

Prof. Dr. Muhammad Abid, T.I.

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PERSONAL STATEMENT

A highly experienced professional with over 24 years of experience of academia and research and 10 years' experience of industry. A productive researcher with completed international and national projects funded by EU, USAID, NSF, HEC, IDB, PSF, NCSF, Tubitak, defense sector and industry with contributions to Defense, Health, Water, Energy, Petrochemical, Climate Change, Water sectors and National Industrial needs with reasonable socio-economic impact. A widely published author with Impact Factor above 300. Having worked in administrative roles as Head, Chair, Dean, Director research and Director Campus. Effectively worked for internationalization and have signed MoUs with international universities of China, UK, US, Italy, Ukraine, Kazakhstan and others for joint research and exchanges and Campus development for new infrastructure and have visited many institutions as visiting professor, expert or collaborator around the globe. Developed and implemented several undergraduate and graduate curriculum and programs and established new engineering and non-engineering departments of international repute. Widely recognized for services and contributions in the field of Mechanical Engineering and awarded the Civil Award Tamgha-i-Imtiaz, Pakistan Engineering Excellence Award – 2023 by Pakistan Engineering Council (for Lifetime Achievement for Distinguished National Service), Pakistan Academy of Sciences Gold Medal Award, HEC Outstanding Research Award, HEC Best University Teacher Award, MOSS Prize from IMechE UK, Special Contribution Award from HEU, honorarium, merit certificates, cash awards and others.

RESEARCH INTERESTS

- *Artificial Intelligence, Machine Learning and Deep Learning applications to handle big data of real-world industrial problems for;*
 - Bolt tightening procedures for non-gasketed and gasketed bolted flanged pipe joints
 - Welding procedure for Pipe Flange joints
 - Stationary Gas Tungsten Arc Welding process
 - Optimized geometry of 3D lattice structures and impact resistant hybrid structures
 - ALE Moving Mesh Generation and High-Performance Implementation using Open MP and MPI Libraries for FSI and Darcy Flow problems.
 - Deep calibrated tomographic learning for 3d reconstruction modelling from sparse projections specifically to human spine.
 - Overhead cranes and trusses
 - Energy efficient buildings such as Environment Controlled Poultry Sheds
 - Prediction of the amount of Sediment Deposition and Sediment load forecasting in Reservoirs
 - Micro-Siting of Wind Turbines using Teaching–Learning-Based Technique
- *Design and Development of Innovative Impact Resistant Hybrid Structures based on Super Elastic Shape Memory Alloys and Light Weight Lattice using numerical and experimental techniques.*
- *Material characterizations using High Strain Equipment (SHPB) and Low Strain Equipment (DWIT)*
- *Performance studies of Gasketed and Non-gasketed Flanged Pipe Joints to determine the Joint Load Capacity for Improved Sealing Capability using numerical, analytical and experimental techniques.*
- *Surface sensitivity and reliability analysis studies of non-gasketed joints using experimental techniques.*
- *Life prediction studies of reservoirs, channels, barrages against sedimentation issues using Computational Fluid Dynamics Analysis and sediments movement studies using related software.*

- *Water Issues: Trans boundary Water Issues specific to Kabul River Basin to address: Climate Change impacts on Snowmelt, Rainfall, Floods, Droughts, Surface and Ground water quality using RS, GIS, statistical tools.*
- *Energy Issues: Renewable systems: PV Solar power plants, Biogas plants, Micro hydro power plant for clean and green energy production.*
- *Disaster risk reduction studies for Metropolitan projects.*

KEY ACHIEVEMENTS

- Awarded prestigious Pakistan Civil Award, Tamgha-i-Imtiaz 2021, by Government of Pakistan.
- Awarded prestigious PEC Engineers Excellence Awards – 2023 (Lifetime Achievement for Distinguished National Service)
- Awarded Pakistan Academy of Sciences Gold Medal 2006 in Engineering and Technology.
- Awarded HEC Outstanding Research Award 2005-06, by Higher Education Commission of Pakistan.
- Awarded Best University Teacher Award 2011, by Higher Education Commission of Pakistan.
- Awarded MOSS Prize 2008 by Process Industry Division of IMechE UK.
- Awarded Special Contribution Award by Harbin Engineering University China 2023
- Supervised Pakistan's first Mechanical Engineering PhD Student under HEC's Indigenous PhD Scheme during 2001-2005.
- First National Coordinator (2006-2014) under STEM HEC Pakistan for Design, Build and Fly Contests
- Chartered Engineer UK since 2006 and Fellow IMechE UK since 2012.
- Represented Pakistan and Asia at numerous national and international delegations (2001-2023)
- Member Pannel of Judges: International Design Competitions organized by IMechE (2013) and AIT Thailand (2016)
- Vice president and Executive Committee Member of IMechE Pakistan Chapter

