

# **MUHAMMAD ASLAM BHUTTO, Ph.D.**

## **HEC APPROVED PHD SUPERVISOR**

Email: mabhutto@neduet.edu.pk and mabhutto@cloud.neduet.edu.pk

### **1. Personal Information**

- Date of birth: 13th August 1974
- Nationality: Pakistani (by Birth)
- Passport No. BG3173863
- CNIC No. 45502-0859386-5
- Hobbies: Social work, news and current affairs, religious know-how, cricket
- Cell/What's App: (+92-333) 2231861
- PEC Registration No. Civil/20259 (Life Member)

### **2. Key Qualifications**

- **Jan 2010-March 2014**

#### **Doctor of Philosophy (Civil Engineering) with specialization in 'Structural Engineering'**

Heriot-Watt University Edinburgh EH14 4AS, United Kingdom

Thesis title: FRP-strengthening of webs of steel plate-girders

Summary of PhD Thesis: The thesis describes the use of fibre-reinforced polymer (FRP) composites to strengthen the webs of steel plate-girders. The tests and finite element analyses (FEA) of the un-strengthened and FRP-strengthened plate-girders were carried out. In the FRP-strengthened plate-girders, the web panels were bonded with GFRP pultruded section stiffeners or layers of carbon or glass FRP composite fabrics. The FRP-strengthening increased the ultimate load of the steel plate-girders by up to 54%. The test results and the FEA predictions for the un-strengthened and GFRP-strengthened specimens were in good agreement. For the FRP fabric-strengthened specimens there was good agreement between the test results and FEA predictions up to the breakdown of the steel-fabric bond. Design procedures for strengthening using FRP composites have been developed. The procedures can be used to estimate the ultimate loads of the FRP-strengthened plate-girders and to determine the cross-sections of GFRP pultruded sections as web stiffeners. The test and FEA results of specimens have been used to validate the design procedures

- **Jan 2005-June 2007**

#### **Master of Engineering (Civil) with specialization in 'Engineering Management'**

NED University of Engineering & Technology Karachi, Pakistan

Major courses: Project Management Framework & Tools, Public Infrastructure Management Organizational Systems, Technical Entrepreneurship, OR, TQM, MIS, SP&DM

- **Aug 1993-Feb 1999**

#### **Bachelor of Engineering (Civil) Gold and Silver Medallist**

Quaid-e-Awam University of Engineering, Science & Technology Nawabshah, Pakistan

Major courses: Quantity Estimation, Construction Management, Steel Structures, Structural Analysis, Strength of Materials, Engineering Mechanics

### 3. Academic and Administrative Experience

- **Jan 2023 to-date**

**Associate Professor, Department of Civil Engineering at TIEST (NEDUET) Mithi**

Responsibilities: Teaching in UG & PG programs; research and scholarly activities; supervision of laboratory and students' projects; PI & Co-PI of funded research projects; students counselling, matters of the PEC accreditation of BE program; coordination of follow-up actions related to the PEC accreditation

- **April 2008 to Jan 2023**

**Assistant Professor, Department of Civil Engineering at NEDUET Karachi**

Responsibilities: Teaching in UG & PG programs; research activities; practical instruction, supervision of laboratory and students projects; PI & Co-PI of funded research projects; students counselling, feedback and extracurricular activities; matters of the PEC accreditation of BE program and the HEC recognition of ME & PhD programs; coordination of follow-up actions related to the PEC accreditation

- **Oct 2003 to April 2008**

**Deputy/Assistant Registrar at NEDUET Karachi**

Responsibilities: Conduct of meetings of Senate, Syndicate, Academic Council and other bodies; faculty nominations to foreign scholarships, conferences and workshops; registration and enrolment of students; students discipline; communication with the HEC, the PEC and other bodies/councils; affiliation of colleges/ institutes; approval of programs; updadtion of curricula; processing and approval of Statutes, Regulations, Admission Policies, etc.

