems development efforts to facilitate continuing improvement of documentation.

- Develop computer-based training on ICT-supported software. Manages projects including timelines, development of costs, development of content, audio and video recording, digitizing media, writing user interface, developing assessments, and creating web animation.
- Consults with departments to analyze business process-supporting technology needs, and documents new processes for end-user retrieval of data and/or information. Promotes the use of technology and technology tools to support continued efficiency and improvement in departmental processes.
- Coordinating and maintaining user interface, documenting processes and policies related to page development, creating graphics and animations, and serving on web-related committees and projects.
- Applies knowledge of end-user needs and issues to assist other ICT staff as well as technical personnel with the design of end-user interface.
- Evaluates emerging training technology and tools.

Systems Support Engineer

- Maintain optimal level of customer satisfaction identify all customer issues and recommend appropriate resolution for same.
- Assist in installing all hardware on systems provide required upgrades manage all change orders and provide technical expertise for all manual product processes.
- Determine all automated systems provide technical support to all production systems and prepare an efficient schedule for same.
- Provide product support to all systems manage all requests for systems assist in resolving all issues perform regular troubleshooting on all network issues and analyze all system logs.
- Install all internal resources and analyze all software to ensure smooth working.
- Maintained all functional documents responded to all customer requests and managed efficient operation of all internal systems.
- Administer all installation and maintenance of all systems.
- Provide support to all help desk operations manage all products according to customer requirements and provide support to all internal and external customers.
- Assist all engineers in technical operations and ensure utilization of all tools efficiently prepare all required repair documents and ensure compliance with all organization guidelines.
- Prepare reports for all repair activities and prepare required equipment proposals.
- Take ownership of customer issues reported and see problems through to resolution
- Research, diagnose, troubleshoot, and identify solutions to resolve customer issues

- Follow standard procedures for proper escalation of unresolved issues to the appropriate internal teams
- Provide prompt and accurate feedback to customers
- Ensure proper recording and closure of all issues
- Prepare accurate and timely reports
- Document knowledge in the form of knowledge base tech notes and articles
- Follow the SLA for issues concerning the severity.

Configuration Management Officer:

- Creating and maintaining documentation for tools used to support configuration management.
- Monitoring all configuration management processes.
- Providing user support and troubleshooting issues with the relevant configuration management software.
- Configuration Management Engineers must also produce detailed written overviews of any upcoming configuration management plans they may have. As they are incredibly complex systems, strong written and verbal communication skills are an absolute must for a configuration engineer, as this is the best possible way to avoid any potential misunderstandings.
- In most cases, the implementation of a configuration control board is also instrumental when it comes to bringing all software through the development and testing phases. Occasionally, CM Engineers may also find they have to train other staff members in the proper use of the configuration of the management tools that are in place, which means both creativity and strong problem-solving skills are also beneficial for those looking to start a career in this position

Cyber Security Instructor

As a master trainer of EC-Council, I try to train the trainee in a real environment and incorporate hands-on experience via i-labs of EC-Council, so that they come up with a valuable asset for the community. During the training session, I tried to:

- Incorporate knowledge of Security vulnerabilities into training materials
- Incorporate the impact of changing Security technologies into training materials
- Assess student knowledge, skills, and abilities to gauge student proficiency in the topic area
- Apply industry best practices in adult learning principles and theories
- Deliver instruction via interactive synchronous and asynchronous learning activities
- Conduct courses relevant to the assigned topic area
- Review and analyze training materials and recommend changes

Mature Resources Group Technologies Private Limited
Currently serving as **Chief Executive Officer / Senior Consultant**

March 2020 to May 2021

As a Chief Executive Officer (CEO) and Senior Consultant in MRGT, it varies depending on the MRGT Mission, product, services, and operational needs to stay profitable. Duties also vary depending on the size of the organization and the number of employees, among other factors. In general, as CEO my responsibilities include:

- Creating, communicating, and implementing the organization's vision, mission, and overall direction
- Leading the development and implementation of the overall MRGT strategy
- Soliciting advice and guidance, when appropriate, from a Board of Directors
- Formulating and implementing the strategic plan that guides the direction of the business or organization.
- Overseeing the complete operation of an organization following the direction established in the strategic plans
- Evaluating the success of the organization in reaching its goals
- Looking at potential acquisitions or the sale of the company under circumstances that will enhance shareholder value
- Representing the organization for civic and professional association responsibilities and activities in the local community, the state, and at the national level
- Participating in industry/university-related events or associations that will enhance the CEO's leadership skills, the organization's reputation, and the organization's potential for success.
- Present and motivate the ICT professional to enhance their skill by gaining professional training.
- Conduct and Supervise foundation to Professional/management level training.

As CEO it is responsible for the overall success of the MRGT and is the ultimate decision-maker for a business. and, while the daily tasks of each chief executive vary, it is the overall vision of the position that provides the framework for the functionality of all departments.

