

Umair N. Mughal



Designation	Assistant Professor, Department of Mechanical Engineering, <i>since July 2007</i>
Room No ./Ext #	Acoustics & Vibration Laboratory / Ext 2290
E-mail	mughal@neduet.edu.pk , umair.mughal@gmail.com
Objective	<i>True Success Encompasses More Than Just Having A Great Occupation, I Would Like To Give Something Worthwhile To The Community That Has Given So Much To Me</i>
Academic Career	<ul style="list-style-type: none"> i. M.Engg. Mechanical (Design Engineering), NED UET, Karachi. ii. B.E. Aerospace, CAE@PAF Academy, Risalpur, NUST iii. HSC Pre-Engineering, FG Degree College, FBISE, Islamabad iv. SSC Science, Army Public School, FBISE, Islamabad
Technical Expertise	<ul style="list-style-type: none"> i. Aircraft Design, ii. Wind Turbine Design, iii. Lead Engineer for Dynamic Balancing Jobs, Nominated by Mechanical Engineering Deptt.
Software Expertise	<ul style="list-style-type: none"> i. Mathematics Tools: MatLab, MathCAD, Maple, Mathematica, Techplot, Curve Expert ii. Mechanical Softwares : ProEngineer, AutoCAD, MSC Visual Nastran 4D iii. Aero Softwares : PANAIR, DATCOM, AAA, Gridgen, Fluent, Profilli, Gambit, RDS iv. Languages : C++, Foxpro, Fortron 90
Previous Experience/Projects	<p><u>Experience at NESCOM, Pakistan (Public Sector R & D Organisation)</u></p> <p>Designation : Assistant Manager, Aero</p> <p>Service Period : From 2nd Dec, 2003 to 23rd July, 2007</p> <p>Job Responsibilities :</p> <ul style="list-style-type: none"> i. Active Member of Aerospace Design Team ii. Supervising Mechanical Workshop Activities iii. Involvement in various Administrative Tasks <p>Projects :</p> <ul style="list-style-type: none"> i. Indigenous Design of a new UAV System ii. Mechanism Design, synthesis & analysis of Control Surfaces of different UAVs iii. Analysis of different UAV Systems on Potential Flow Solver, DATCOM and AAA iv. Simulation of Different UAV Systems on MATLAB <i>using Simulink & Aerosim</i> v. Design of 26' Span Inverted Airfoil Shaped Moving Roof for a Building vi. Developed Propeller Design Code in MatLab for the design of 3kW Wind Turbine. vii. Also used Wind Turbine Blockset of Simulation of 3 kW Wind Turbine <p><u>Projects During MEngg. Mechanical (Course Work Projects)</u></p> <ul style="list-style-type: none"> i. Design & Fabrication of Conveyor Belt Type Magnetic Separator for Cement Plant ii. Mechanism Design and its simulation for control of Canardvator of an Aircraft

	<p><u>Project and Important Course During through BE Aerospace</u></p> <p>Aircraft Design Course : General Design of Supersonic VTOL/STOL Aircraft using RDS</p> <p>Final Year Project : Theoretical Investigation of Pressure Differential AOA Measuring System</p> <p>Instructor & Advisor : Dr. Jehanzeb Masud</p>
Teaching Experience	<p>Teaching Mechanical Vibrations(Theory), Clean Air Technology(Lab.), Engineering Mechanics(Theory), Gas Turbine(Lab.) in the Academic Session 2008-09</p> <p>Taught Solid Mechanics I(Theory+Lab), Fluid Mechanics II(Theory+Lab.), Gas Turbine(Lab.) in Academic Session 2007-08.</p>
Research Experience	As Mentioned in EXPERIENCE at NESCOM, Pakistan
Professional Memberships	<p>i. PEC Membership # : AERO/958 (Life Time Member)</p> <p>ii. IEEE Membership # : 41631049 (Member <i>Since 2004</i>)</p> <p>iii. ASME Membership # : 8633273 (Member <i>Since 2005</i>)</p>
Teaching Interest	Vibrations and Control, Renewable Energy Technologies, Fluid Mechanics, Gas Turbine
Research Interest	Dynamic Simulation and Control, Acoustic Emissions and Control, Bio Control
Technical Interest	<p>To continue working as Lead Engineer for Dynamic Balancing Jobs,</p> <p>To work in the field of Acoustic Emissions and Control</p> <p>To work in the field of BioControl</p>
Honors	<p>i. 7 out of 7 semesters on COMMANDANT MERIT LIST in BE</p> <p>ii. Aailed NUST Scholarship on Entry Test Merit Position</p> <p>iii. Aailed NUST Scholarship in 3 out of 7 Semesters on Overall Class Ranking</p> <p>iv. Aailed NESCOM Scholarship in Last 2 Semesters of BE</p>
Conference Proceedings	<p>i. U. N. Mughal, J. Masud, "A Step forward in Stealth Technology – Theoretical Investigation of Pressure Differential Angle of Attack Measuring System", 12ACFM 18-21 August 2008, ISBN 978-89-961399-0-4-93060</p> <p>ii. U. N. Mughal, J. Masud, "Use of Conformal Mapping to theoretically analyze the flow on an Airfoil from Rotating Cylinder for Flush System" 12ACFM 18-21 August 2008, ISBN 978-89-961399-0-4-93060</p> <p>iii. Umair N. Mughal, "Wind Turbines; Believe of Greener and Healthier Future", 2nd National Conference on Energy & Environment, QUEST, Nawabshah, Pakistan</p>
Workshops/Seminars Attended	<p>i. Attended 2 Days Training Workshop on Wind Mast Installation and Wind Data Collection by UNDP/GEF Wind Energy Project on May 22-23 2008.</p> <p>ii. Attended Traing on Library Facilities and Digital Resources by Quality Management Cell of NED University of Engineering and Technology, Karachi, Pakistan in March 2008</p>
Personal Information	Married.