- **April 2003 to October 2003**

**Assistant Registrar (Training) ISO9000 at NEDUET Karachi**

Responsibilities: Training needs of university faculty and employees; approval and conducts of yearly training plan, arrangement of resource persons; feedback of trainees; BOR(DL) meetings →

- **March 2000 to April 2003**

**Assistant Controller of Examinations at QUEST Nawabshah**

Responsibilities: Planning, conduct and supervision of all university examinations; coordination with teaching departments and affiliated colleges on examinations matters; coordination with the PEC, the HEC and other bodies on matters related to passed out students; compilation and announcement of results; issuance and verification of degrees and other certificates

- **June 1999 to March 2000**

**Site Supervisor at Telecom Foundation Pakistan**

Responsibilities: Supervision of construction, underground excavation, cable laying and other works in Sukkur

### 4. Research Interests

- Design, strengthening, finite element modelling and analyses of thin-walled steel members, such as plate-girders
- Search, performance and application of new construction/building materials e.g., slag-concrete, bio-concrete, FRP-concrete, seawater-concrete, ash concrete, fabric concrete

- Performance and properties of slag-concrete, bio-concrete, FRP-concrete, seawater-concrete, ash concrete, etc.
- Management issues in construction industry and solutions with IOT applications, etc.
- Railway infrastructure of Pakistan, its problems and solutions

## 5. Research Projects

### Submitted for Approval

- **Jan 2023**

**Title: Investigation and Mitigation of Deficient Plate Girders in Existing Steel Bridges (\*Submitted as PI to Sindh HEC under Sindh Research Support Program –SRSP)**

### Completed Projects

- **Feb 2019 to Jan 2020 as Co- Principal Investigator (Co-PI)**

**Title: Development of Bio-Concrete from Micro-organisms**

Sponsor: Advanced Studies & Research Board (AS&RB) of NEDUET

Executer: Departments of Chemistry & Civil Engineering, NEDUET Karachi, Pakistan

- **Sep 2017 to Aug 2019 as Co- Principal Investigator (Co-PI)**

**Title: Use of Micro-organisms for the Production of Bio-Concrete and Industrial Enzymes**

Sponsor: Higher Education Commission (HEC), Government of Pakistan under SRGP Program

Executer: Departments of Chemistry & Civil Engineering, NEDUET Karachi, Pakistan

- **Oct 2016 to Sep 2019 as Principal Investigator (PI)**

**Title: Strengthening and Repair of Thin-walled Steel Members using FRP Composites**

Sponsor: Higher Education Commission (HEC), Government of Pakistan under NRPU Program in collaboration with the Pakistan Railways (PR)

Executer: Department of Civil Engineering, NEDUET Karachi, Pakistan

- **Dec 2014 to May 2016 as Project Team Member**

**Title: Development of an Energy-Retrofit Optimization Model for Sustainable Energy Management of Institutional Buildings in Pakistan'**

Sponsor: Standing Committee on Scientific and Technological Cooperation (COMSTECH) of Organization of Islamic Countries (OIC).

Executer: Department of Civil Engineering, NEDUET Karachi, Pakistan

- **Jan 2010 to March 2014 as Research Student**

**Title: Carbon Composites for the Strengthening of Steel Structures**

Sponsor: Department for Transport (DfT), London, United Kingdom

Executer: School of the Built Environment, Heriot-Watt University Edinburgh, United Kingdom

## 6. Supervision of Students' Projects

- Ahmed, M. and Bhutto, M.A. (2023) Probabilistic Seismic hazard assessment of low seismically active regions in Pakistan using synthetic catalogue by Master's student Gul e Zehra Rizvi.
- Ahmed, K. and Bhutto, M.A. (2021) Production and optimization of self-healing concrete by using indigenous bacteria by Master's student Muhammad Umar bin Amir.
- Bhutto, M.A. and Sangi, A.J. (2018) Strengthening and Repair of Thin-walled Steel Members using FRP Composites by Master's student Ubaidullah Khan
- Supervised undergraduate Final Year Design Projects recently on (1) To Study Properties of Concrete Mixed with Textile Fabric Waste, (2) Use of GFRP bars as replacement of steel bars, (3) Use of carbon fibres in mortar and concrete, (4) Use of steel slag as replacement of fine aggregate in mortar and concrete, etc.