EDUCATION

PhD Mechanical Engineering; University of Strathclyde, Glasgow, Scotland, UK (2000)

University of Strathclyde is ranked 276 in QS WUR. (<https://strath.ac.uk>)

Individual Thesis: Experimental and analytical studies of conventional (gasketed) and unconventional (non-gasketed) flanged pipe joints (with special emphasis on the engineering of 'joint strength' and 'sealing'). PhD Thesis, University of Strathclyde, Glasgow, UK, 2000.#

BSc Mechanical Engineering: University of Engineering & Technology (UET), Lahore, Pakistan (1992)

UET Lahore is one of the top universities in Pakistan and is ranked #791-800 in QS WUR 2024

(<https://uet.edu.pk>)

Group Thesis: Automatic Feedback Control Systems

CAREER HISTORY

COMSATS University Islamabad (CUI), Pakistan – Tenured Professor (2014- Present)

COMSATS University Islamabad (CUI) is a top ranked public sector fast-growing research-based university in Pakistan and is ranked #651-660 in QS World University Rankings 2024. (<https://comsats.edu.pk>)

- **Director CUI Wah Campus (March 15, 2021 – Present)**

Responsible for all administrative, financial, academic, strategic and development functions of the Campus and for ensuring that the provisions of the Act, Statutes, Regulations and Rules are faithfully observed in order to promote the general efficiency and good order of the Campus.

Moreover, during this tenure lease of POFs building was surprisingly ended and there was no new space available for smooth functioning of campus. In a span of 30 months, I along with team created spaces for smooth conduct of academic activities at CUI Wah Campus with financial impact >1.6 Billion PKR that include but not limited to following projects:

- New development of Academic Block having covered area of 116,000 sft.
- Renovated space 19,980 sft for shifting Electrical and Computer Engg Dept.
- Paved parking along with solar sheds of 45,000 sft for Faculty, staff and students
- Paved and shaded Transport area of 15,000 sft for ease of students and protection of University Vehicles
- Transport office with Transport washing area (1176 sft)
- State of the art 04 PC labs and addition of IT and computational infrastructure
- Faculty offices, Lecture Halls and Labs: Management Sci, Electrical Engg, Civil Engg and Mathematics; Auditorium, library, PC Labs, Conference rooms, cafeteria, IT Centre, Project rooms and student spaces (Renovated >80,000 sft area); Allied facilities > 1400 Rft
- BOT Solarization project of 400KW for campus along with restoration of dedicated WAPDA supply line (which was long pending) for low cost electricity as compared to POFs
- Upgradation of WAPDA supply lines as per WAPDA requirements
- Submission of PC1 of PKR 1674 million for year 2024-25 (CDWP is awaited)

- **Director Interdisciplinary Research, CUI Wah Campus (August 18, 2014 – Present)**

Responsible for all administrative and multi and interdisciplinary research activities by engaging faculty and researchers of CUI and other national and international institutions and organizations to provide real world solutions and high-end research with focus on themes i.e. Water, Health, Energy and Defence.

- **Focal Person UNESCO Water Chair on Knowledge Systems for Integrated Water Resource Management, CUI Wah Campus (December 29, 2020 – Present)**

UNESCO Chair on Knowledge Systems for Integrated Water Resources Management was established at CUI Wah Campus in 2014 with the scope to work on Sustainable Goals SDG5 and SDG6.

Responsible for all administration and work to develop skills, networks and potential of leaders and prospective water managers and policy makers, through a co-ordinated suite of Transboundary IWRM modules addressing key issues in integrated water resource management.

- **Dean Faculty of Engineering (September 06, 2019 – March 03, 2021)**

Responsible for making proposals for the development plans for introducing all new engineering disciplines and improvement of facilities in each engineering department in consultation with the concerned faculty members at all CUI campuses.

Presided over the meetings of respective Board of Faculty and worked as ex-officio member of the Syndicate, Academic Council, Board of Advanced Studies, Research and University Affiliation Committee, Selection board and others.

- **Chairman Mechanical Engineering, CUI Wah Campus (Dec 23, 2014 – Feb 28, 2021)**

Responsible for planning, organization, and supervision of the work of the mechanical engineering department operative simultaneously at different CUI Campuses.

Developing proposals for the development plans for introducing new disciplines and improvement of facilities in mechanical department in consultation with HoDs.

Presided over the meetings of respective Board of Studies and Industrial advisory boards and worked as ex-officio member of Screening committee for selection board.

- **Head of Department Mechanical Engineering, CUI Wah Campus (September 01, 2016 – August 01, 2022)**

Responsible for planning, organization, and supervision of administrative and academic work of the mechanical engineering department at CUI Wah Campus.

Developing proposals for the development plans for introducing new program in consultation with the concerned faculty members.