Leading, guiding, directing, and evaluating the work of other executive leaders, including presidents, vice presidents, and directors, depending on the organization's reporting structure, is also part of the job. In the process of leading these senior leaders, the CEO makes certain that the strategic direction the CEO filters down through the organization to ensure its achievement.

Additionally, the CEO must ensure that the organization's leaders experience the consequences of their actions whether through reward and recognition or performance coaching and disciplinary actions. Without responsibility and accountability that is actively expected and reinforced, the CEO will fail to attain desired success and profitability.

- As a pioneer of this organization, in the reorganization of the design of the logo and employee card, the Director General awarded a commendation certificate along with a cash award.

Awards & Achievements

- First Higher Education Scholarship awarded from DG for MCS.
- Commendation Certificate for successfully completion the complete documentation of one of the complex strategic projects.
- Award second higher education scholarship for MSCS
- Place my name on honor of the wall of the organization
- Commendation Certificate on Successful Configuration Management.
- Appreciation and best employee certificate from Rector Riphah International University
- Best Paper Award 21st to 23rd June 2011 (PARS 2011)
- International Doctorate Fellowship Universiti Teknologi Malaysia, (2010-11)
- International Doctorate Fellowship Universiti Teknologi Malaysia, (2012-13)
- Higher Education Commission Pakistan Partial Support for PhD Studies Abroad
- SATHA Information Security Gold Medal / Innovation Award 2015.

Research & Development: (I. Funded Research Grants)

Funded Applied Projects

1. “Train and Certified ICT Graduates and Professionals in Pakistan” **PKR 14.32 Million** Funded By the Ministry of Information Technology and Telecommunication and Pakistan Software Export Board.

Funded Research Projects

1. “A Real-Time Caller ID Spoofing Prevention System” funded by Ignite ICT&RD Ministry of Science and Technology Pakistan, **PKR 12.3 Million**
2. “Fingerprinting Non-Numeric Datasets using Row Association and Pattern Generation”, funded by Pakistan Science Foundation Ministry of Science and Technology Pakistan. **PKR 1.2 Million**
3. “A Benchmark Suit for Hard Real-Time System”, funded by the Higher Education Commission of Pakistan, **PKR 2.3 Million**
4. “Host Based Intrusion Detection System”, Applied Research Project funded by National Engineering and Scientific Commission of Pakistan, **PKR 0.2 Million**
5. “IP Based Fault Tolerance and Management System”, Applied Research Project funded by National Engineering and Scientific Commission of Pakistan, **PKR 0.2 Million**
6. “Context-Aware Jammer”, funded by Pakistan Science Foundation Ministry of Science and Technology Pakistan. **PKR 1.2 Million**

7. Network Life Time Estimation in Wireless Sensor Networks using AI. Sarawak Univesiti Malaysia **05 Million RM**
8. Low-cost Solar-Based WiFi / WiMAX Infrastructure for Sarawak Universiti Malaysia. **1.34 Million RM**

Research & Development : (**Patent**)

Method and system for item authentication and customization

K Hussain, MT Dominguez, DE Failor, WG Ackerman - US Patent App. 16/865,134, 2020

Research & Development : (**II. Journal Papers**)

1. Khalid Hussain Hassan Mohamednour Osman Haji, Amar Gmaa Mohmmood Farag, Hassan Edris Hassan Investigating Password Vulnerabilities and Protection Strategies International Journal of Intelligent Systems and Applications in Engineering. (Scopus) In Press.
2. Khalid Hussain and Aminu "Named Entity Recognition for Hausa Language" International Journal of Intelligent Systems and Applications in Engineering. (Scopus) In Press.
3. Khalid Hussain, Mohamed Fofana & Mohammad Tamim International Journal of Intelligent Systems and Applications in Engineering. (Scopus) In Press.
4. Khalid Hussain, Noor Abdikhalak Hajj Noor, Hafiz Jibril and Husein Waliyu A Comprehensive Analysis Using Machine Learning Algorithms to Determine How Student's Environmental Factors Determine Their Exam Scores. International Journal of Intelligent Systems and Applications in Engineering. (Scopus) In Press.
5. Yusuf Abubakar, Khalid Hussain, H.A.J.S., 2024. Efficient Disease Prediction Framework to Suggest Early Treatment Decisions in Healthcare. Journal of Electrical Systems 20, 687–691. <https://doi.org/10.52783/jes.2088>
6. Riskhan, B., Safuan, H. A. J., Hussain, K., Elnour, A. A. H., Abdelmaboud, A., Khan, F., & Kundi, M. (2023). An Adaptive Distributed Denial of Service Attack Prevention Technique in a Distributed Environment. Sensors, 23(14), 6574.
7. Chittaranjan Mallick, Sourav Kumar Bhoi, Trailokyanath Singh, Basheer Riskhan, Khalid Hussain (2023). "Transportation Problem Solver for Drug Delivery in Pharmaceutical Companies using Steppingstone Method", International Journal of Intelligent Systems and Applications in Engineering. (Scopus).
8. Chittaranjan Mallick, Sourav Kumar Bhoi, Trailokyanath Singh, Khalid Hussain, Basheer Riskhan, Kshira Sagar (2023). "Cost Minimization of Airline Crew Scheduling Problem Using Assignment Technique", International Journal of Intelligent Systems and Applications in Engineering. (Scopus).
9. Khalid Hussain, Suhaib Ajaz Khan, Mehreen Muzaffar, Zaynab Rashid Khan, Sheikh Umar Farooq Performance evaluation of CNN architectures for COVID-19 detection from X-ray images Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization Volume 11 Issue 1 pp 80-93 2023/1/2.

