

PROFILE

ADNAN QADIR, Ph.D(Transportation)

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Profile Summary

Presently head of the department Urban and Infrastructure Engineering, NED University of Engineering and Technology, Karachi. Served in King Abdul Aziz University Jeddah for two years. Over twenty five years of academic and research experience in the field of Transportation engineering. More than twenty research publications in ISI index journals and peer reviewed conferences. Member of Qatar National research fund(QNRF) project evaluation and review committee since 2012. Also serving as reviewer in Elsevier publications for Civil Engineering journals. Conducted training in Works department of Quetta in AUTOCAD.

EDUCATION

- 2010 Doctor of Philosophy- Transportation Engineering
Middle East Technical University, Ankara, Turkey
Thesis: 'Investigation of low temperature cracking in Asphalt Concrete Pavement'
- 1997 Master of Science in Civil Engineering (MSCE)
NED University of Engineering & Technology, Pakistan
- 1991 Bachelor of Engineering (Civil)
NED University of Engineering & Technology, Pakistan

ACADEMIC/RESEARCH EXPERIENCE

NED University of Engineering & Technology, Pakistan

Professor and Chairperson

March 2017-to date

King Abdul Aziz University, Jeddah

2014-2016

NED University of Engineering & Technology, Pakistan

Professor

2010-2014

- Subject Teacher for undergraduate and graduate courses in Transportation and Materials Engineering
- Responsible for setting up Transportation Materials and Transportation Systems laboratories
- Departmental activities include exam supervision, junior faculty training, and holding of workshops and seminars
- Active participation in technical and professional societies

Co-ordinator Post Graduate Studies (Civil), 2010-13

Responsibilities included:

- Learner-centred curriculum development (revised the entire curriculum for Master of Engineering and Management, Transportation engineering discipline)
- Admission process formulation, course organization and overall supervision of the program
- Monitor and evaluate program based on student and faculty feedback for further improvement and quality enhancement
- Application of interactive learning technologies in support of education and training activities
- Offering Professional Development courses for practicing engineers

Secretary, Construction material research group(CMRG), 2010-13

Responsibilities included:

- Development of research program for various disciplines within the university
- Evaluation of submitted research proposals from various departments.
- Develop University-Industry interaction through common-interest projects, knowledge-sharing seminars and symposiums

- Develop programs for extending educational resources to technical and non-technical working professionals
- Preparation and recording of meetings and correspondences

Advisor, Senior Year Design Projects and Independent Study Projects(ISP)

Responsibilities including interaction with government and industry to arrive at key project formulations, acting as team-player and advisor on projects, evaluation and grading

COURSES OFFERED AS FACULTY AT NED UNIVERSITY OF ENGG. & TECHNOLOGY, KARACHI

UNDERGRADUATE COURSES

Transportation Engineering I
 Transportation Engineering II
 Engineering Materials
 Disaster Management and Rehabilitation
 Engineering Surveying I and II
 Planning & Design of Transportation System

GRADUATE COURSES

Pavement Assets Management
 Pavement Analysis & Design
 Pavement Rehabilitation and Maintenance
 Highway Materials and Construction
 Geometric Design of Highways

PROFESSIONAL EXPERIENCE

A. Experience Managing Civil Engineering Projects to Successful Completion

Worked as Site Engineer between 1992-1997 in public and private organisations, responsibility includes

- Overall supervision of multi-storey buildings, Road carpeting and building maintenance
- Preparation of Bill of quantities, Project Estimates and Tender documents
- Supervision of stores
- Monitoring of building and Highway structure
- Layout of foundation of buildings, Boundary Wall, Sewerage lines and Electricity Cables
- Construction of Road network around the buildings
- Management and supervision of multi-storey buildings and Road construction works
- Submission of Tender documents
- Overall supervision of laying of Telephone cables in the streets of Karachi
- Conducted Socio-economic survey of various localities of Karachi
- Updating of topographic map

Exponent Engineers , PAKISTAN

May 2013-Present

Transportation Advisor (Associate)

- Pavement design including empirical and mechanistic methods, economic analysis
- Reviewed design of highway projects and evaluation of tenders.
- Project presentation and client (government and private) contact.