Ghulam Ishaq Khan Institute of Engineering Sciences & Technology (GIKI) Topi, Pakistan (Feb 01, 2001– July 31, 2014)

GIKI is one of the top private universities in Pakistan and is ranked #451-500 in QS WUR by Subject 2023 (<https://giki.edu.pk>)

- **Dean Faculty of Mechanical Engineering (Aug 2011 – July 2014)**

Responsible for planning, organization, and supervision of administrative and academic work. Making proposals for the development plans for introducing new program in consultation with the concerned faculty members.

Presided over the meetings of respective Board of Faculty and worked as ex-officio member of different forum as per statutes.

- **Assistant/ Associate/ Full Professor (Feb 2001 – July 2014)**

Teaching, research, and other departmental responsibilities.

Visiting Professor in KSA Universities (KAUST Thuwal, KAAU Jeddah, IU & Taibah Medina (2015 – Present)

Deliver lectures, keynotes, attend academic and research meetings, joint supervisions and proposals writing.

University of Strathclyde Glasgow, UK – Teaching Assistant (Jan 1998 – Dec 2000)

University of Strathclyde is ranked 276 in QS World University Rankings. (<https://strath.ac.uk>)

Worked as Teaching assistant to related teacher for tutorials, assignments and conducting labs.

Shell Expro Limited UK – Research Consultant (Jan 1999 – Dec 2000)

Shell is an international energy company that has been present in the UK since 1897. (<https://www.shell.co.uk>)

Developed bolt tightening procedures using detailed numerical simulations for all ranges of gasketed bolted flanged pipe joints to be implemented in Shell Ltd globally.

Heavy Mechanical Complex Limited, Taxila, Pakistan – Design Engineer (Jan 1993 – Dec 2000)

Heavy Mechanical Complex Limited is a leading engineering goods manufacturing enterprise in Pakistan. (<https://www.hmc.com.pk>)

Tender preparations and participations, Cost estimation, Bill of quantities, designing, detail drawing preparations of industrial structures, overhead cranes, and pressure vessels.

Rupali Polyester Pvt. Ltd, Lahore, Pakistan – Maintenance Engineer (July 1992 – Dec 1992)

The Rupali Group is an established leading corporation in the Petrochemical industry, responsible for producing the primary raw materials for the downstream Textile industry of Pakistan. (<https://www.rupaligroup.com>)

Maintenance and operation of polyester machinery.

PROFESSIONAL MEMBERSHIPS/ FELLOWSHIPS

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- Fellow Institution of Mechanical Engineers (FIMechE) UK (80060433)
 - UK Chartered Engr. (CEng), Engineering Council UK since 2006
 - Lifetime Member Pakistan Engineering Council (PEC) since 1992 (Mech-10058)

RESEARCH FELLOWSHIPS

- University of Strathclyde, Glasgow, UK (8 weeks in 2002)
- University of Illinois at Chicago and Urbana Champaign, USA (8 weeks in 2007 and 2009)
- National University of Taiwan, Taiwan (3 Weeks in 2011)
- UK Universities under Exploratory and Knowledge Exchange Grant British Council (Dec 2012)
- LYAKHOV School on Computational Materials Science. Guilin Univ of Electronics Tech, China and Stony Brook Univ USA. (1 Week in 2013)
- 4th Summer School on “Methods and Tools for the Assessment and Monitoring of the Central Asian Water and Land Resources”. German-Kazakh Univ Almaty Kazakhstan. (2 weeks in 2017)
- 6 Weeks fellowship at Cranfield University UK funded by HEC; Jan-Feb 2018

PATENTS AND PUBLICATIONS

- Patents = 2; Issued by Republic of Tajikistan; (1) Patent #: TJ 1014, Fresnel Concentrator; Issue date, 27.09.2019; (2) Patent #: TJ 995, Solar thermoelectric generator, Issue date, 17.05.2019
- Peer-reviewed international journal papers = **143**; Cumulative **Impact Factor >330**
Cumulative citation: **3466**; h-index: **30**; i10-index: **98** [Prof. Dr. Muhammad Abid - Google Scholar](#)
- Books: 12
- Book Chapters = 9
- International Conference Papers >165
- Technical Reports > 55
- **PhD supervised** = 06, **MS supervised** >55