10. Muneer Abbas, Rana Muhammad Asghar, Khalid Hussain, Muhammad Saleem, Dilbar Hussain, Niaz Hussain, Muhammad Irshad, Mudassar Khaliq, Zubeda Parveen, Muhammad Nadeem, Abdul Ghaffar Responses of different aphid species on wheat crop with relation to abiotic factors. *Pure and Applied Biology*. Vol. 12, Issue 2, pp991-999, 2023.
11. Latif, R. M. A., Asghar, M. I., Umer, M., & Hussain, K. (2023). Blockchain-Based Secure and Efficient Ride Sharing System. In *Handbook of Research on Cybersecurity Issues and Challenges for Business and FinTech Applications* (pp. 364-387). IGI Global.
12. Ilyas, A., Mirza, S. A., Hussain, K., Ilyas, A., & Shahzad, K. A comprehensive review on genetic resistance of chickpea to ascochyta blight. *Journal of Plant Pathology* Volume 104 Issue 4 1337-1354 Springer International Publishing 2022/11.
13. Khalid Hussain, Muneer Abbas, Niaz Hussain, Muhammad Irshad, Mudassar Khaliq, Zubeda Parveen, Sohail Abbas, Ali Raza, Abdul Ghaffar Study on Species Richness of Aphid through Integrated Pest Management. *Pakistan Journal of Agricultural Research* Volume 35 Issue 3 2022/9/30.
14. Rao Nadim, Rana M. Amir Latif, Khalid Hussain, N. Z. Jhanjhi, Mamoon Humayun "A flexible framework for requirement management (FFRM) from software architecture toward distributed agile framework" *Turkish Online Journal of Qualitative Inquiry*, <https://www.degruyter.com/document/doi/10.1515/comp-2022-0239/html>
15. Muhammad Nadim, Rana M. Amir Latif, Khalid Hussain, NZ Jhanjhi, Mehedi Masud, Mohammad Baz, Riyaz Ahamed Ariyaluran Habeeb Towards Requirements Elicitation and Analysis Model for Distributed Audience *Turkish Online Journal of Qualitative Inquiry (TOJQI)* Volume 12, Issue 5, July 2021: 3406-3424 <https://www.tojq.net/index.php/journal/article/view/2912/1943> 2.
16. Muhammad Nadim, Rana M. Amir Latif, Khalid Hussain, NZ Jhanjhi, Mehedi Masud, Mohammad Baz, Mamoon Humayun A Framework for Software Customization in Global Software Development (GSD) *Turkish Online Journal of Qualitative Inquiry (TOJQI)* Volume 12, Issue 5, July 2021: 3331-3364 <https://www.tojq.net/index.php/journal/article/view/2905/1937> 3
17. Muhammad Nadim, Rana M. Amir Latif, Khalid Hussain, NZ Jhanjhi, Mehedi Masud, Mohammad Baz Database Management System (DBMS): A Cloud-Enabled Service for Small to Medium Enterprise *Turkish Online Journal of Qualitative Inquiry (TOJQI)* Volume 12, Issue 5, July 2021: 3307-3330 <https://www.tojq.net/index.php/journal/article/view/2904/1936>.
18. G. Zaman, H. Mahdin, K. Hussain, Atta-ur-Rahman, J. Abawajy and S. A. Mostafa, "An Ontological Framework for Information Extraction from Diverse Scientific Sources," in *IEEE Access*, doi: 10.1109/ACCESS.2021.3063181. **[Indexed in ISI, IF 3.74]**
19. Gohar Zaman, Hairulnizam Mahdin, Khalid Hussain, Atta-ur-Rahman, Nehad Ibrahim and Noor Zuraidin Mohd Safar "Digital Library of Online PDF Sources: An ETL Approach" *IJCSNS International Journal of Computer Science and Network Security*, VOL.20 No.11, November 2020 **[Indexed in ISI, IF 0.553]**
20. Gohar Zaman, Hairulnizam Mahdin, Khalid Hussain and Atta-ur-Rahman "Information Extraction from Semi and Unstructured Data Sources: A Systematic Literature Review" *ICIC Express Letters* Volume 14, Number 6, pp. 593-603 June 2020 *ICIC International* 2020 ISSN 1881-803X
21. Syed Jawad Hussain, Umer Farooq, Khalid Hussain, A. Alaboudi, NZ Jhanjhi, Mamoon Humayun "Electronic Health Record Classification using Natural Language Processing and Machine Learning Algorithms" *International Journal of Advanced and Applied Sciences* Accepted **[Indexed in ISI, IF**