B. Investigation of pavement failures

Evaluation techniques include field survey, pavement distresses, detail study of as built drawings, core cutting, trenching and laboratory investigations

- Failure of Residential Road in HEJ campus , Client-Karachi University -2010
- Investigation of Failure of Mubarak Village road, Client –National Accountability Bureau(NAB)-2011
- Failure of Road in Kashmore Cantonment Area, Client-National Logistic Cell-2012

PUBLICATIONS

Journal

1. Utilization of Plastic waste in Pavement Structure, Journal of Solid waste and technology, pp 185-194, volume 32, August 2006
2. A paradigm for down grading the nuisance of Polyethylene bag pollution Technology Updates Journal, Volume 3, Academic Year 2006-2008.pp 1-12

3. Experimental testing of hot mix asphalt mixture made of recycled aggregates, *Waste Management Research*, Volume 29, Issue 12, 2011, pp 1316-1326 (Journal Impact Factor-1.222)
4. Design of thermal stress restrained testing machine for measurement of low temperature cracking in asphalt concrete, *World Journal of Engineering*, Volume 9, Issue 4, pp 339-348.
5. Effect of air voids on low temperature fracture strength of asphalt concrete, *The International Journal of Pavement Engineering & Asphalt Technology (PEAT)*, Volume 13, Issue 2, 2012
6. Determination of statistical correlation between dynamic modulus and thermal strength of asphalt concrete, *NED University Journal of Research*, Volume 8, Issue 2, 2011, pp 52-61.
7. Rutting performance of polypropylene modified asphalt concrete, paper accepted to be published in *International Journal of Civil Engineering* (Journal Impact Factor-0.681), 2013.
8. Performance of Hot Mix Asphalt Mixtures Made of Recycled Aggregates *Journal of Testing and Evaluation* 42(2):20130004 · March 2014
9. Flexure and shear strength of Fiber modified lightweight aggregates concrete and its application in water retaining structures, *World Journal of Engineering* 2017, Vol-14, No.2, pp-101-107 (Authored), Emerald.
10. Investigation of Glass Transition Temperature of asphalt concrete, *Journal of Testing and Evaluation* 2017, Vol-45, No.5, pp-1-13 (Authored), ASTM.
11. Comparison of SBS and PP Fiber Asphalt Modifications for Rutting Potential and Life Cycle Costs of Flexible Pavement, *Road Materials and Pavement Design* (Authored), Taylor & Francis Ltd 2016.
12. Artificial Neural Network Models for performance design of asphalt pavement reinforced with geosynthetic, *Transport Research Record, TRB* 2020. Published online 20-06-2020. SAGE Publications
13. Statistical Analysis for Comparing and Predicting Rutting Resistance of Asphalt Pavements with Rigid and Flexible Geogrid Layers, *Construction and Building Materials*, 24-07-2021, Elsevier

Conference:

14. Traffic Delays and queue buildup due to damaged road in Karachi-23-24th January 2001, First International Road Conference, Lahore organized by IEP, 2001.
15. Post Disaster Mitigation – A Relief To Human Sufferings 14th – 15th November, 2002, International Conference on Protection of Structures against Hazards, Singapore.
16. Use of Recycled plastic waste as an aggregate in Pavement structure 14-16 March, 2005, International Symposium on Pavement Recycling, SAO PAULO Brazil).
17. Effect of aggregate type and rate of temperature change on fracture strength of asphalt concrete, 5th International Conference Bituminous Mixtures and Pavements, 1-3 June 2011, Thessaloniki, Greece, Hyatt Regency Hotel
18. Effect of air voids on low temperature fracture strength of asphalt concrete, 11th International Conference on Pavements Engineering and Infrastructure, 15-16 February 2012, Liverpool, United Kingdom.
19. Use of Recycled Aggregates in Hot Mix Asphalt Mixture, paper presented in 3rd International Conference on Construction in developing countries, Bangkok, Thailand 4-6 July 2012.
20. Karachi Circular Railway-A need for Karachiites, paper presented in 3rd International Conference on Construction in developing countries, Bangkok, Thailand 4-6 July 2012.
21. Flexural behaviour of reinforced lightweight aggregate concrete and the effect of polypropylene fibre, 12th International Conference on Pavements Engineering and Infrastructure, 27-28 February 2013, Liverpool, United Kingdom.
22. Finite Element Modelling of Thermal Stress Restrained Specimen Test, 5th Euroasphalt and Eurobitume Congress, 13-15th June 2012, Istanbul, Turkey.
23. Using Dynamic Modulus as an Indicator for Thermal Strength of Asphalt Concrete, 1st Meeting and Technical Conference of the Middle East Society of Asphalt Technologists, MESAT 2010, 05-08 July 2010, Beirut, Lebanon.
24. Finite Element Analysis of Tractor Trolley Tyres on Bituminous-bound Macadam Roads of Pakistan, 17th IRF World Meeting & Exhibition, the Premier Event for Transportation Professionals, 10-14 November 2013, Riyadh, KSA.
25. Experimental Investigation of Geotextiles in Asphalt Concrete Pavement, 17th IRF World Meeting & Exhibition, the Premier Event for Transportation Professionals, 10-14 November 2013, Riyadh, KSA
26. Effect of overloaded vehicles on the performance of highway bridge girder: A case study"; Published in the *Procedia Engineering*, Volume 77, pp. 95-105, 2014 (Fourth International Symposium on Infrastructure Engineering in Developing Countries (IEDC-2013); Pakistan, 26-28 December, 2013.
27. Performance Evaluation of Geocomposite Reinforcement in Flexible Pavements using Marshall Test Protocol, 5th ICCOEE international conference, 14th-15th August 2018, Kuala Lumpur Malaysia published in MATEC Web of Conferences 203, 06020 (2018) <https://doi.org/10.1051/mateconf/201820306020> ICCOEE 2018.