RESEARCH CONTRIBUTION - INTERNATIONAL AND NATIONAL PROJECTS

- Asia Link: (2006-2008) as Project Manager worth Euro 1019000; *A Framework Approach to Strengthening Asian Higher Education in Advanced Design and Manufacture Project Manager*
- Pak US: (2006-2008) as PI worth US\$ 512000: *Development of computational mechanics infrastructure and human resources for advancing engineering design practices in Pakistani Industry*
- IDB Technical Grant (2007-2008) as Project Team Member, worth US\$146600: *Proposal for purchase Research Equipment*
- EPSRC fast Track Award: (1998-2000) as Project Team Member, worth GBP 57000: *Design and analysis of bolted joints*
- PEER USA: (2006-2009) as PI, worth US\$300000: *Satellite Enhanced Snowmelt Flood and Drought Predictions for the Kabul River Basin (KRB) with surface and groundwater modeling*
- NSFC and PSF: (2015-2018) as PI, worth Yuan 2 mill + PKR 7.4 mill: *Design and Development of Innovative Impact Resistant Hybrid Structures based on Super Elastic Shape Memory Alloys and Light Weight Lattice*
- Pakistan Science Foundation: (2004-2007) as PI, worth PKR 1.25 mill: *Experimental and Analytical Studies of Gasketed and Non-gasketed Flanged Pipe Joints to Determine the Joint Load Capacity for Improved Sealing Capability and their Implementation.*
- Pakistan Science Foundation: (2007-2009) as PI, worth PKR 0.75 mill: *Design, Fabrication, and Installation of Photovoltaic System*
- Pakistan Science Foundation: (2009-2010) as PI, worth PKR 0.6 mill: *Battery Based Micro-Hydro Power Plant on Catamaran for Free Water Flow Operation*
- Industry: (2011-2012) as PI worth PKR 0.5 mill: *Optimization of bolted pipe joints for compact systems*
- Industry + Pakistan Science Foundation: (2017-2019), as Co-PI, worth PKR 40 mill: *Digitization of engine test bed, Fuel Injection pump, low speed high torque engine performance evaluation and enhancement*

- Hamdard University and Agha Khan Medical College: (2017-2018) as Co-PI, worth PKR 1 mill: *A Novel Transform-Domain Fuzzy Data Fusion Technique for Medical Image Enhancement*.

PHD (6) and MS (>55) RESEARCH SUPERVISIONS

Supervised PhD titles include:

- Experimental and Finite Element Investigation of Residual Stresses and Distortions in Welded Pipe Flange Joints
- Fracture analysis of thick cylinders under high fatigue cycle loading
- Strength and sealing performance of gasketed bolted flange joint under combined thermal and internal pressure loading.
- ALE Moving Mesh Generation and High-Performance Implementation using Open MP and MPI Libraries for FSI and Darcy Flow problem.
- Three-dimensional numerical simulation of stationary Gas Tungsten Arc Welding process
- Deep calibrated tomographic learning for 3d reconstruction modelling from sparse projections.

ACADEMIC AND ADMINISTRATIVE CONTRIBUTIONS

Establishment of Centers

- Interdisciplinary Research Center Fall 2014

Establishment of New Departments at CUI Wah Campus

- Department of Mechanical Engineering (with BS, MS, PhD) from Fall 2018
- Department of Humanities from Fall 2023 (MS English program offering will be from Spring 2024)
- Department of Art and Design at CUI Wah Campus, Program will be offered from Fall 2024

Development and Initiation of New Programs at CUI Wah and GIKI

- BS programs: BS Artificial Intelligence, BS Computer Engineering, BS Mechanical Engineering | BS Industrial Engineering, BS Mechatronics Engineering, BS Automotive Engineering
- MS programs: MS Advanced Design and Manufacture (with EU and Asian Partners), MS Computational Mechanics (with US Partners) at GIKI | MS Computational Engineering, MS Mechanical Engineering, MS Underwater Communications (with HEU China), MS English at CUI Wah
- PhD: Mechanical Engineering at GIKI and CUI Wah | Civil Engineering and Mathematics at CUI Wah

Courses taught and labs supervision at GIKI and CUI

- Undergraduate: Mechanical Engineering Design, Stress Analysis, Dynamics, CAD/CAM, Finite Element Methods.
- Postgraduate: Advanced Stress Analysis, Applied Finite Element Analysis, Product Design, CAD/CAM, Pressurized Systems, Thin-Walled Structures, Design Optimization and Analysis Techniques, Design Management and Prediction, Modeling, Simulation and Visualization, Case Studies in Advanced Heat Transfer

Joint supervisions and research with national and international partners

Campus Development works (Completed and Inaugurated from 2021 to 2025)

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- Transport office with Transport washing area (1176 sft)
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- Faculty offices, Lecture Halls and Labs: Management Sci, Electrical Engg, Civil Engg and Mathematics; Auditorium, library, PC Labs, Conference rooms, cafeteria, IT Center, Project rooms and student spaces (Renovated >80,000 sft area); Allied facilities > 1400 Rft
- BOT Solarization project of 400KW for campus along with restoration of dedicated WAPDA supply line (which was long pending) for low-cost electricity as compared to POFs
- Upgradation of WAPDA supply lines as per WAPDA requirements
- Submission of PC1 of PKR1674 million for year 2024-25 (CDWP is awaited)

