

Dr. Muhammad Ali

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Coordinator, Centre of Excellence in Information Technology (CEIT)
Coordinator, Office of Research, Innovation & Commercialization (ORIC)
Institute of Management Sciences (IMSciences), Peshawar

PhD in Computer Science University of Innsbruck Austria (2004 – 2008)

Professional Experience

Since 2010: Coordinator ORIC

The ORIC has been established at the direction of the HEC in order to promote and strengthen research and process of knowledge creation at IMSciences. As coordinator ORIC, I am supervising a team of five members including Manager Research Development, Manager Research Operations, Manager University-Industry Linkages (and Knowledge Exchange), and two research associates.

ORIC goals / achievements /activities

- Supporting the institute's strategic research directions
- Increasing and diversifying external research funding
- Manage and enhance the research activities at the institute
- Develop research policies and priorities for the institute
- Act as a liaison between the institute's research community and its supporters and stakeholders
- A key player in the implementation of Knowledge Exchange (KE) strategy initiated by the HEC and the British Council
- Introduced the policy of research publication rewards for IMSciences faculty members

Following research projects, submitted through ORIC, have been approved by the HEC under the National Research Programme for Universities (NRPU)

- Countering Counterfeits in Pakistan (2011)
Approved budget: 3.868 m. pkr
Status: *in progress*
- Valuing the Environmental Health Effects; a case study of Peshawar, Pakistan (2011)
Approved budget: 2.692 m. pkr
Status: *in progress*

- The impact of tourism on local livelihood (2011)
Approved budget: 1.699 m. pkr
Status: *in progress*
- Persistence of Thalassemia within joint family system in Khyber Agency, KP (2011)
Approved budget: 3.004 m. pkr
Status: *in progress*
- A study of cases and duration of unemployment and underemployment of university graduates in KP, Pakistan (2011)
Approved budget: 2.330 m. pkr
Status: *in progress*

Trainings / workshops / seminars attended in the ambit of ORIC

- Capacity Building Programme for ORIC Managers at NUST, Islamabad. The extensive five day training programme was co-sponsored by the HEC and British Council (23-27 Jan. 2012)
 - Professional writing skills
 - Entrepreneurial culture and changing the mindset
 - History, concept and significance of Intellectual Property
 - Technology transfer processes
 - KE master classes conducted by the British Council to learn from the experiences of the UK academics in the area of Knowledge exchange.
 - First series of KE master classes with arranged at video conference facility in Quaid-e-Azam University Islamabad to learn from the experiences of University of Cumbria, UK in the area of Knowledge Exchange and initiate the same at our Institute (Dec. 14-2011 -- Jan. 17, 30-2012)
 - Second series of KE master classes arranged at video conference facility in Allama Iqbal Open University Islamabad on Enterprise Educators delivered by National Council for Enterprise in Education (NCEE), UK (June 2012)
 - Training in Monitoring and Evaluation for Senior Managers conducted by ASP-LUMS at Lahore University of Management Sciences, from Feb. 19-21, 2012

Since 2008: Coordinator CEIT

On re-joining the Institute in 2008 after my PhD, I was given the charge of Centre of Excellence in IT (CEIT). The CEIT is looking after various academic programmes including BCS (4 year), MSc Computer Science (equivalent to 16 years), MS in Information Technology and Computer Science (equivalent to 18 years), and PhD in IT and CS. I am supervising an extensive team including 8 full time faculty members, 14 technical and administrative staff members. I am also responsible for the smooth functioning of the IT infrastructure at the Institute including the campus wide network, IT equipment in offices and labs, and the IT support staff.