## 7. Additional Technical Experience (Reviews, Inspections, Evaluations, etc.)

- **Jan 2020 to Jan 2023**  
Working as Class Advisor B.E. (Civil & Construction Engineering) and Area Coordinator ISO & QEC Representative in Department of Civil Engineering at NEDUET Karachi
- **March 2019**  
Represented NED University and presented paper titled "Implementing QA in Universities/ HEIs through Ensuring & Promoting Stakeholders' Trust" at 15th International Biennial INQAAHE Conference at Bandaranaike Memorial International Conference Hall (BMICH) Colombo
- **March 2018 to Dec 2018**  
Worked as Director QEC & Management Representative ISO 9000  
Functions: Overall supervision of the QEC; Observing member of the Senate, the Syndicate, the Academic Council, the BOR(UL) and other statutory bodies, monitoring of all feedback systems; planning, conduct and follow-ups of internal and external quality audits; NOCs of MS/PhD programs from the HEC; accreditation visits of the PEC and other accreditation councils; coordination with the HEC and other regulatory bodies
- **April 2018 to-date**  
'Technology Program Evaluator' of the National Technology Council (NTC), HEC-Government of Pakistan
- **Feb 2018 to-date**  
Conduct the Self-IPE of the following Universities/DAIs. The review was carried out by evaluation of the performance against 11 standards including Organization & Governance, Faculty, Students and Academic Programs & Curricula.
  - ✓ Quaid-e-Awam University of Engineering, Science & Technology (QUEST) Nawabshah in December 2019
  - ✓ University of Sindh Jamshoro in June 2019
  - ✓ Institute of Business Administration (IBA) Karachi in June 2018
  - ✓ Sir Syed University of Engineering & Technology (SSUET) Karachi in June 2018
  - ✓ Dow University of Health Sciences (DUHS) Karachi in March 2018

- ✓ NED University of Engineering & Technology (NEDUET) Karachi in February 2018
- **Nov 2017 to-date**  
Conducted the Self-Review of PhD and MS Programs of the following Universities/DAIs
  - ✓ Sir Syed University of Engineering & Technology (SSUET) in October 2018
  - ✓ NED University of Engineering & Technology (NEDUET) Karachi in November 2017
- **May 2017 to-date**  
Member of Assessment Team to assess the Self-Assessment Reports (SARs) of various UG, PG and PhD programs offered at NED and other universities
- **March to Sep 2017**  
Leading Member of the NED-QEC Team that coordinated all activities and updated all required changes/ additions into the Quality Management System (QMS); updation of all relevant documents and necessary procedures towards successful transformation to ISO 9001-2015 Standards
- **June to July 2017**  
Carried out 'Functional & Systematic Audit' of the Office of Research, Innovation and Commercialization (ORIC) at NEDUET
- **Feb 2017-March 2018**  
Member (Nominee of the VC NEDUET) on Technical Committee on Dangerous Buildings (TCDB) constituted by the Sindh Building Control Authority (SBCA) for inspection and classification of the dangerous buildings in Sindh province
- **May 2015 to-date**  
Conducted the Performance Review of the following affiliated colleges/ institutes of the NEDUET for affiliation and/or extension in the affiliation
  - ✓ College of Management Sciences (CMS) Karachi in November 2017
  - ✓ Institute of Industrial Electronic Engineering (IIEE) PCSIR in May 2015
- **May 2014 to Sep 2019**  
Worked as Deputy Director QEC & Deputy Management Representative ISO 9000  
Functions: Preparation, review and updation of QMS documents; Observing member of BOF(MME) and BOF(ISH); meetings of BOR(UL&DL), their minutes and follow-ups; planning, conduct and follow-ups of IPE and PhD/MS reviews by the HEC; re-certification and updation of ISO 9001:2015 standards; review/ updation of students and faculty handbooks
- **Jan 2008 to-date**  
Certificated Internal QMS Auditor duly recognized by the Lloyd's Register Quality Assurance (LRQA) and the Internal Register of Certificate Auditors (IRCA)
- **Jan 2007 to-date**

Working as Internal Quality Auditor, QEC at NEDUET Karachi Functions: Auditing of and reporting on all academic and administrative functions of the University in accordance with the QEC-approved Audit Plan 4