NATIONAL AND INTERNATIONAL DELEGATIONS

- *Led Pakistan delegate* in International Speak out for Engineering and International Design Competitions organized by IMechE in South Asia and Asia Pacific Regions in 2013, 2015, 2016.
- *National delegate*: International Institute of Welding Congress IIW2006 in South Africa | Maldives for academic and research collaborations with Maldives universities | Auto show in Hannover Germany | 5th edition of Maritime Security Workshop “Secure Seas – Prosperous Pakistan” 2022.
- *Mentor* for United National Industrial Development (UNIDO) Pakistan since 2013
- *Expert* for PEC, HEC, HED accreditation councils | Member National Curriculum Review Committee (NCRC) of (HEC) of Pakistan (2001-2023)
- Presented Asia as expert on PED Requirements and ASME Code: 2013 in Genova Italy | ASME Turkey Section as expert on Bolted flanged pipe joints, 2013
- MoUs with international universities of China, UK, US, Italy, Ukraine, Kazakhstan, Turkey (2001-2023)

NATIONAL AND INTERNATIONAL COMMITTEES

- Member Panel of Judge for International Design Competitions by IMechE for Visually Impaired People, 13-17 Sep 2013, Hong Kong and Hearing Disordered People, 14-17 July 2016, Colombo, Sri Lanka | Innovation for Collaborations Competition by Asian Institute of Technology, Thailand, 12-13 May 2016
- Coordinator DICE Automotive and DICE IET Chapter in Pakistan (2009)
- National expert to review project proposals by HEC, PSF, HED (2001-Till to date)
- Chair Impartiality Committee of Certification Services of Pakistan (CeSP) Islamabad

INTERNATIONAL CONFERENCES, WORKSHOPS AND ENGINEERING FAIRS ORGANIZED

International Engineering Fair with VERAX Ltd. at Stockholm Sweden 2000 | ICADAM2008, Sanya China 2008 | APSENA2009, UIUC USA 2009 | ISFCS2010 & 2012, Pakistan 2010 & 2012 | ICPVT13, UK 2013 | IEOM2014, Indonesia 2014 | PGSRET2015, Pakistan 2015 | ISWANS2015, Pakistan 2015 | Do Engineering, CUI Islamabad Pakistan 2017 | FIT 2021-2023, Pakistan 2021-2023 | CPMI 2019-2023; China and Pakistan 2019 to 2024 | COA 2024 Harbin, China.

INTERNATIONAL AND NATIONAL WORKSHOPS, SEMINARS, SHORT COURSES CONDUCTED AND COORDINATED (2001 – 2023)

Sponsored by Islamic Development Bank for participants from Islamic countries: Computer-Integrated Product Design and Manufacturing | CAD/CAM for Mechanical Component Design and Manufacturing

In collaboration with UIUC USA Experts under Pak US funded project: High Performance Computing / Advanced Non Linear FEM in different years | Collaborative research with large system codes on the

web | A New Class of Multiscale Finite Element Methods: Application to Fluid and Solid Mechanics | Variational Multiscale Stabilized Formulation for the incompressible Navier-Stokes Equations

In collaboration with EU and Asian Partners under Asia Link project: Design, Management and Prediction | Modeling, Simulation and Visualization | Materials Design and Materials Processing | Advanced Stress Analysis | Design Optimization and Analysis Techniques | Advanced Heat Transfer and CFD.

In collaboration with Industries, academia and research organizations: Introduction to Pro-Mechanica | Heat Exchanger Installation, Operation and Maintenance | Introduction to FEA/FEM using ANSYS Basic and Advance | Introduction to CFD using ANSYS CFX | Introduction to Turbo Machinery using ANSYS CFX | Introduction to Dynamic Analysis using ANSYS LSDYNA and AutoDyne | Die and Mold Design in collaboration with Industry | Coaching Dynamics for Academia and Industry personnel