0.601]

22. Jawad Hussain, Ayesha Majeed, Khalid Hussain, NZ Jhanjhi “Age Classification using Convolutional neural network using a local Dataset” in Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(9), 2038-2045.
23. Jawad Hussain, Gul Mar Khan, Khalid Hussain, NZ Jhanjhi “Identification of most influential parameters for interactive communication using DOE Technique” in Turkish Journal of Computer and Mathematics Education (TURCOMAT), 12(9), 2180-2188.
24. Rana M. Amir Latif, Khalid Hussain, NZ Jhanjhi, Anand Nayyar, Osama Rizwan “A Remix IDE: Smart Contract-Based Framework for The Healthcare Sector by Using Blockchain Technology” in Multimedia Tools and Applications. <https://doi.org/10.1007/s11042-020-10087-1> Springer Science+Business Media, LLC, part of Springer Nature 2020 **[Indexed in ISI, IF 2.313]**.
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33. Ahthasham Sajid, Khalid Hussain, Imran Baig “Reactive Buffer Management Model to Handle Congestion at Node Level in Opportunistic Network” International Journal of Computer Science and Information Security Vol14 No. 8 July 2016 **[Indexed in ISI, IF 0.553]**
34. Khalid Hussain, Syed Jawad Hussain, Veena Dillshad, Muhammad Nafees, Muhammad Awais Azeem An Adaptive SYN Flooding attack Mitigation in DDOS Environment International Journal of Computer Science and Network Security, VOL.16 No.7, pp 27 – 33, July 2016 **[Indexed in ISI, IF 0.553]**

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37. Sajida Aziz, Yaqoob Wani, Khalid Hussain "GIS-Based Expert System for Energy Resource Exploration" International Journal of Scientific and Engineering Research Volume 7 Issue 2 February 2016. **[Indexed in ISI, HEC Approved]**
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44. Khalid Hussain, Saleem Iqbal, Sohail Asghar and Abdul Hanan Abdullah An Efficient AI-Based Approach for Multimedia Traffic Management in Wireless Network Research Journal of Applied Sciences Engineering and Technology print ISSN 2040-7459 Online ISSN 2040-7467**[Indexed in ISI]**.
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47. Khalid Hussain Faraz Ahsan An Approach for Surveillance Using Wireless Sensor Networks (WSN) Journal of Information & Communication Technology Vol1 No.2 pp 35-40 ISSN 1675-414X.
48. Muhammad Usman Khalid Hussain Muhammad Sharif Enhanced Watershed Image Processing Segmentation Journal of Information & Communication Technology Vol2 Issue 1 pp 01-09 ISSN 1675-414X.
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Research & Development : (III. Conference Papers)

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2. Hussain, K., Haji, H. M. O., Farag, A. G. M., Hassan, H. E., & Kumar, H. (2025). Investigating Password Vulnerabilities and Protection Strategies. In *International Conference on Mathematical Modeling and Computational Science* (pp. 300-313). Springer, Cham.
3. Riskhan, B., Zali, N. A. A., & Hussain, K. (2025). An Implementation of RFID-Enabled ID Cards in the Education Sector to Optimize and Facilitate the Use of Student Cards. In *International Conference on Computational Intelligence in Pattern Recognition* (pp. 93-107). Springer, Singapore.
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8. Khalid Hussain, Zohair Ihsan, Deris Sitwan, Mohd Yazid bib Idrees, Abdul Hanan Abdullah An AI Technique to Mitigate Malicious Node in Wireless Network UTM Johor Bahru Skudai Malaysia, 21st to 23rd June PARS 2011 (Best Paper Award).
9. Khalid Hussain An Evaluation of the Virtual Router Redundancy Protocol Extension with Multi-Segment Load Balancing IEEE International Symposium in Signal Processing and Information Technology UAE 16-18 March 2010.
10. Khurram Javed, Umer Saleem Malik, Khalid Hussain, Muhammad Sher An Efficient approach for vertical handover between WLAN and EVDO. Human Com/ITCS/MUE 11 August 2010.
11. Furqan Naseer, Shafiq ur Rehman, Khalid Hussain Using Meta Data Technique for Component-Based Black Box Testing ICET 2010 October, 18-19, 2010.
12. Iffat Ahmed, Leonardo Badia, Khalid Hussain Evaluation of Deficit Round Robin Queue Discipline for Real-time Traffic Management in an RTP/RTCP Environment EMS 2010 November 17 – 19, 2010
13. Khalid Hussain Muhammad Sher An Announcement: Detecting and Isolating Malicious Node in Wireless Ad Hoc and Sensor Networks International Multi-Conference of Engineers and Computer Scientists (IMECS 2009) ISBN 978-988-17012-2-0 18-20 IEEE / Springer March 2009 Hong Kong.
14. Zahid Khan Khalid Hussain Identification and Analysis of Performance Metrics for Real-Time Operating System 5th International Conference on Emerging Technology (ICET 2009) October, 19-20 2009, Islamabad Pakistan.

