

MUHAMMAD UMAR KHAN

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Objective

To pursue my professional career in academia so that I get opportunity to deliver my knowledge of mechanical engineering proficiently to the students and conduct useful research

Education

- **M.S. (2021):** Design & Vibration, Mechanical Engineering, KFUPM, Dhahran, KSA
Thesis: Vibration Analysis of Rotating Tapered Timoshenko Beam Using Fourier– p Superelement
CGPA¹: 3.139/4.00
Degree GPA²: 3.678/4.00
- **B.E. (2016):** Mechanical Engineering, NEDUET, Karachi, Pakistan
Final Year Project: Design & Fabrication of High-Performance Human-Powered Vehicle
CGPA: 3.661/4.00
- **HSC (2011):** Pre-Engineering, Hamdard College of Science & Commerce, Karachi, Pakistan
Aggregate Marks: 87.18%
- **SSC (2009):** Science, Hamdard Public School, Karachi, Pakistan
Aggregate Marks: 86.12%

Professional Experience

- **Lecturer (on contract)** [September 2021 – present]
Department of Mechanical Engineering, NEDUET, Karachi, Pakistan
 - **Responsibility**
 - To teach undergraduate mechanical engineering subjects (e.g., Mechanical Vibrations)
- **Teaching Assistant** [September 2018 – May 2021]
Mechanical Engineering Department, KFUPM, Dhahran, KSA
 - **Responsibility**
 - To grade homework assignments of undergraduate and graduate courses of mechanical engineering (e.g., Machine Design – I & II, Introduction to ME Design, System Dynamics &

¹ based on all coursework taken at KFUPM

² based on 8 courses taken in fulfilment of degree requirements

Control, Mechanical Vibrations, Mechanics of Machines, Vibration Measurement and Analysis, Advanced Dynamics)

➤ **Executive Officer – II** [April 2017 – September 2017]

Management Trainee [October 2016 – April 2017]

Plant Engineering Department, Feroze1888 Mills Limited, S.I.T.E., Karachi, Pakistan

- **Responsibilities**

- To perform technical energy audits and work out energy saving opportunities
- To coordinate with departments for developing energy baselines and Energy Performance Indicators (EnPIs) for all machines, processes, and equipment
- To assist in the implementation of ISO 50001 throughout the organization
- To perform other tasks assigned by the energy manager (e.g., **preparation of feasibility reports, life cycle cost assessment, cooling load estimation, working for centralized chilling system at the facility**, etc. to name a few)

Research Publications (Ready to Submit)

- M. U. Khan and A. Bazoune, “Free Vibration Analysis of Rotating Uniform Timoshenko Beam Using Fourier– p Superelement”
- M. U. Khan and A. Bazoune, “Free Vibration Analysis of Rotating Tapered Timoshenko Beam Using Fourier– p Superelement”
- M. U. Khan and A. Bazoune, “Free and Forced Vibration Analysis of Rotating Uniform Proportionally Damped Timoshenko Beam Using Fourier– p Superelement”
- M. U. Khan and A. Bazoune, “Free Vibration Analysis of Rotating Double-Tapered Euler-Bernoulli Beam with Setting Angle Using Fourier– p Superelement”

Achievements

- Achieved a total scaled score of **104/120** in TOEFL iBT (2016)
- Achieved GRE score of **164/170 (87th Percentile)** in Quantitative Reasoning, **150/170 (47th Percentile)** in Verbal Reasoning, and **4.0/6.0 (59th Percentile)** in Analytical Writing (2016)
- Received monthly Hakim Mohammed Said Memorial Scholarships of 1000 PKR (2009 -2011) and 5000 PKR (2012 – 2015) [awarded by Hamdard Foundation Pakistan]
- Participated in and won various semi-technical and quiz competitions held at NEDUET (2012 – 2015)

Skill Set

- **Softwares:** Mechanical APDL (Ansys), MATLAB, Wolfram Mathematica, OriginPro, Scientific WorkPlace, Python
- **Microsoft Office Tools:** Word, Excel, PowerPoint, Teams
- **Soft Skills:** Confident speaker & presenter, cooperative team member, clear in verbal communication