## **8. Honours and Awards**

- **November 2022**  
Awarded the status of the APPROVED PHD SUPERVISOR by the HEC Pakistan
- **February 2022**  
Assigned work of the Updating of the Act, Statutes and Regulations of NEDUET Karachi
- **April 2018**  
Nominated as ‘Technology Program Evaluator’ of the National Technology Council (NTC), Government of Pakistan
- **January 2018**  
Awarded status of ‘Certified Quality Procurement Professional’ by the Sindh Public Procurement Authority (SPPRA) after successful completion of training on PPRA, SPPRA & World Bank Procurement Rules and International Best Practices
- **November 2017**  
Nominated as Focal Person/Technical Expert to the Anti-Corruption Establishment, Government of Sindh regarding Inspection/Investigation/Evaluation/ Quality Assurance of the cases related-to procurement of Construction Works, Goods and Services
- **May 2017**  
Awarded Status of Lead Auditor by International Register of Certified Auditors (IRCA) through Lloyds Register Quality Assurance (LRQA) for Inspection/Investigation of Management Systems of Organizations
- **August 2016**  
Awarded research grant of Rs. 7.050 million on approval of a project titled ‘Strengthening and Repair of Thin-walled Steel Members using FRP Composites’ by the Higher Education Commission (HEC), Government of Pakistan under National Research Program for Universities (NRPU)
- **February 2015**  
Awarded the status of **Approved PhD Supervisor** by the Higher Education Commission (HEC), Government of Pakistan
- **March 2013**  
Won **Second Prize** in Poster Completion at 15<sup>th</sup> Young Researchers’ Conference (YRC) organised by The Institution of Structural Engineers (IStructE), March 14, 2013, London, United Kingdom.

- **January 2010**  
Awarded **Fully Funded Scholarship** for pursuing PhD in Civil Engineering jointly sponsored by the Department for Transport (DfT), United Kingdom and NED University of Engineering & Technology Karachi, Pakistan
- **January 2008**  
Awarded the status of the **Certificated Internal QMS Auditor** by Lloyd's Register Quality Assurance (LRQA) duly recognized by Internal Register of Certificate Auditors (IRCA)
- **February 2003**  
Awarded **GOLD and SILVER MEDALS together-with CERTIFICATES OF MERIT** during First Convocation of Quaid-e-Awam University of Engineering, Science & Technology (QUEST) Nawabshah for securing **FIRST** Positions in Faculty of Engineering and in Department of Civil Engineering during Bachelor of Engineering Examinations 1999
- **February 2003**  
Awarded **Cash Prize** and **Shield** during First Convocation-2003 of QUEST Nawabshah for outstanding performance in the convocation arrangements

#### **9. Major Training Attended**

- Aug 2014 to-date Attended Trainings/Workshop on the following topics
  - ✓ 'Good Governance in Higher Education' organized by QEC-NED on 25-29 Aug 2014
  - ✓ 'Outcome Based Education (OBE) and Assessment System of Accreditation' conducted by Malaysian Mentors and organized the HEC and PEC on 5 March 2015
  - ✓ 'Outcome Based Education (OBE) System' conducted by Malaysian Mentors and organized by the PEC and NEDUET on 27-28 Oct 2015
  - ✓ 'Concepts and Techniques of Bloom's Taxonomy' organized by the QAA-HEC on 31 March 2016
  - ✓ 'Quality Management System: Lead Auditor Training Course' organized by the LRQA and NEDUET on 24-28 April 2017
  - ✓ 'Workshop for Technology Program Evaluators' organized by the National Technology Council (NTC) on 18-19 April 2018

#### **10. Resource Person in Trainings**

- May 2014 to-date Conducted Trainings/Workshops to cover the following themes organized by the QEC-NED and other Universities/HEIs
  - ✓ Governance System in Universities
  - ✓ HEC Self-Assessment of Programs
  - ✓ Institutional Performance Evaluation (IPE) by the HEC
  - ✓ HEC Review of PhD/MS programs
  - ✓ PEC Out-Come Based Education (OBE) System
  - ✓ Public Procumbent Systems and Procedures in Pakistan

## 11. Memberships

- The Pakistan Engineering Council (PEC) -Life Member
- The Institution of Engineers Pakistan (IEP) –Life Member
- The International Association for Engineers (IAENG)
- The Amnesty International (AI)
- The Institution of Structural Engineers (IStructE) United Kingdom
- The American Society for Testing and Materials (ASTM)
- The Plagiarism Standing Committee (PSC) of IBA Karachi
- The Inspection Committee of Sindh High Court for ‘Karachi-Hyderabad Motorway M9’
- The Technical Expert in the Anti-Corruption Establishment, Government of Sindh
- The Procurement Committee, Applied Economics Research Centre (AERC) UoK
- The Inquiry Committee for ‘Gulbahar Building Collapse on 5<sup>th</sup> March 2020’

