### **Niaz Bahadur Khan**

### Assistant Professor

School of Mechanical & Manufacturing Engineering

Email: niaz.bahadur@smme.nust.edu.pk

**Professional Memberships** 

Contact: 000000000

LinkedIn: https://www.linkedin.com/in/niaz-bahadur-khan-32802420/



Since 2015

### **About**

Dr. Niaz Bahadur Khan is working as Assistant Professor in the School of Mechanical & Manufacturing Engineering. Dr. Niaz Bahadur Khan has a PhD in Numerical Modeling And Analysis Of Flow Around Stationary And Oscillating Cylinder. Dr. Niaz Bahadur Khan has published 54 research articles & conference papers having a citation count of 1728, carried out 2 projects and filed 0 intellectual property.

#### **Qualifications**

PhD in Numerical Modeling And Analysis Of Flow Around Stationary And Oscillating Cylinder Universiti Malaya, Malaysia	2014 - 2018
MS in Mechanical	2008 - 2009
Ghulam Ishaq Khan Institute of Science & Technology , Pakistan	
BS in Mechanical Engineering	2003 - 2007
UET Peshawar , Pakistan	
F.Sc in Pre-Engineering	2001 - 2003
Islamia College Peshawar , Pakistan	
Matric (SSC) in Science	1999 - 2001
BISE, Peshawar , Pakistan	
Experience	
Assistant Professor	2022- Present
School of Mechanical & Manufacturing Engineering	
Assistant Professor	2021 - 2021
School of Mechanical & Manufacturing Engineering	
Assistant Professor	2018 - 2022
School of Mechanical & Manufacturing Engineering	
Assistant Professor	2018 - 2018
School of Mechanical & Manufacturing Engineering	
Senior Engineer	2013 - 2014
AEDesign PVT Limited, Lahore, Pakistan , AEDesign PVT Limited, Lahore, Pakistan	
Manager Technical	2009 - 2013

PEC

### **Research Projects**

#### **National Projects**

Integrated Life Cycle Environmental, Energy Use and Socioeconomic Impact of Peshawar BRT System and its Comparison with Other Modes of Passenger Transportation

2021

Funding Agency: HEC Amount: PKR 4,680,500.00 Status: Approved inprocess

High Speed Air Inlet Performance Estimation using CFD Tools in the field of Aerodynamics, CFD

2021

Funding Agency: NESCOM Amount: PKR 200,000.00 Status: Approved\_inprocess

#### **International Projects**

#### **Research Articles**

#### Experimental Investigation of Surface Roughness Effects on Energy Harvesting from Piezoelectric Eel behind a Cylindrical Bluff Body

2025

Muhammad hammad Bucha Niaz Bahadur Khan Emad Ud Din Hafiz Hamza Riaz Adnan Munir Umar Faroog Ming Zhao Riaz Muhammad Mohammed Jameel Muhammad Tauseef Nasir Muhammad Nafees Mumtaz Qadri

PLoS One, Volume 20(7), Article Number e0327916

Impact Factor: 2.600 | Quartile: 2 DOI: 10.1371/journal.pone.0327916

# Evaluation of balance and orthotic gait training techniques for rehabilitation in hemiplegic stroke

2025

patients

Sidra Tariq Muhammad Asim Waris Dr. JAVAID IQBAL Niaz Bahadur Khan Syed Omer Gilani Shafaq Mushtaq Qasim Owais Khurram Mushtaq Scientific Reports, Volume:15, Issue:1, Article Number 15059

Impact Factor: 3.800 | Quartile: 1

DOI: https://doi.org/10.1038/s41598-025-98227-1

#### Hydrodynamic and hydro acoustic analysis of marine propeller in off design flow conditions

2025

Ammar Nazeer Niaz Bahadur Khan Emad Ud Din Mohammed Jameel Omar Al-Abbasi Qian Wu Adnan Munir Hanzla Shahid