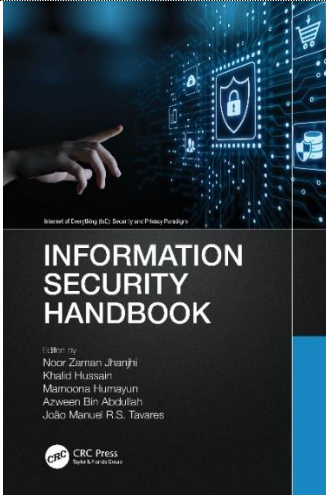
15. Khalid Hussain Faraz Ahsan Conservation of Flow in Wireless Mesh Network (NCICT-2007 University of Science and Technology, Bannu, KPK, Pakistan)
16. Khalid Hussain Faraz Ahsan Conservation of Flow with Lossy Channel in Wireless Mesh Network (BIZTEK Cyber technology-issues, challenges, and development Friday 6th July 2007 at Karachi, Pakistan).
17. Saleem Iqbal Khalid Hussain Faraz Ahsan Minimizing Vertical Handoff Latency for Wireless LAN and GPRS using Mobile IP Cyber technology-issues, challenges, and development Friday 6th July 2007 at Karachi
18. Khalid Hussain Khalid Mahmood Configuration Management of EN 30B Steel Parts Machining Processes (Failure of Engineering Materials & Structures FEMS UET Taxila FEMS/46 22-23 October 2007)
19. Khalid Hussain Role of Configuration and Quality Management in Aerospace Industry. (10th National Aeronautical Conference, April 20-21 2006 College of Aeronautical Engineering Risalpur.)
20. Khalid Hussain Security issues in Cluster Based Routing Protocol for Mobile Ad Hoc Network (National Workshop on "Network Simulation" 6th May 2006 at Fatma Jinahh Women University Rawalpindi.)

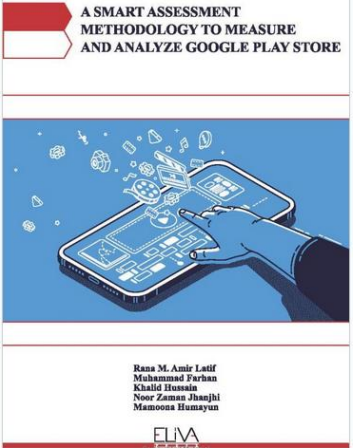
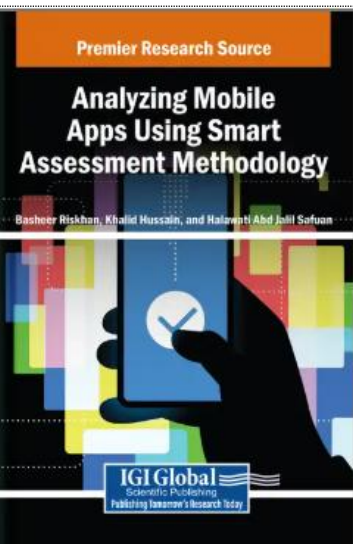
Research & Development : (IV. Book Chapters)

