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<b>Designation</b>	Assistant Professor		
<b>Department</b>	Mechanical Engineering		
<b>Faculty</b>	Engineering		
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<b>Qualification</b>			
Year	Degree/Certificate	Name of the Institute/ University	Field of study
	Post Doctorate		
2016	PhD	Universiti Teknologi PETRONAS, Malaysia.	Mechanical Eng. (Materials)
2011	MS/ Mphil	NED UET, Karachi.	Mechanical Eng. (Design)
2003	Graduation	UET, Taxila.	Mechanical Engineering

#### Publications in HEC Recognized journals.

1. S.B Dhuban, S.Karuppanan, **A.N Mengal**, S.S Patil, "Effect of fiber orientation and ply stacking sequence on buckling behaviour of basalt-carbon hybrid composite laminates" *Indian journal of engineering & materials sciences*, **2017**, , (23) 187-193 **(Indexed in ISI Web of Science, IF=0.485)**.
2. Zahoor Ullah, Mohamad Azmi Bustam, Amir Sada Khan, Nawshad Muhammad, and **Ali Nawaz Mengal**. "A Detail Description on Catalytic Conversion of Waste Palm Cooking Oil into Biodiesel and Its Derivatives: New Functionalized Ionic Liquid Process," *Chemistry Select*, **2017**, 2(27) 8583– 8595. **(Indexed in ISI Web of Science, IF=5.06)**.
3. **A. N. Mengal**, S. Karuppanan, M. Ovinis, "In-plane shear properties of basalt-carbon/epoxy hybrid composite laminate," *Mat.-wiss. u. Werkstofftech.* **2017**, 48, 261. **(Indexed in ISI Web of Science, IF=0.41)**.
4. **Ali Nawaz Mengal**, Suleiman Akilu, Mohammad Siddique, "Strength enhancement of basalt fiberreinforced epoxy laminates with biowaste catalyst free carbon nano spheres," *Journal of Applied and Emerging Sciences*. **2016**, 6(2), 105-110. **(HEC Recognized, Z Category)**.
5. Abdul Sattar Jatoi, Mohammad Siddique, **Ali Nawaz Mengal**, Suhail Ahmed Soomro, Shaheen Aziz, "Comparative study of different biomass on bio-electricity generation using microbial fuel cell," *Journal of Applied and Emerging Sciences*. **2016**, 6(2), 74-78. **(HEC Recognized, Z Category)**.
6. **A. N. Mengal**, H. Muqsit, S. Karuppanan, "Flexural Strength Analysis of Basalt Fiber Reinforced Composite Layup Structure", *Advanced Materials Research*. **2016**, 1133, 121-125. **(Indexed in ISI Web of Science, IF=0.23), (Indexed in HEC Recognized Abstracting & Indexing Services Chemical Abstract Service Source Index CAS)**.
7. **A. N. Mengal**, S. Karuppanan, "Study on Interlaminar Shear Strength of Angle Ply Oriented Basalt Carbon Hybrid Composite", *Key Engineering Materials*. **2016**, 701, 300-306. **(Indexed in ISI Web of Science, IF=0.39), (Indexed in HEC Recognized Abstracting & Indexing Services Chemical Abstract Service Source Index CAS)**.
8. **A. N. Mengal**, S. Karuppanan and N. H. Farhood, "Compressive behavior of basalt FRP and basaltcarbon hybrid FRP laminates," *ARPJ Journal of Engineering and Applied Sciences*. **2016**, 11(20), 11994-11998. **(Indexed in HEC Recognized Abstracting & Indexing Services Chemical Abstract Service Source Index CAS)**.
9. N. H. Farhood, **A. N. Mengal** and S. Karuppanan, "Effect of low velocity impact on deformation behavior of metallic vessel." *ARPJ Journal of Engineering and Applied Sciences*. **2016**, 11(22), 13319-13323. **(Indexed in HEC Recognized Abstracting & Indexing Services Chemical Abstract Service Source Index CAS)**.
10. Mohammad Siddique, Mohammad Najam Khan, **Ali Nawaz Mengal**, Faisal Mushtaq, "Potential effect of biomass addition with pakistani low rank coal on emission of so<sub>2</sub>," *Journal of Applied and Emerging Sciences*. **2016**, 6(1), 6-8. **(HEC Recognized, Z Category)**.
11. **Mengal, Ali Nawaz**; Karuppanan, Saravanan," Influence of angle ply orientation on the flexural strength of basalt and carbon fiber reinforced hybrid composites," *Composites Research*. **2015**, 28 (1), 1-5. **(Indexed in HEC Recognized Abstracting & Indexing Services Chemical Abstract Service Source Index CAS)**.
12. **A. N. Mengal**, S. Karuppanan, A. A. Wahab, "Basalt Carbon Hybrid Composite for Wind Turbine