### Formerly Member of

- NED University’s Senate (SEN), Syndicate (SYN), Academic Council (AC), Selection Board (SB), Finance & Planning Committee (FPC), Advanced Studies & Research Board (ASRB), Affiliation Committee, University Development Working Party (UDWP), Board of Review (University Level), Boards of Faculty of MME & ISH, BOR(QEC), and Accommodation Committee
- The Executive Committee, Pakistan Network of Quality Assurance in Higher Education (PNQAHE)
- The Sindh Anti-Encroachment Tribunal Inspection Team for ‘Gujjar Nallah’
- The SBCA Technical Committee on Dangerous Buildings (TCDB)

## 12. Publications and Related Work

- **Design Guideline: 01**  
Developed “Design and Application Guidance for FRP-strengthening of Webs of Steel Plate Girders” and submitted to the Department of Transport (DfT), United Kingdom in 2014
- **Journal Publications: 21 published, 02 Accepted and 04 in process**
  1. Rafi, M.M., Khan, S. and **Bhutto, M.A.** (2023) Assessment of Mechanical Properties of Adobe Masonry, *Journal of Materials in Civil Engineering* (Review completed; ready for publication)
  2. Khan, S.U., Ayub, T., **Bhutto, M.A.**, and Mustafa, A. (2023) Utilization of Tannery waste in Concrete, *International Journal of Civil Engineering* (Submitted in Dec 2022; under review)
  3. Rafi, M.M. and **Bhutto, M.A.** (2023) Comparison of performance of analytical models for prediction of shear strength of steel plate girders, *Structures and Buildings (Proceedings of the ICE)* (Submitted in Aug 2022; under review).



4. **Bhutto, M.A.** and Rafi, M.M. (2023) Strengthening of slender webs of steel plate girders using fibre reinforced polymer composites, *Journal of Composites for Construction* (Submitted in May 2022; under review)
5. **Bhutto, M.A.**, Nasir, M., and Marri, A. (2023) Impact Assessment of Construction Materials used in Water Supply & Sewerage Infrastructure, *International Journal of Business and Management Sciences* (Accepted for publication).
6. **Bhutto, M.A.**, Khan, A. and Marri, A. (2023) Inflation and Its Impact on Highway Construction Materials, *International Journal of Business and Management Sciences*, (Accepted for publication)
7. Bhangwar, S.N., Memon, A.H., **Bhutto, M.A.**, Rahman, I.A. and Memon, F.A. (2022) Risk Level of the Types and Causes of Claims in Construction Projects of Pakistan, *Quaid-E-Awam University Research Journal of Engineering, Science & Technology*, 20(01), 13-20.
8. **Bhutto, M.A.**, Ahmed, K. and Aamir. M.U.B. (2022) Production and Optimization of Self-Healing Concrete by Using Indigenous Bacteria. *International Journal of Biology and Biotechnology*, 19 (4): 561-568.
9. Khan, H.M., Waseemullah, **Bhutto, M.A.**, Khan, S.M. & Baig, M.A. (2022) Analysis of 3D Building Construction Applications in Augmented Reality. *International Journal of Computer Science and Network Security*, 22(10), 340-346.
10. Kisaiezehra, Farooq, M.U., **Bhutto, M.A.** & Kazi, A.K. (2022). Real-Time Safety Helmet Detection Using Yolov5 at Construction Sites. *Intelligent Automation & Soft Computing*, 36(1), 911-926
11. Beg, T., Siddiqui, M. O. R., **Bhutto, M. A.**, Iqbal, K., & Sun, D. (2022). Utilization of textile denim sludge waste in high load-bearing structural applications. *Polimery*, 67(7-8), 298-307.
12. Rafi, M.M., **Bhutto, M.A.**, and Aziz, T. (2022) Study of Strength and Durability Characteristics of Concrete Mixes Made by Unwashed Sea Sand as Fine Aggregates (2022) *Advances in Civil Engineering Materials*, 11(1), 321-338
13. Jakhrani, N. H., Mukwana, K. C., **Bhutto, M. A.**, Mangi, D. M., & Hafeez, M. (2021). Analysis of the Physicochemical Characteristics of Distillery Wastewater at Habib Sugar Mills, Nawabshah. *Engineering, Technology & Applied Science Research*, 11(6), 7788-7792.