PLoS ONE, Volume:20, Issue:3, Article Number e0320435

Impact Factor: 2.900 | Quartile: 1

**DOI:** https://doi.org/10.1371/journal.pone.0320435

# A Comprehensive Approach to Wind Turbine Power Curve Modeling: Addressing Outliers and

2024

**Enhancing Accuracy** 

Khuram Mushtaq Muhammad Asim Waris Runmin Zou Uzma Shafique Niaz Bahadur Khan M Ijaz Khan Muhammad Imran Mohammed Jameel

Energy, Volume 304, Article Number 131981 Impact Factor: 9.000 | Quartile: 1 | Citations: 6

DOI: 10.1016/j.energy.2024.131981

## Optimization of TIG welding parameters for enhanced mechanical properties in AISI 316L stainless

2024

Khubaib Zafar Ghumman Sadaqat Ali Niaz Bahadur Khan M. Ijaz Khan Hafiz Tauqeer Ali Mirjalol Ashurov5 International Journal of Advanced Manufacturing Technology, Pages 1-13

Impact Factor: 2.900 | Quartile: 2 | Citations: 5 DOI: https://doi.org/10.1007/s00170-024-14277-1

### Chatter detection and suppression inmachining processes: a comprehensive analysis

2024

Abdul Basit Niaz Bahadur Khan Sadaqat Ali Riaz Muhammad Dilsora Abduvalieva M. Ijaz Khan Mohammed Jameel

International Journal on Interactive Design and Manufacturing, Volume 18, Pages 3751-3771

Impact Factor: 2.100 | Quartile: 3 | Citations: 10 DOI: https://doi.org/10.1007/s12008-023-01716-8

#### Numerical investigation of vortex-induced vibrations (VIV) of a rotating cylinder in in-line and cross-

2024

## flow directions subjected to oscillatory flow

Ubaid Ur Rehman Adnan Munir Niaz Bahadur Khan Ming Zhao Mian Ashfaq Ali Muhammad Kashif Mohammad S. Islam Zeeshan Saeed

Ocean Engineering, Volume 304, Article Number 117917

Impact Factor: 4.600 | Quartile: 1 | Citations: 9 DOI: https://doi.org/10.1016/j.oceaneng.2024.117917

#### ExoMechHand prototype development and testing with EMG signals for hand rehabilitation

2024

Ajdarullah Muhammad Asim Waris Uzma Shafique Niaz Bahadur Khan Quratlain Saeed Naureen Tassadaq Owais Qasim Hafiz T Ali

Medical Engineering and Physics, Volume 124, Article Number 104095

Impact Factor: 2.2 | Quartile: 3 | Citations: 5 DOI: 10.1016/j.medengphy.2023.104095

# Robust CNN architecture for classification of reach and grasp actions from neural correlates: an edge device perspective

2023

Hajra Sultan Haris Ijaz Muhammad Asim Waris Shafaq Mushtaq Khurram Mushtaq Niaz Bahadur Khan Mehdi Talija Jamshed Iqbal Said Ghani Khan Measurement Science and Technology, Volume 35, Number 3, Article Number 035703

Impact Factor: 2.4 | Quartile: 1 | Citations: 2

DOI: 10.1088/1361-6501/ad1157

## Deploying efficient net batch normalizations (BNs) for grading diabetic retinopathy severity levels from

2023

fundus images

Summiya Batool Syed Omer Gilani Asim Waris Khawaja Fahad Iqbal Niaz Bahadur Khan Muhammad Ijaz Khan Syed Muhammad Eldin Fuad A. Awwad Scientific Reports, Volume 13, Issue 1, Article Number 14462

Impact Factor:  $4.6 \mid$  Quartile:  $1 \mid$  Citations: 6

DOI: 10.1038/s41598-023-41797-9

# Effect of Zn nanoparticle-doped flux on mechanical properties of SAC305 solder joint after electromigration

2023

Muhammad Nasir Bashir Niaz Bahadur Khan Shahid Bashir Abdul Faheem Khan M. M. Quazi Mustabshirha Gul Saif Wakeel Hafiz Muhammad Saad Journal of Materials Science: Materials in Electronics, Vol:34, Article Number: 321,