Rotor Blades: A Short Review", *Advanced Materials Research*. **2014**, 970, 67-73. **(Indexed in ISI Web of Science, IF=0.23), (Indexed in HEC Recognized Abstracting & Indexing Services Chemical Abstract Service Source Index CAS).**

- 13. Ali Nawaz Mengal, Saravanan Karuppanan and Azmi Abdul Wahab, Structural analysis of basalt fiber reinforced plastic wind turbine blade,"** *MATEC Web of Conferences*. **2014**, 13, 1-5. **(Indexed in ISI Web of Science, IF=0.17), (Indexed in HEC Recognized Abstracting & Indexing Services Chemical Abstract Service Source Index CAS).**
- 14. Muhammad Hashim, Ali Nawaz Mengal, "Flow dynamics of two phase (air and water) stratified flow by a simulation package comsol multiphysics,"** *Journal of Applied and Emerging Sciences*. **2012**, 3(1), 87-93. **(HEC Recognized, Z Category).**
- 15. Mohammad Siddique, Ali Nawaz Mengal, "Effect of Blending Ratio of Coal and Biomass on NOx Emission Regarding Co- Firing,"** *Journal of Applied and Emerging Sciences*. **2017**, 7(1), 34-39 **(HEC Recognized, Z Category).**
- 16. Syed Jahanzaib Shah, Ali Nawaz Mengal, "Analysis of swelling characteristics of expansive soil,"** *Journal of Applied and Emerging Sciences*. **2017**, 7(1), 47-52 **(HEC Recognized, Z Category).**
- 17. Saeedullah Jan Mandokhail, Ali Nawaz Mengal, "2D Numerical Modeling of the Cyclic Simple Shear Test Using Opensees,"** *Journal of Applied and Emerging Sciences*. **2017**, 7(1), 40-46 **(HEC Recognized, Z Category).**
- 18. Faisal Mushtaq, Muhammad Najam Khan Malghani, Muhammad Siddique Nasar, Ali Nawaz Mengal, Ramli Mat, Farid Nasir Ani,"** Pyrolysis Heating Performance of Oil Palm Shell Waste Biomass with Carbon Surfaces," *Journal of Applied and Emerging Sciences*. **2017**, 7(1), 70-75 **(HEC Recognized, Z Category).**
- 19. Syed Zafar, Ahmed Bilal, Muhammad Ayoub, Syed Nasir, Anwaar Hazoor, Ali Nawaz Mengal, Ehsanullah Kakar, Aamir Mehmood,"** Strength Behaviour Evaluation of Cement Mortar using Waste Fly Ash and Marble Dust" *Journal of Applied and Emerging Sciences*. **2017**, 7(2), 145-150 **(HEC Recognized, Z Category).**
- 20. Ghulamullah Kakar, Faisal Mushtaq, Saeedullah Jan Mandokhail, Mohammad Siddique, Ali Nawaz Mengal, "Experimental Evaluation of Corrosion for Aluminum Alloy in Aerated NaCl Solutions under Turbulent Hydrodynamic Conditions"** *Journal of Applied and Emerging Sciences*. **2017**, 7(2), 145-150 **(HEC Recognized, Z Category).**