14. Jakhrani, A. Q., Jakhrani, S. H., **Bhutto, M. A.**, Jatoi, A. R., Sandilo, U. G., & Ahsan, M. J. (2021). Performance Analysis of Solar Water Pumping System at Nawabshah. *Quaid-E-Awam University Research Journal of Engineering, Science & Technology, Nawabshah.*, 19(2), 49-53.
15. Jakhrani, A. Q., Jatoi, A. R., **Bhutto, M. A.**, Sahito, W. S., Soomro, A., & Shar, N. Z. (2021). Groundwater Quality Analysis of Different Villages in Two Union Councils of District Tando Muhammad Khan. *Quaid-E-Awam University Research Journal of Engineering, Science & Technology, Nawabshah.*, 19(2), 8-14.
16. Bangwar, D. K., Saand, A., **Bhutto, M. A.**, Zardari, M. A., & Keerio, M. A. (2019). Reducing the Effect of Carbonation and Corrosion in Rice Husk Ash Concrete by Incorporating Polymer. *Tehnicky Vjesnik-Technical Gazette*, 26(3), 881-884.
17. Memon, A. H., Soomro, M. A., Lakho, N. A., Memon, A. N., & **Bhutto, M. A.** (2018). A Survey on the Criteria for Measuring the Profitability of a Construction Organization. *Engineering, Technology & Applied Science Research*, 8(3), 2879-2881.
18. Memon, M. A., **Bhutto, M. A.**, Lakho, N. A., Halepoto, I. A., & Memon, A. N. (2018). Effects of uncrushed aggregate on the mechanical properties of no-fines concrete. *Engineering, Technology & Applied Science Research*, 8(3), 2882-2886.
19. Memon, N. A., Larik, A. H., **Bhutto, M. A.**, Lakho, N. A., Memon, M. A., & Memon, A. N. (2018). Effect of Prepackaged Polymer on Compressive, Tensile and Flexural Strength of Mortar. *Engineering, Technology & Applied Science Research*, 8(3), 3044-3047.
20. Jawaid, S., Ahmed, K., & **Bhutto, M. A.** (2018). Bio concrete: an overview. *Int J Biol Biotech*, 15(4), 801-813.
21. Memon, N.A., Abro, F.R., **Bhutto, M.A.** and Sumadi, S.R. (2015) *Marble powder as stabilizer in natural clayey soils*, *Science International Journal*, 27(5), p 4105-4110
22. Ansari, A.A., **Bhutto, M.A.**, Bhatti, N.K., and Memon, R.A. (2015) Strength of wall-slab junction with new form of shear reinforcement in a laterally loaded tall shear wall building, *Journal of Civil Engineering and Architecture*, 9(2), p193-206

23. Memon, N.A., Keerio, N.U., **Bhutto, M.A.** and Sumadi, S.R. (2014) Experimental study of compressive strength of resin grout with marble powder, *European International Journal of Science and Technology (EIJST)*, 3(4), p87-95
  24. Jatoi, A.R., Samo, S.R., Abbasi, H. and **Bhutto, M.A.** (2014) Monitoring and assessment of noise pollution: Case study of Cantonment railway station Karachi, Pakistan, *Sindh University Journal of Research (Science Series)*, 46(1), p59-62
  25. **Bhutto, M.A.**, Ansari, A.A. and Memon, N.A. (2013) Prediction of behaviour of steel plate subjected to shear, *International Journal of Engineering and Advanced Technology (IJEAT)*, 10(10), p1-5.
  26. Ansari, A.A., Bhatti, N.K. and **Bhutto, M.A.**, (2013) Suitability of pre-perforated post-reinforced baked clay beam panels for low cost housing, *American Journal of Civil Engineering*, 1(1), p6-15.
  27. Ansari, A.A., **Bhutto, M.A.**, and Bhatti, N.K. (2013) Mechanical system developed for performance evaluation of reinforced baked clay structural panels, *International Journal of Emerging Technology and Advanced Engineering*, 3(5), p791-797.
- **Conference Presentations: 13**
    1. **Bhutto, M.A.** and Shaikh, A.A. (2022) Increasing Non-Teaching Load on Faculty -A Big Challenge to Quality Assurance in Higher Education, International Conference on Future Trends of Quality Assurance in Higher Education (ICFT-QAHE) 2022, NED University of Engineering and Technology, Karachi, Pakistan, May 16-17, 2022
    2. Ahmed, K. and **Bhutto, M.A.** (2020) Development of Self-Healing Concrete by using Bacteria, 5<sup>th</sup> International Conference on Bioscience and Biotechnology (BioTech 2020) Kuala Lumpur, Malaysia, February 2020.
    3. **Bhutto, M.A.** and Ahmed, K. (2020) Development of Self-Healing Fungal Concrete, 5<sup>th</sup> International Conference on Bioscience and Biotechnology (BioTech 2020) Kuala Lumpur, Malaysia, February 2020.
    4. Shaikh, A.A., Wasif, M., **Bhutto, M.A.** and Uddin, R. (2019) Risk based approach and Smart KPIs for the Quality Assurance in Higher Education Institutions, 2<sup>nd</sup> International PNQAHE Conference on Quality Assurance at Higher Education, Lahore.
    5. **Bhutto, M.A.**, Shaikh, A.A., Wasif, M. and Uddin, R. (2019) Implementing Quality Assurance in Universities/HEIs through Ensuring and Promoting Stakeholders' Trust, 15<sup>th</sup> International Biennial INQAAHE Conference at Bandaranaike Memorial International Conference Hall (BMICH) Colombo, March 2019.