Impact Factor: 2.779 | Quartile: 2 | Citations: 5

DOI: 10.1007/s10854-022-09722-4

# Experimental investigation of effect of welding parameters on surface roughness, micro-hardness and tensile strength of AISI 316L stainless steel welded joints using 308L filler material by TIG welding

2022

Khubaib Zafar Ghumman Sadaqat Ali Emad Ud Din Aamir Mubashar Niaz Bahadur Khan Syed Waqar Ahmed

Journal of Materials Research and Technology, Volume 21, Pages 220-236

Impact Factor: 6.267 | Quartile: 1 | Citations: 35 DOI: https://doi.org/10.1016/j.jmrt.2022.09.016

## Role of Crystallographic Orientation of $\beta$ -Sn Grain on Electromigration Failures in Lead-Free Solder

2022

Joint: An Overview

Muhammad Nasir Sajid Ullah Butt Muhammad Adil Mansoor Niaz Bahadur Khan Shahid Bashir Yew Hoong Wong Turki Alamro Sayed Mohamed Eldin Mohammed Jameel

Coatings , Volume 12(11), Article Number 1752

Impact Factor: 3.236 | Quartile: 2 | Citations: 7

DOI: https://doi.org/10.3390/coatings12111752

# The Impact of Laminations on the Mechanical Strength of Carbon-Fiber Composites for Prosthetic Foot Fabrication

2022

abrication

Bakhtawar Sehar Muhammad Asim Waris Syed Omer Gilani Shafaq Mushtaq Niaz Bahadur Khan Umar Ansari Mohammed Jameel M. Ijaz Khan Omar T. Bafakeeh El Sayed Mohamed Tag-ElDin

Crystals, Volume 12, Issue 10, Article Number 1429
Impact Factor: 2.670 | Quartile: 2 | Citations: 74

DOI: https://doi.org/10.3390/cryst12101429

# A Training Exoskeleton for rehabilitation in Upper Extremity for Stroke Patients. Journal of Computational Biophysics and Chemistry

2022

Sohaib Faiz Muhammad Asim Waris Shafaq Mushtaq Niaz Bahadur Khan Mohammed Jameel Ahmed M. Galal Journal of Computational Biophysics and Chemistry, Pages 1-9

Impact Factor: N/A | Citations: 1

DOI: https://doi.org/10.1142/S2737416523400033

## Cattaneo-Christov Double Diffusion (CCDD) on Sutterby Nanofluid with Irreversibility Analysis and

2022

Motile Microbes Due to a RIGA Plate

Muhammad Faizan Ahmed A Zaib Farhan Ali Omar T Bafakeeh Niaz Bahadur Khan El Sayed Mohamed Tag-ElDin Mowffaq Oreijah Kamel Guedri Ahmed M Galal

Micromachines, Volume 13, Issue 9, Article Number 1497

Impact Factor: 3.523 | Quartile: 2 | Citations: 2 DOI: https://doi.org/10.3390/mi13091497

Niaz Bahadur Khan Yu-MingChu Fayyaz Ahmad M. Ijaz Khan Mubbashar Nazeer Farooq Hussain S. Kadry Liquan Mei

Alexandria Engineering Journal, Volume 60, Issue 2, Pages 2127-2137

Impact Factor: 6.626 | Quartile: 1 | Citations: 37 DOI: https://doi.org/10.1016/j.aej.2020.12.017

### Physical importance of entropy generation in fluid flow (Williamson) with nonlinear radiative heat flux

Niaz Bahadur Khan M. Imran Khan Waqar Azeem Khan M. K. Nayak

Indian Journal of Physics, Volume 95, Pages 717-724 Impact Factor: 1.778 | Quartile: 3 | Citations: 14

DOI: 10.1007/s12648-020-01728-0

2022

2021

2020

DOI: ttps://doi.org/10.1093/jcde/qwaa023

energy and entropy generation

Fully developed Darcy-Forchheimer mixed convective flow over a curved surface with activation