#### Paper Presented

S. No	Title of Paper	Name of Conference	National/ International	Date
1	Tensile strength analysis of basalt carbon/epoxy laminated hybrid composite	SIMEC	National	24-25 March 2017
2	Flexural strength analysis of basalt fiber reinforced composite layup structure	ICOSEM	International	16-18 Nov 2015
3	Structural analysis of basalt fiber reinforced plastic wind turbine blade.	ICPER	International	3-5 June 2014
4	Tensile fatigue analysis of basaltcarbon/epoxy hybrid composite	BAPC	International	20-22 May 2013

5	Basalt carbon hybrid composite for wind turbine rotor blades: A short review.	ICOSEM	International	13-14 Nov 2013
<b>Books Authored/ Edited/Book Chapter</b>				
S. No	Name of book/book chapter	Publisher	ISBN	
1.	Lamination/Tensile fatigue behavior of basalt-carbon/epoxy hybrid laminated composite (Accepted)	Intech open	978-953-51-5269-9	
<b>Work Experience</b>				
S. No	From (year)	To (year)	Name of the Institution/ Organization	Position held
1	June, 2011	To date	BUIITEMS	Assistant Professor
2	Sep, 2006	May, 2011	BUIITEMS	Lecturer
3	August, 2005	August,2006	Public Health Engineering Department	Assistant Engineer (SDO)
4	July, 2004	July, 2005	Government College of Technology, Quetta	H.O.D (RACT Department)
5	Mar, 2003	June, 2004	MRDL, China, Saindak Copper and Gold Project.	Deputy Section In charge (Maintenance)
<b>Area of specialization</b>			Composite Materials and Nano Materials	
<b>International Trainings</b>			Participated in "Building Academic Linkage Program" Funded by Department of State USA at University of Nebraska Omaha USA.	
<b>Computer Skills</b>			MS Office, Auto Cad, Catia, Solid Works, Ansys, Pro E. Mat Lab	
<b>Research Interest</b>			Fatigue Analysis, Fracture Mechanics, Finite Element Modeling, Composite Materials, Energy and Intumescent Coatings.	
<b>Future Research Plans</b>			Working on several research projects related to energy and materials.	
<b>Research grants/ Projects</b>			<ol style="list-style-type: none"> <li>1. Analysis of Intumescent Coatings with Basalt Fiber Reinforced Composites for Fire Proofing of Structural Applications. (Duration: 1 years (Completed), Funding source: <b>ORIC BUIITEMS, Amount: 200000 PKR</b>)</li> <li>2. Burst Pressure Investigation of Type IV Hybrid Composite Pressure Vessels, Funding source: <b>ORIC BUIITEMS, Amount: 200000</b> (Completed).</li> <li>3. Fatigue Characteristics and Life Prediction Analysis of Turbine Blades. (under review), Funding Source, <b>(ORIC BUIITEMS) Amount: 200000</b> (In progress).</li> <li>4. Development of a Nontracking Collector with Nano Fluids to Enhance the Thermal Capabilities of the Collector, Funding source: <b>HEC TDF24 Amount 4.78 Million</b> (In progress).</li> </ol>	

<b>MS Research Supervised:</b>	<ol style="list-style-type: none"> <li>1. Muhammad Jahanzaib, Study of strength variation of concrete used for structural elements by using different hybrid waste materials as a partial replacement of coarse aggregate. (Completed)</li> </ol>
	<ol style="list-style-type: none"> <li>2. Zafar ullah, Performance assimilation of using waste fly ash and marble dust on cement mortar. (Completed)</li> <li>3. Mian Muhammad Sulman, Analysis of intumescent coating with basalt fiber reinforced composite for fire proofing of structural applications.</li> <li>4. Muhammad Hasnain, Development of pervious concrete pavement usin PET.</li> <li>5. Siraj Ahmad, Effect of admixtures on compressibility of soil.</li> </ol>
<b>PhD Research Supervised: (As Co supervisor)</b>	<ol style="list-style-type: none"> <li>6. Jamil Ahmad, Fabrication of nanofiller generator (In Process)</li> </ol>