CEIT goals / achievements /activities

- Ensure the quality of the programmes and maintain the standard of courses as pre-determined by the institute.
- Supervising the teaching staff and providing the necessary instruments to execute its responsibilities.
- Hiring/firing and supervising the technical staff including Network and database managers, technicians, lab supervisors, and office assistants
- Acting as resource person for the IT instructors and establishing course specific performance guidelines.
- Guiding and facilitating the faculty in developing the course material and keeping it at the current know-how level and at par with the international standards
- Advising the Academic Council for introducing the new academic programmes.
- Started MS in Computer Science programme (eq. to 18 years) in 2009
- Started PhD in Computer Science and Information Technology in 2010
- Editor-in-chief of the Journal of Computer and Information Sciences, published by IMSciences

Administrative and Technical role

- Management, supervision and directing all Information technology resources of the Institute
- Proposing the top management in implementing the technology infrastructure in a cost-effective way
- Define, update and implement the IT strategy at the Institute
- Acquiring the software and hardware required
- Select, manage and control the IT service providers
- Hiring/firing and supervising the technical staff responsible for the computer labs, network equipment and other IT related stuff
- Established seven state of the art computer labs with branded computers and latest software
- Overseeing the Pakistan Education and Research Network (PERN) provided by the HEC. PERN is fully integrated and dedicated communication infrastructure using advanced Information & Communication Technologies. We are providing high speed Internet facilities to students and faculty round the clock along with access to a large number of research repositories
- Appointed Anti-Plagiarism Software (Turnitin) Administrator by the HEC for IMSciences

Trainings / workshops / seminars attended in the ambit of CEIT

- Advanced features in Turnitin (anti-plagiarism software) in Dubai (Dec. 2010). Two day training was organized by the HEC and iParadigms, UK. I was the only participant selected from KP Province.
- Project Management training (PMP) conducted at IMSciences in July 2008 by a certified PMP trainer.

Teaching /research

- Areas of interest: Computer Networks, fault tolerant and dependable computing, Network on chips, Delay and Disruption Tolerant Networks
- Courses (2011-2012): Data Communications, Computer Networks, Advanced Computer Networks, Fault Tolerant Computing, Research Methods for Computer Science

Administrative services (IMSciences)

- Convener, Research Committee

The IMSciences research committee evaluates and approves research projects submitted by faculty members. It also utilizes the research fund for the capacity building of its faculty. As convener of research committee, I introduced the payments for registration fees and awards for research publications in reputed (HEC recognized) journals to improve IMSciences ranking.

- Member, Advisory Committee

The advisory committee is responsible for providing advice and guidance on all issues governing the Institute. The committee is advisory to the Director and has purview over all strategies, policies, directions, issues, and priorities at all levels and across the Institute, including research, academic, and administrative infrastructure

- Member, Semester Committee

The semester committee resolves issues and cases relating to student exams and unfair means, drop outs, short of attendance, and semester freeze as per IMSciences rules and regulations.

- Member, Anti-plagiarism committee

The Institute has a zero-tolerance policy toward plagiarism. The role of anti-plagiarism committee is to ensure the prevention of plagiarism in the first place besides resolving cases of student and faculty plagiarism.

- Member, Project Management Committee

The project management committee is responsible for the implementation, monitoring and evaluation of various building infrastructure and IT related projects at IMSciences. The SOPs of PM committee includes providing assistance to projects when and if required, resolving issues related to project scope changes, resolving conflict and disputes etc.

- Member, Board of Advanced Studies and Research (BASR)

BASR evaluates research proposals for PhD candidates at IMSciences. It also is responsible for the approval of PhD thesis before the award of degrees. The board is comprised of senior faculty members from the Institute along with renowned industry representatives and academics.

- Subject specialist, Selection Board

I have been a member (subject specialist) of IMSciences selection board for the selection of lecturers and Assistant Professors in Computer Sciences.

Administrative services (others)

- Subject specialist, selection board for Computer Sciences at UET Peshawar (2010)
- Member, selection board for Computer Sciences at Islamia College University, Peshawar (2010-2011)
- Member, Board of Advanced Studies and Research (BASR) at Frontier Women University, Peshawar (2010)
- Member of National Review Curriculum Committee (HEC) for designing and implementing IT curriculum for bachelors, masters and PhD programmes at Pakistani universities(2009)

Previous Experience

Dec. 2003 – Jun. 2008

PhD Scholar and Research Associate at the Institute of Computer Science, University of Innsbruck, Austria

- On paid study leave from IMSciences for PhD on a competitive scholarship awarded by the HEC

Jan. 2000 – Dec. 2003

Lecturer, Institute of Management Sciences, Peshawar.