Riaz Muhammad M. Ijaz Khan Mohammed Jameel Niaz Bahadur Khan Computer Methods and Programs in Biomedicine, Volume 188, Article Number 105298 Impact Factor: 5.428 | Quartile: 1 | Citations: 191 DOI: https://doi.org/10.1016/j.cmpb.2019.105298 Analysis of entropy generation minimization (EGM) in flow of Ree-Eyring nanofluid between two 2020 coaxially rotating disks Niaz Bahadur Khan Muhammad Ijaz Khan Riaz Muhammad Sumaira Qayyum M. Jameel Thermal Science, Pages 1-17 Impact Factor: 1.625 | Quartile: 4 | Citations: 6 DOI: 10.2298/TSCI190722057K Modeling and computational analysis of hybrid class nanomaterials subject to entropy generation 2019 Niaz Bahadur Khan M. Ijaz Khan A. Alsaedi T. Hayat COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, Volume 179, Article Number UNSP 104973 Impact Factor: 3.632 | Quartile: 1 | Citations: 112 DOI: 10.1016/j.cmpb.2019.07.001 2019 Newtonian heat and mass conditions impact in thermally radiated Maxwell nanofluid Darcy-Forchheimer flow with heat generation Niaz Bahadur Khan Muhammad Wagas M. Mudassar Gulzar Wagar Azeem Khan Muhammad Ijaz Khan International Journal of Numerical Methods for Heat & Fluid Flow, Volume: 29, Issue: 8, Pages 2809-2821 Impact Factor: 2.871 | Quartile: 1 | Citations: 13 DOI: 10.1108/HFF-11-2018-0695 Numerical simulation of flow with large eddy simulation at Re = 3900 A study on the accuracy of 2019 statistical quantities Niaz B. Khan Zainah B. Ibrahim Mian Ashfaq Ali Mohammed Jameel Muhammad Ijaz Khan Ahad Javanmardi D.O. Oyejobi International Journal of Numerical Methods for Heat & Fluid Flow, -Impact Factor: 2.871 | Quartile: 1 | Citations: 12 DOI: 10.1108/HFF-11-2018-0619 On entropy generation effectiveness in flow of power law fluid with cubic autocatalytic chemical 2019 reaction Niaz Bahadur Khan M. Faisal Javed M. Waqas Riaz Muhammad Muftooh Ur Rehman M. Ijaz Khan Sajjad Wali Khan M. Tahir Hassan Applied Nanoscience, Volume 9, Issue 5, Pages 1205-1214 Impact Factor: 2.880 | Quartile: 3 | Citations: 30 DOI: 10.1007/s13204-019-01064-8 2019 Transport of Jeffrey nanomaterial in cubic autocatalytic chemically nonlinear radiated flow with entropy generation M. Faisal Javed M. Waqas M. Ijaz Khan Niaz Bahadur Khan Riaz Muhammad Muftooh Ur Rehman Sajjad Wali Khan M. Tahir Hassan Applied Nanoscience, Volume 9, Issue 5, Pages 1-9 Impact Factor: 2.880 | Quartile: 3 | Citations: 17 DOI: 10.1007/s13204-019-01071-9 Physical aspects of Darcy-Forchheimer bidirectional flow in carbon nanotubes (SWCNTs and 2019 MWCNTs) Muhammad Ijaz Khan Madiha Rashid Tasawar Hayat Niaz B. Khan Ahmed Alsaedi International Journal of Numerical Methods for Heat & Fluid Flow, Volume 29, Issue 6, Pages 2032-2056 Impact Factor: 2.871 | Quartile: 1 | Citations: 13 **DOI:** 10.1108/HFF-12-2018-0770 Optimization of SWCNTs and MWCNTs (single and multi-wall carbon nanotubes) in peristaltic transport 2019 with thermal radiation in a non-uniform channel Niaz Bahadur Khan M. Faisal Javed M. Imran Khan Riaz Muhammad Muftooh Ur Rehman Sajjad Wali Khan Tufail A.Khan M. Tahir Hassan Journal of Molecular Liquids, Volume 273, Pages 383-391 Impact Factor: 5.065 | Quartile: 1 | Citations: 17 DOI: 10.1016/j.molliq.2018.09.029 Experimental and numerical study of flexural behavior of novel oil palm concrete filled steel tube 2018 exposed to elevated temperature Niaz Bahadur Khan Muhammad Faisal Javed Nor Hafizah Ramli Sulong Shazim Ali Memon Sardar Kashif-ur Rehman Journal of Cleaner Production, Volume 205, Pages 95-114