6. **Bhutto, M.A.**, Shaikh, A.A., Wasif, M. and Uddin, R. (2017) Quality Improvement of the Academic Programs in Universities/ Higher Educational Institutions (HEIs) through Students' Feedback, 1<sup>st</sup> International Conference on 'Quality Education QCON'17', Khyber Medical University (KMU) Peshawar, December 18-19, 2017.
7. Khan, A., Fareed, S. and **Bhutto, M.A.** (2017) Behaviour of short rectangular concrete columns confined with CFRP wraps, 6th Asia-Pacific Conference on FRP in Structures, Singapore, APFIS2017, July 19-21 2017.
8. **Bhuto, M.A.**, Wasif, M., Uddin, R. and Shaikh, A.A. (2017) Improving Quality of the Academic Programs in Universities/HEIs through Self-Assessment Mechanism 1<sup>st</sup> National Conference on 'Quality Education QCON'17', Liaquat University of Medical & Health Sciences (LUMHS), Jamshoro, March 9-10, 2017.
9. **Bhutto, M.A.**, Memon, N.A., Ansari, A.A. and Sumadi, S.R. (2014) Finite element analyses of steel plate loaded in shear and subject to simply supported boundary conditions, 1<sup>st</sup> National Conference on Civil Engineering 'Modern Trends and Advancements', Quaid-e-Awam University of Engineering, Science & Technology (QUEST), Nawabshah-Pakistan, April 28-29, 2014, p88-99.
10. Memon, N.A., Lashari, S., Rind, S.A. and **Bhutto, M.A.** (2014) Effect of initial wet curing on compressive strength of concrete with silica fume, 1<sup>st</sup> National Conference on Civil Engineering 'Modern Trends and Advancements', Quaid-e-Awam University of Engineering, Science & Technology (QUEST), Nawabshah-Pakistan, April 28-29, 2014, p78-87.
11. **Bhutto, M.A.** and May, I.M. (2013) Use of FRP composites for strengthening of slender steel web panels subjected to shear, 6<sup>th</sup> International Conference on 'Advanced Composites in Construction (ACIC 2013)', Queen's University Belfast, Northern Ireland, September 10-12, 2013, p167-179.
12. **Bhutto, M.A.** (2013) Validation of design procedure for steel plate-girders with pultruded GFRP intermediate stiffeners, First Postgraduate Conference on 'Infrastructure and Environment Scotland', Heriot Watt University, Edinburgh, United Kingdom, June 3, 2013, p.107-114.
13. **Bhutto, M.A.** (2013) FRP Composites for strengthening of steel bridge members, 15<sup>th</sup> Young Researchers' Conference (YRC) organised by The Institution of Structural Engineers (IStructE), March 14, 2013, London, United Kingdom, p19-20.

### 13. References

- **Prof. Dr. Noor Ahmed Memon**  
Professor of Civil Engineering & Dean, Faculty of Engineering QUEST, Nawabshah, Pakistan Email: [nahmedmemon@gmail.com](mailto:nahmedmemon@gmail.com)

- **Prof. Dr. Tim Stratford**  
Chair of Civil Engineering Design & Director of Learning and Teaching The University of Edinburgh, Edinburgh, United Kingdom Email: [tim.stratford@ed.ac.uk](mailto:tim.stratford@ed.ac.uk)
  
- **Prof. Dr. Abdul Razak Mahar**  
Professor of Botany & Director QEC Shah Abdul Latif University Khairpur Mirs', Pakistan Email: [dr.razakmahar@gmail.com](mailto:dr.razakmahar@gmail.com)