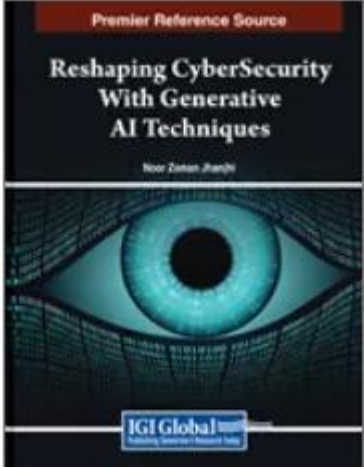
1. Riskhan, B., Sheikh, M. A., Hossain, M. S., Hussain, K., & Hussain, M. (2025). A Methodical Approach to Exploiting Vulnerabilities and Countermeasures Using AI. In N. Jhanjhi (Ed.), Utilizing Generative AI for Cyber Defense Strategies (pp. 287-308). IGI Global. <https://doi.org/10.4018/979-8-3693-8944-7.ch008>
2. Riskhan, Basheer, Halawati Abd Jalil Saufan, Jazuli Bello Ladan, Md Amin Ullah Sheikh, Khalid Hussain, and Manzoor Hussain, 2024. "Reshaping secure coding through generative AI approach to minimizing programming challenges", Advances in Information Security, Privacy, and Ethics:265-280. <https://doi.org/10.4018/979-8-3693-5415-5.ch008>
3. Khalid Hussain "E-Communities Adoption in A Mobile Systematic Approach for Social Development Published by IGI Global Scopus Indexed.
4. Khalid Hussain and Jazuli Bilo "Optimization for minimizing the programming issue and challenges" Published by IGI Global Scopus Indexed.
5. Khalid Hussain "Protocol Share Base Traffic Rate Analysis for UDP Bandwidth Attack" Published by IGI Global Scopus Indexed.
6. Naqvi, M., Hussain, K., Asghar, S. and Fong, S. (2011). Mining Temporal Association Rules with Incremental Standing for Segment Progressive Filter. Communications in Computer and Information Science, 2011, Volume 136, Part 7, 373-382, Book Title: Networked Digital Technologies Editor: Fong, Simon, 1st Edition, DOI: 10.1007/978-3-642-22185-9_32 Print ISBN: 978-3-642-22184-2 Series ISSN: 1865-0929 Publisher: Springer Berlin Heidelberg.
7. Shehneela Khan, Tariq Ali, Umer Draz, Khalid Hussain, Prevention of DOS/DDOS Attacks Through Expert Honey Mesh Security Infrastructure "Information Security Handbook", published by Taylor & Francis Group
8. Muhammad Talha Saleem Noor ul Ain, Zartaj Tahir Khalid Hussain Cost oriented Electronic Voting system using Hashing function with digital personal "Information Security Handbook", published by Taylor & Francis Group
9. Shahida, Khalid Hussain Security Management System (SMS) "Information Security Handbook", published by Taylor & Francis Group

10. Saleem Iqbal, Muhammad Junaid Nazar, Saud Altaf, Kashif Naseer Qureshi, Khalid Hussain Software Defined Networking (SDN) Security Concerns “Information Security Handbook”, published by Taylor & Francis Group
11. Mehwish Malik, Hina Umbrin, Nuzhat Akram Khalid Hussain Security Challenges in Big Data: A comprehensive study “Information Security Handbook”, published by Taylor & Francis Group
12. Zia ur Rehman, Saud Altaf, Saleem Iqbal, Khalid Hussain, Kashif Sattar Key Authentication Schemes for Medical Cyber-Physical System Information Security Handbook CRC Press pp 141-155 2022/2/17.
13. Zia ur Rehman, Saud Altaf, Saleem Iqbal, Khalid Hussain, Kashif Sattar Key 8 Key Authentication Information Security Handbook CRC Press pp 141 2022/2/17
14. Khurram Shahzad, Hasnat Ahmed, Faraz Ahsan, Khalid Hussain, MN Talib Blockchain-Based Supply Chain System Using Intelligent Chatbot with IoT-RFID Information Security Handbook CRC Press pp 233-245 2022/2/17.
15. Raja Majid Ali Ujjain, Khalid Hussain, Sarfraz Nawaz Brohi The impact of Blockchain technology on advanced security measures for E-Government Cybersecurity Measures for E-Government Frameworks IGI Global pp 157-174 2022.
16. Raja Majid Ali Ujjain (University of the West of Scotland, UK), Khalid Hussain (Superior University, Pakistan), and Sarfraz Nawaz Brohi (University of the West of England (UWE), Bristol, UK, The Impact of Blockchain Technology on Advanced Security Measures for E-Government. The Medical Cyber-Physical System “Information Security Handbook” was published by Taylor & Francis Group.

Research & Development :(V. Book Editing)

1	Noor Zaman, Khalid Hussain , Mamoon Hamayun, Azween Bin Abdullah, Joao Manuel R. S. Tavares “Information Security Handbook”, published by Taylor & Francis Group	
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2	Rana M. Amir Latif, Muhammad Farhan, Khalid Hussain, Noor Zaman, “A Smart Assessment Methodology to Measure and Analyze Google Play Store”, published by Cambridge UK.	
3	Kaleem Razzaq Malik, Muhammad Farhan, Rana M. Amir Latif, Khalid Hussain, Noor Zaman, “Bi-Directional Data Transformation Methodology Emerging Research and Opportunities” published by Cambridge UK.	
4	Analyzing Mobile Apps Using Smart Assessment Methodology (Scoups Indexed) Basheer Riskhan, Khalid Hussain, and Halawati Abd Jalil Safuan (Albukhary International University, Malaysia) DOI: 10.4018/979-8-3693-6925-8	

5	Reshaping CyberSecurity with Generative AI Techniques (Scoups Indexed) Noor Jhanjhi (noorzaman.jhanjhi@taylors.edu.my), Khalid Hussain (khalid.hussain@aiu.edu.my)	
6	Vulnerabilities Assessment and Risk Management in Cyber Security (Scoups Indexed) Professor Dr. Khalid Hussain (khalid.hussain@aiu.edu.my)	
7	Precision Medicine with AI in Oncology-Innovative Approach to Cancer Detection and Treatment Dr. Danish Jamal, Dr. Shehnla Zardari, Dr. Firdous Kausar, Prof. Dr. Khalid Hussain (Springer Nature, Switzerland AG, Gewerbestrasse 11, 630 Cham Switzerland.	