INTERNATIONAL RESEARCH COLLABORATIVE VISITS

EPERC meeting on Technical Task Force 4 for metal-to-metal flange joints, Amsterdam, 1998 | VERAX Ltd. Sweden, for joint research and experiments on Non-gasketed Flange Joints, 1999 | ABB Stahl. Sweden, for joint research on the use and application of flange joints, 1999 | Pakistan and Saudi Arabia industries for research surveys on non-gasketed flange joints, 1998 | UoS Glasgow UK for continued research, 2001 | UIC Chicago and UIUC Urbana Champaign, USA under Pak US funded research project, 2007-9 | SANYA China under Asia Link project for meetings, conference, research collaborations, 2008 | SANYA China under HEU-CUI MoU for meeting, workshop and research collaborations, 2023 | Huaz Hong Univ of S&T, Wuhan China under Asia Link project for meeting and course, 2008 | NTU, Taiwan under Bio sensing & Bio actuation program funded by NSF SA & NSC Taiwan, 2009 | UK Universities under Exploratory and Knowledge Exchange Grant funded by BC, 2012 | Guilin Univ China, Lyakhov School on Computational Materials Science funded by US & China | Northwestern Polytechnic Univ and Guilin Univ China for research collaboration, 2013 | Yeditepe and ITU Turkish Universities for joint research work and lectures, 2014 | KAUST, KAAU, IU & TU Medina KSA for joint research and lectures, 2016 | Asian Institute of Technology, Bangkok, Thailand, 2016 | Maldives National University, Maldives, 2016 | School of Engineering, Nazarbayev University, Kazakhstan, 2016 | German Kazakh University, Almaty, Kazakhstan, 2017 | East University of Science and Technology, China, 2017 | Cranfield University, UK funded by HEC, 2018 | Harbin Engineering University, China, 2018 | Northwestern Polytechnic University, China, 2018 | Kick off meeting under PEER USAID project at Nazarbayev University, Kazakhstan, 2016 | Indus Basin Knowledge Forum by ICIMOD and World Bank, Sri Lanka, 2017 | Progress meeting under PEER USAID project, Colombo, Sri Lanka, 2017 | Intl Conf on Water Resources in Central Asia, by Intl Science and Technology Centre and German Kazakh University in Almaty, Kazakhstan, 2017 and 2018 | Regional Knowledge Forum Drought: Earth Observation and Climate Services for Food Security and Agricultural Decision Making in South & Southeast Asia. ICIMOD Kathmandu, Nepal, 2018 | Central Asia PEER Forum, Almaty, Kazakhstan, 2018 | Collaborative research visit to NPU and Harbin Engineering University China; 2019 | Consultation on Integrated Basin Wide Approach for Kabul River Basin forum, Dubai, 2019 | Pak-Afghan Stakeholder Consultation on Kabul River Basin. Dubai, 2019 | China Pakistan Marine Information Workshop and meeting under BRI, HEU China, 2019 | China Pakistan Marine Information Workshop and meeting under BRI, HEU China, 2023 | President forum at HEU China under BRI and CPEC, 2023 | Cranfield University UK under Pak UK Mobility Grant funded by British Council, 2023. | China Pakistan Marine Information Workshop 2024 and meeting under BRI, HEU China, 2024 | 3rd China Ocean Acoustic Conference, HEU China 2024.

CONTINUING EDUCATION/ SPECIALIZED COURSES ATTENDED (1998 – 2023)

- Pressure Vessel Design - Concepts and Principles by IMechE UK 1998
- Composite materials - GRP Saddle Supports & Vessels - Concepts and Principles by IMechE UK 1998
- Introduction to Piping Design and Analysis' by IMechE UK 1999

- Intro to the Commercialization the Technology' by UoS, Glasgow UK equivalent to 6 CHs 2000
- Project Management by SHEFC UK by UoS Glasgow UK 2000
- High Performance Computing offered by expert from UIUC, USA 2007
- Advanced Non-Linear FEM offered by expert from UIUC, USA 2009
- Design, Management and Prediction offered by expert from UK 2008
- Modeling, Simulation and Visualization offered by expert from UK 2008
- Materials Design and Materials Processing offered by expert from NPU China 2008
- Bio Inspired Sensing and Bio Inspired Actuators. NTU, Taiwan 2011
- Evolutionary Structure Prediction Using the USPEX Code. Guilin Univ China 2013
- Collaboration for Innovation - AIT Thailand 2016
- Introduction to Academic Practice - Enhancing teaching and learning in higher education. Cranfield University UK 2023.
- Core skills development for researchers. Cranfield University UK 2023.

LANGUAGES

English (Fluent), Urdu (Native) and Punjabi (Fluent).

Prof. Dr. Muhammad Abid, T.I.

TOTAL INTERNATIONAL JOURNAL PAPERS PUBLISHED = 143 NOS

(Impact Factor = >330)

Citations as per Google Scholar = 3466 (h-index = 30; i10-index = 98) <https://scholar.google.com/citations?hl=en&user=XDcfi74AAAAJ>

S.#	Name of Author(s)	Complete Name of Journal	Title of the Publication	pISSN & eISSN	Vol & Issue #	Date	Page #
1	D H Nash and M Abid	International Journal of Pressure Vessels and Piping	Combined external loads tests for standard and compact flanges https://www.sciencedirect.com/science/article/abs/pii/S0308016100000727	0308-0161	Vol. 77 No. 13	2000	799-806
2	D H Nash, J Spence, A S Tooth, M Abid and D J Power	International Journal of Pressure Vessels and Piping	A parametric study of metal-to-metal full face taper-hub flanges https://www.sciencedirect.com/science/article/abs/pii/S0308016100000715	0308-0161	Vol. 77 No. 13	2000	791-798
3	M. Abid , D. H. Nash	International Journal of Pressure Vessels and Piping,	Comparative study of the behaviour of conventional gasketed and compact non-gasketed flanged pipe joints under bolt up and operating conditions' https://www.sciencedirect.com/science/article/abs/pii/S0308016103002047	0308-0161	Vol. 80, Issue 12	2003	831-841
4	M. Abid , D. H. Nash	International Journal of Pressure Vessels and Piping	A parametric study of metal-to-metal contact flanges with optimized geometry for safe stress and no-leak conditions https://www.sciencedirect.com/science/article/abs/pii/S0308016103002035	0308-0161	Vol. 81, Issue 1	2004	67-74
5	M Abid , D H Nash	Proc. IMechE Part E: J. Process Mechanical Engineering	Surface sensitivity study of non-gasketed flange joint https://journals.sagepub.com/doi/10.1243/0954408042467007	0954-4089	Vol. 218	2004	205-212
6	M Abid , D H Nash	International Journal for Strain Measurement.	Leakage criteria through a non-gasketed pipe joint	0039-2103	Vol. 206	2004	1-16
7	M. Siddique, M. Abid , H. F. Junejo, R. A. Mufti,	Journal of Material Science Forum	3D finite element simulation of welding residual stresses in pipe-flange joints: effect of welding parameters https://www.scientific.net/MSF.490-491.79	0255-5476	Vol. 490-491	2005	79-85