Impact Factor: 6.395 | Quartile: 1 | Citations: 16

Investigation of tendon dynamics effects on tension leg platform response in random seas

Niaz Bahadur Khan Damilola O Oyejobi Mohammed Jameel Nor Hafizah Ramli Sulong

Proceedings of the Institution of Mechanical Engineers, Part M: Journal of Engineering for the Maritime Environment, online published on 16 November

2018

Impact Factor: 1.241 | Quartile: 3 | Citations: 4

**DOI:** 10.1177/1475090218811718

Flexural behaviour of steel hollow sections filled with concrete that contains OPBC as coarse aggregate

2018

2018

Niaz Bahadur Khan Muhammad Faisal Javed N.H. Ramli Sulong Shazim Ali Memon Sardar Kashif-Ur Rehman

Journal of Constructional Steel Research, Volume 148, Pages 287-294

Impact Factor: 2.65 | Quartile: 2 | Citations: 13

DOI: 10.1016/j.jcsr.2018.05.035

Seismic isolation retrofitting solution for an existing steel cable-stayed bridge

2018

Niaz Bahadur Khan Ahad Javanmardi Zainah Ibrahim Khaled Ghaedi Hamed Benisi Ghadim

PLoS ONE, NULL

Impact Factor: 2.776 | Quartile: 2 | Citations: 14

DOI: 10.1371/journal.pone.0200482

VIV study of an elastically mounted cylinder having low mass-damping ratio using RANS model

2018

Niaz Bahadur Khan Zainah Ibrahim M. Ijaz Khan T. Hayat Muhammad F. Javed

International Journal of Heat and Mass Transfer, NULL Impact Factor: 4.346 | Quartile: 1 | Citations: 113 DOI: 10.1016/j.ijheatmasstransfer.2017.12.109

Axisymmetric flow of Casson fluid by a swirling cylinder

2018

Niaz Bahadur Khan Muhammad Faisal Javed Muhammad Imran Khan Riaz Muhammad Muftooh Ur Rehman Sajjad Wali Khan Tufail A. Khan

Results in Physics, NULL

Impact Factor: 3.042 | Quartile: 1 | Citations: 75

**DOI:** 10.1016/j.rinp.2018.04.015

2018

Onedegree of freedom at high Reynolds number using different turbulent models

Niaz Bahadur Khan Zainah Ibrahim

Proceedings of the Institution of Mechanical Engineers Part M-Journal of Engineering for the Maritime Environment, Pages 1-11

Impact Factor: 1.241 | Quartile: 3 | Citations: 46

DOI: 10.1177/1475090217751992

Numerical investigation of flow around cylinder at Reynolds number = 3900 with large eddy simulation technique: Effect of spanwise length and mesh resolution

Numerical investigation of vortexinduced vibration of an elastically mounted circular cylinder with

2018

Niaz Bahadur Khan Zainah Ibrahim Ahmad Badarudin Bin Mohamad Badry Mohammed Jameel Muhammad Faisal Javed Proceedings of the Institution of Mechanical Engineers Part M-Journal of Engineering for the Maritime Environment, NULL

Impact Factor: 1.241 | Quartile: 3 | Citations: 42

DOI: 10.1177/1475090217751326

FE modelling of the flexural behaviour of square and rectangular steel tubes filled with normal and high strength concrete

2017

Niaz Bahadur Khan Muhammad Faisal Javed N.H. Ramli Sulong Shazim Ali Memon Sardar Kashif Ur Rehman

*Thin-Walled Structures*, Volume 119, Pages 470-481 **Impact Factor:** 2.881 | **Quartile:** 1 | **Citations:** 68

DOI: 10.1016/j.tws.2017.06.025

**Editorial Activities** 

2021

Edited Journal Issue / Proceeding / Book

Impact Factor: 3.24