- Teaching Computer Science and Information Technology related courses to undergraduate & graduate programs.
- Supervising individual and group student projects.
- Supervised extra-curricular activities including study counseling, educational visits to industry, and establishment of an IT club for the promotion of IT activities among the students and faculty

Mar. 1999 – Dec. 1999

Lecturer (full time) & Administrator (evening programme), Al-Khair University, Peshawar (currently CECOS University, Peshawar)

- Teaching undergraduate level courses in Computer Science and Information Technology
 - Helping students with their projects
 - As in-charge for the evening programme:
 - Organizing lectures for various courses
 - Arranging teachers for courses
 - Managing the timetables and classes
 - Reporting on the overall progress of the programme
 - Ensuring that all processes are in line with university regulations
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Publications

- **Accepted:** ARCHITECTURE BASED SOFTWARE QUALITY MAINTENANCE RIPPLE EFFECT ANALYSIS" to be published in International journal of innovative computing, information and control (IJICIC Vol 8, No 1, 2012). **(co-author)**
- A FODA Oriented Approach to Architecture based Ripple Effect Analysis ", published in Information Journal (Vol.14, No.6, June, 2011) **(co-author)**
- A Scalable and Privacy Preserving Remote Attestation Mechanism, pp.1193 Volume 14 No. 4, Journal of Information, SCI Indexed, IF 0.09. **(co-author)**
- Mauth: A fine-grained and user-centric permission delegation framework for web services pp: 2060-2071 **(co-author)**
- Content based Image Retrieval using Geometrical-Shape of objects in Image, journal of Computer and Information Sciences, vol. 2, No. 1, Feb. – Aug. 2008, ISSN: 1995-5391, pg. no. 1 – 6. **(co-author)**
- Using the NS-2 Network Simulator for Evaluating Network on Chips", journal of Computer and Information Sciences, vol. 2, No. 1, Feb. – Aug. 2008, ISSN: 1995-5391, pg. no. 7 – 12. **(Principal author)**

Conference Proceedings

- Seamless Proactive Vertical Handover Algorithm. ITNG, Las Vegas, 2011: 94-99 **(co-author)**
- Region-Based Security Architecture for DTN. ITNG, Las Vegas, 2011: 387-392 **(co-author)**
- DTN-RSim: An event-based routing simulator for DTN, International Conference on Computer Networks and Information Technology (ICCNIT), Bara Gali, July 11-13 2011 **(co-author)**
- Efficient vertical handover approaches for increased user satisfaction in next generation networks, , International Conference on Computer Networks and Information Technology (ICCNIT), Bara Gali, July 11-13 2011 **(co-author)**
- Localized filter in color image segmentation, World Academy of Science, Engineering and Technology, August 24-26, 2011, Paris. **(Principal Author)**
- Internet Lessons for Network on Chips Designers, Proceedings of 33rd International Conference on Telecommunication and Signal Processing (TSP 2010), August 17 – 20, 2010, Baden (near Vienna), **Austria. (Principal author)**
- Object identification with Color and Texture in CBIR System", Proceedings of World Congress on Science, Engineering and Technology, October 28 – 30, 2009, **Venice, Italy**, pg. no. 251 – 256. **(Principal author)**
- Fault tolerant Context Aware Mobile Computing" , Proceeding of International Conference on Future Computer and Communication, ISBN Number (978-1-4244-3754-2) , **Kuala Lumpur, Malaysia**, 3-5 April 2009. **(co-author)**

- Comparative Analysis of transient-fault tolerant schemes for Network on Chips , International Conference on Computer, Electrical and System Sciences and Engineering, WASET 2008, Heidelberg, Germany, September 24-26, 2008.
(Principal author)