8	M. Abid , M. Siddique, R.A. Mufti	Journal of Modelling and Simulation in Materials Science and Engineering	Prediction of welding distortions and residual stress in pipe-flange joint using finite element technique https://iopscience.iop.org/article/10.1088/0965-0393/13/3/013/meta	0965-0393	Vol. 13	2005	455–470
9	M. Abid , D. H. Nash	Journal of Engineering Integrity Society	FMEA of Gasketed and Non-gasketed bolted flanged pipe joints	1365-4101	Vol. 17	2005	14-21
10	M. Abid , M. Siddique	Journal of Acta Mechanica.	Finite Element Simulation of Tack Welds in Girth Welding of Pipe-Flange Joint https://link.springer.com/article/10.1007/s00707-005-0241-3	0001-5970	Vol. 178, No.1-2	2005	53-64
11	M. Abid , M. Siddique	International Journal of Pressure Vessels and Piping.	Numerical simulation to study the effect of tack welds and root gap on welding deformations and residual stresses of a pipe-flange joint https://www.sciencedirect.com/science/article/abs/pii/S030801610500089X	0308-0161	Vol. 82	2005	860-871
12	Muhammad Abid , Muhammad Siddique	Journal of Modelling and Simulation in Materials Science and Engineering, Institute of Physics	Numerical Simulation of the effect of Constraints on Welding Deformations and Residual Stresses in a Pipe-Flange Joint https://iopscience.iop.org/article/10.1088/0965-0393/13/6/010	0965-0393	--	2005	919-933
13	M. Siddique, M. Abid	Journal of Modelling and Simulation in Materials Science and Engineering, Institute of Physics.	Numerical Simulation of mechanical stress relieving in a multi-pass GTA girth welded pipe-flange joint to reduce IGSCC https://iopscience.iop.org/article/10.1088/0965-0393/13/8/013	0965-0393	Vol. 13	2005	1383-1402
14	M. Abid	International Journal of Mechanics and Materials in Design	Determination of gasketed and non-gasketed flanged pipe joint's capacity subjected to combined loading: An experimental approach https://link.springer.com/article/10.1007/s10999-005-0519-6	1359-5997	Vol. 2	2005	35-47
15	Muhammad Siddique, Muhammad Abid	Proc. IMechE Part E: J. Process Mechanical	FE Simulation of Mechanical Stress Relieving in Welded Pipe-Flange Joint https://journals.sagepub.com/doi/10.1243/095	0954-4089		2005	1-9

		Engineering	440805X69316				
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13. **Muhammad Abid**, A frame work approach to strengthening Asian higher education in Advance Design and Manufacture. Quarter-I report 2006 submitted to EU.