Research Endeavours

- Use of polypropylene fibres for control of asphalt pavement's rutting in Pakistan, Funded by Frontier Work Organisation, Completed in September 2012, Duration: Six Months, Award amount Pak Rs. 4,80,000/-
- Application of Polymer Modified Asphalt for Control of Asphalt Pavement's rutting in Pakistan, Funded by Messrs. Pak Hy-Oils limited, Duration 06 month, year, Award amount Pak Rs. 5,25,000/-
- Application of non woven Geosynthetic Materials for controlling Rutting in Asphaltic Concrete Pavements in Pakistan
- Application of woven Geosynthetic Materials for control of Rutting in Asphaltic Concrete Pavements in Pakistan
 - Awarded National Research Program for Universities (*NRPU*) , *HEC project for "Investigation of the Rutting and Fatigue performance of Asphalt concrete reinforced with Geotextile Materials"* , amounting to nearly *PKR Rs 7.562 Million*
- Preparation of Geo Data base of storm water drainage of Karachi. *PKR 27.6 Million*

PROFESSIONAL DEVELOPMENT & TRAINING

- 2016 Conducted AUTOCAD training for undergraduate students of King Abdul Aziz University Jeddah, KSA
- 2011 Conducted Eagle Point training to Undergraduate Students
- 2010 Certificate course in Coastal and Harbour Engineering Applications conducted by CCEE at NEDUET Karachi , Pakistan .
- 2007 Imparted Pavement Analysis and design training to Civil and Works Department employees, Quetta, Pakistan
- 2006 Conducted AUTOCAD training for officers of Irrigation Department, Quetta, Pakistan
- 2003 Obtained certificate course training in Technical feasibility of projects conducted by CCEE at NEDUET , Pakistan
- 2001 Obtained certificated in EaglePoint 2000
- 2001 Obtained certificated in AutoCAD 2000

LICENCES/MEMBERSHIPS

- Life Fellow, Institution of Engineers, Pakistan
- Life Fellow, Pakistan Engineering Council, Pakistan

Reviewer:

- QNRF research projects
- Elsevier publications
- Phd Thesis
- Approved PhD Supervisor(HEC)

COMPUTER EXPERIENCE

- Microsoft Office, working knowledge of Microsoft Project and Microsoft Access.
- Pavement Evaluation, Analysis, Design and LCCA software experience such as Darwin, LEDFAA, FAARFIELD, PCAPAVE, Asphalt Institute MS-1, Kenlayer, Kenslab,
- Well versed with various statistical software programs.

TEACHING INTERESTS

- Transportation and Materials Engineering related courses
- Courses related to project execution and management
- Learner-centred curriculum development and application of interactive learning technologies

RESEARCH INTERESTS

- Pavement Design, Evaluation, Maintenance and Management
- Non-destructive road condition evaluation
- All aspects of Mix design
- Infrastructure and Asset Management

PROFESSIONAL INTERESTS

- Develop University/College-Industry interaction through common-interest projects, knowledge-sharing seminars and symposiums
- Develop programs for extending educational resources to technical and non-technical working professionals
- Offering Professional Development courses for practicing engineers
- Active participation in technical and professional societies