Project/Thesis Supervisions/Co-Supervision

Ph.D.

1. Muhammad Firdaus Azizul Fata “Digital Inclusion and Access. A study of Malaysia” Albukhary International University Malaysia.
2. Muhammad Tayyeb "Enhanced Reliable And Energy Efficient Pressure Based Data Forwarding Scheme for Underwater Wireless Sensor Networks" Universiti Teknologi Malaysia as Co-Supervisor (Completed).
3. Ahtasham Sajid “An Efficient Buffer Management Scheme using Forward Chaining (data-driven) Expert System (FCDDDES) in Opportunistic Networks” Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology Islamabad (Completed).
4. Hafiz Mati-ur-Rehman “Performance Evaluation and Enhancement of SDN Controller” Secs NUST Islamabad.
5. Hafiz Muhammad Saleh Kaukb “Agent-Based Backup Management System in Cloud Computing” International Islamic University Islamabad
6. Gohar Zaman “An Ontological Framework for Information Extraction From Diverse Scientific Sources” Universiti Tun Hussain Onn Malaysia as Co-Supervisor.

MS.

1. Alaaeldin Mohamed Omer Elfadul “The Role of Artificial Intelligence in Social Business Management” Albukhary International University Malaysia.
2. Usman Amir “DDoS Attack Detection and Prevention Technique in Cloud Computing” RISE Riphah International University. Islamabad.
3. Kamran Afzal “Lite Weight Mobile Broker For Sharing Resources In Multi Clouds” Alama Iqbal Open University Islamabad.
4. Tahir Shahzad “An e-model for concept building at school level student in Pakistan” Alama Iqbal Open University Islamabad.
5. Asif Javed “Agent-Based Artifact level Change control Mechanism using Light Weight Approach(ABaCM) Alama Iqbal Open University Islamabad.
6. Saqib Iqbal “A Sentiment Mining Approach (ASMA) For Behavior Prediction on Big Data” University of Lahore Islamabad.
7. Ali Zulqarnain “Fragrance Detection by using a cell phone” University of Lahore Islamabad.
8. Sabih Khan Afridi “Agent-based security Enhancement mechanism (ABSEM) For TCP Protocol” University of Lahore Islamabad.
9. Hafiz Muhammad Saleh Kaukb “A Lightweight Real-Time Agent-Based Backup Management System” University of Lahore Islamabad
10. Sajida Aziz, GIS-Based Expert System for Energy Recourse Exploration. University of Lahore Islamabad.
11. Sohail Anjum “Handling of Congestion Control, Routing, and Security Issues in Multi-Protocol Label Switching (MPLS)” (University Institute of Information Technology PMAS_ARID University)
12. Akhtab Hussain “A Secure Trust Based Cluster Head Election Mechanism For Mobile Adhoc Network” (University Institute of Information Technology PMAS_ARID University)
13. Azhar Hayat Khan “Network Layer Misbehavior Detection in MANET ” (University Institute of Information Technology PMAS_ARID University)
14. Malik Mehroz “Fairness Based Dynamic Routing In Wireless Mesh Networks” (University Institute of Information Technology PMAS_ARID University)

15. Nayla Khadim “Detecting of Malicious Node in MANET through Fatih” (International Islamic University)
16. Iffat Ahmed “Multimedia Traffic Management in Wireless Network” (Allama Iqbal Open University)
17. Muhammad Muzaffar Iqbal “Implementation of Versatile Resilience Ring protocol (VRPR) in homogeneous network” (Allama Iqbal Open University).
18. Saima Noreen “Successful Load Balancing of Multimedia Traffic in Wireless Mesh Networks through Minimizing Packet Loss Ratio and Delay” (International Islamic University)
19. Urooj Kokab “Maximizing throughput & minimizing packet loss ratio by traffic shaping technique in Wireless Mesh Networks” (International Islamic University)
20. Surraya Khanum “Mobile Agent Based Hierarchical Intrusion Detection System in Wireless Sensor Networks” (International Islamic University)
21. Sumaira Seemab “Detection and Identification of Unreliable Traffic in Wireless Ad-hoc Network during Congestion” (International Islamic University)
22. Asima Ismail “Detection and Identification of Unreliable Traffic in Wireless Ad-hoc Network during Congestion (International Islamic University).

Undergraduate Project Supervision

- Most of the graduate projects received international recognition and prizes internationally, being smart and unique based on Mobile development, IoT, Virtual Reality, Kinetic sensors, etc.
- Supervised numerous projects for BSCS at IBT, Karachi **Pakistan**.
- Supervised numerous projects for BSCS at King Faisal University, **Saudi Arabia**.
- Several projects participated in **international conferences** and won the first prizes besides **journal publications**.

PhD Thesis Evaluation as Examiner

Ph.D.

1. Ms. Marya Iqbal “Towards Aspect Based Software Product Lines Model: Situational Component Mining Taxonomy” Univeristy Institute of Information Technology Pir Mehr Ali Shah ARID Agriculture University Rawalpindi Pakistan.
2. Ms. Irum Ilyas “An Integrated Software Testing Approach for the Adaption of Agile Practices: From Requirement Prediction Towards Prioritization” Univeristy Institute of Information Technology Pir Mehr Ali Shah ARID Agriculture University Rawalpindi Pakistan.
3. Mr. Wong Hoo Meng “A Logic Model For Root Cause Analysis Of Software Service Failure On Multiple-Tier Application Architecture” Taylor's University Australia (Malaysia Campus).
4. Mr. Zerdoumi Saber “Deep Learning For Recognizing Overlapped And Touching Character For Arabic Scripts” Taylor's University Australia (Malaysia Campus).
5. Mr. Hashim Ali Thesis Title: “Profit Aware Resource Provisioning and Management in Heterogeneous Cloud” Abdul Wali Khan University Mardan
6. Mr. Lim Teng Soon Thesis Title: Leveraging Deep Reinforcement Learning for Criminal Network Hidden Link Prediction. Taylor's University Australia.
7. Mr. Ayaz Ali Khan, Thesis Titled; “Energy and Performance Efficient Resource Management in Containerized Datacenters ” Abdul Wali Khan University Mardan
8. Mr. Ammar Rafiq's Thesis Titled; “QoS Based Algorithm for Efficient Bandwidth Utilization in NF-EPON” University of Engineering and Technology Lahore
9. Adnan bin Amanat Ali “Swipe Behavior-Based Mobile Authentication System” Universiti Tunku Abdul Rahman Malaysia.

Professional Services: (A. Regional Editor)

1. International Journal of Intelligence and Information Technology.
2. Information Technology Journal – Science Alert ISSN **1812-5646- USA**
3. Journal of Applied Sciences – Science Alert **ISSN 1812-5662- USA**
4. Research Journal of Information Technology – Science Alert **ISSN 2151-7959- USA**
5. Asian Journal of Scientific Research – Science Alert **ISSN 2077-2076- USA**

Professional Services: (B. Executive\Editor\Associate Editor\ Editorial Board)

1. Computer Science Teacher Association (Membership No. 4217685)
2. International Association of Engineers (Membership No. 101485)
3. International Association of Computer Science and Information Technology
4. (IACSIT) (Membership No. 80331789)
5. National Computing Education Accreditation Council
6. IEEE Membership (Membership No. 90541675)
7. Pakistan Information Security Association (PISA)
8. Malaysia Information Security Professional (MISP)
9. Elsevier Computer Science
10. IEEE Computer Society Member
11. Information Security Network
12. Information Security Community
13. International Cyber Task Force
14. Malware Analysis
15. IEEE Computer Network Engineer
16. EC Council
17. EC Council Academy
18. Information Security Career Networks
19. Information Security Expert Center

Professional Training and Certifications

1. EC-Council Master Trainer
2. Certified Ethical Hacker (From EC Council)
3. Configuration Management Advance Level (PSE AERO)
4. Configuration Management Level-1 (PSE AERO)
5. Certified Ethical Hacking
6. VMware Certified Associate Data Center Virtualization
7. VMware Certified Associate Workforce Mobility
8. VMware Certified Associate Cloud

Technical Talks, Keynote Speaker Presentations, and Workshops Conducted

1. **Invited Speaker** at 6th Carvinal IMWORK 2024 Plembang Indonesia 15th – 17th 2024.
2. **Invited Speaker** at 4th Industrial Revolution Consortium (My4IRC) by Malaysia Technology Development Corporate (MTDC) on 9th to 10th October 2024.
3. **Invited Speaker** at KHI-HTC 1st IEEE Karachi Section Humanitarian Technology Conference 2023 on 8th and 9th January 2024.
4. **Invited Keynote Speaker at the Scoups Indexed** International Conference on Data Science, AI, and Analytics 13th 14th September 2023.
5. **Invited Keynote Speaker** at Karachi Institute of Economics and Technology “Identification of Probable Vulnerabilities and Countermeasures for Government Organizations” 9th August 2023.
6. **Invited Keynote Speaker at IEEE** International Conference on International Bhorbun Conference Applied Science and Technology, **2019**.
7. **Invited Keynote Speaker at IEEE** International Conference on International Bhorbun Conference Applied Science and Technology, **2018**.
8. **Invited Keynote Speaker at IEEE** International Conference on International Bhorbun Conference Applied Science and Technology, **2017**.

Research Interest

Cyber Security, Wireless Sensor Networks (WSNs), WBAN, IoT, Cloud Computing, Mobile Applications, Ad hoc Networks, Mobile Computing, and Software Engineering.

Personal Information

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