14. **Muhammad Abid**, A frame work approach to strengthening Asian higher education in Advance Design and Manufacture. Quarter-II report 2006 submitted to EU.
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26. **Muhammad Abid**, Development of computational mechanics infrastructure and human resources for advancing engineering design practices in Pakistani industry. Annual Report Technical and Financial (Year-2) 2007 submitted to HEC and USAID.
27. **Muhammad Abid**, A frame work approach to strengthening Asian higher education in Advance Design and Manufacture. Quarter-VIII report 2008 submitted to EU.
28. **Muhammad Abid**, A frame work approach to strengthening Asian higher education in Advance Design and Manufacture. Quarter-IX report 2008 submitted to EU.
29. **Muhammad Abid**, A frame work approach to strengthening Asian higher education in Advance Design and Manufacture. Quarter-IX report 2007 submitted to EU.
30. **Muhammad Abid**, A frame work approach to strengthening Asian higher education in Advance Design and Manufacture. Annual Technical and Financial Report (Year 3) 2008 submitted to EU.
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35. **Muhammad Abid**, Design, Fabrication, installation on 4-5 kW PV Solar System. (Report #: R&D/F-GIK/ENGG (102)/SA-08/01/P1) March 2009.
36. **Muhammad Abid**, Design, Fabrication, installation on 4-5 kW PV Solar System. (Report #: R&D/F-GIK/ENGG (102)/SA-08/01/P2) July 2009.
37. **Muhammad Abid**, Development of Computational Mechanics Infrastructure and Human Resources for Advancing Engineering Design Practices in Pakistani Industry. International conference on Pakistan-US Science and Technology, November 2009, HEC Pakistan.
38. **Muhammad Abid**, Design, Fabrication, installation on 4-5 kW PV Solar System. (Report #: R&D/F-GIK/ENGG (102)/SA-08/01/P2) Dec 2009.
39. **Muhammad Abid**, Development of Computational Mechanics Infrastructure and Human Resources for Advancing Engineering Design Practices in Pakistani Industry. International conference on Pakistan-US Science and Technology, June 2010, HEC Pakistan.
40. **Muhammad Abid**, Khasan S Karimov. Design, Fabrication and Installation of Battery Based Micro Hydro Power Plant on Current Water Stream. PSF/Res/F-GIK/ENGG (107). Report 1. 2012
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42. **Muhammad Abid**, Khasan S Karimov. Design, Fabrication and Installation of Battery Based Micro Hydro Power Plant on Current Water Stream. PSF/Res/F-GIK/ENGG (107). Report III. 2013
43. **Muhammad Abid**, Khasan S Karimov. Design, Fabrication and Installation of Battery Based Micro Hydro Power Plant on Current Water Stream. PSF/Res/F-GIK/ENGG (107). Report IV. 2013

F. CONFERENCE PARTICIPATIONS

Papers presented in conferences at Cambridge UK, Calgary Canada, Istanbul Turkey, Bahrain, South Africa, China, Egypt and Pakistan.

University of Engineering & Technology



Lahore

SESSION 19⁹⁰

(Annual/~~Supplementary~~)

In recognition of the fulfilment of prescribed

requirements MUHAMMAD ABID

son/daughter of MUHAMMAD ANWAR ABBAS

is admitted to the Degree of

Bachelor of Science

in MECHANICAL Engineering in FIRST Division

with Honours.

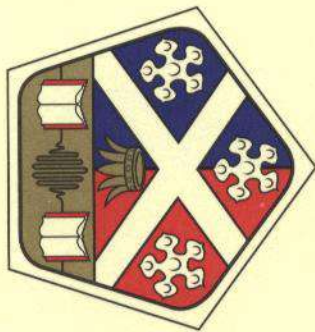
He/She passed the Examination as a whole.

Lahm
Controller of Examinations

Lahore

April 13, 1994

Countersigned
M. Hashim
Chancellor



UNIVERSITY OF
STRATHCLYDE

By virtue of the power to award degrees granted to it by the Charter and Statutes and by the authority of the Senate the University has this day conferred the Degree of

DOCTOR OF PHILOSOPHY

for research in the Department of Mechanical Engineering

Muhammad Abid

upon

In witness whereof we have caused
the Common Seal of the University to
be impressed upon this document on

11 July 2001

199752749

University
Seal



Principal

Secretary
to the University



PAKISTAN CIVIL AWARDS

Investiture Ceremony

Islamabad, 23rd March 2022

Name **Prof. Dr. Muhammad Abid**
Award **Tamgha-i-Imtiaz**
Field **Engineering (Mechanical)**

Prof. Dr. Muhammad Abid earned his B.Sc degree from University of Engineering and Technology, Lahore and Ph.D in Mechanical Engineering from University of Strathclyde, United Kingdom. He is presently working as Dean Faculty of Engineering, Director Interdisciplinary Research, Chair and HOD and Professor of Mechanical Engineering in COMSATS University Islamabad (CUI) since July 2014. He represents Ministry of Science & Technology (MoST) in Ministry of Defence Production (MoDP) for defence related projects. He has vitalized a mega project with defense sector to provide indigenous solutions resulting in tremendous savings of foreign exchange. Keeping in view energy needs of Pakistan, he has completed a number of projects, related to Energy Production, Energy Audits and Conservation, funded by Pakistan Science Foundation (PSF). He has obtained two International Patents jointly, from Tajikistan Academy of Sciences for Solar Energy applications. Keeping in view water issues, he is jointly working on USAID funded project on Kabul River Basin with Afghanistan and Kazakhstan. He has the honor of being the first National Coordinator for Design, Build and Fly competition for 9 years nominated by HEC under STEM Career project. He is a recipient of Pakistan Academy of Science (PAS) Gold Medal in 2005, Higher Education Commission (HEC) Outstanding Research Award in 2006 and HEC Best University Teacher Award in 2011.

In recognition of his outstanding services in the field of Engineering (Mechanical), the President of the Islamic Republic of Pakistan has been pleased to confer upon Prof. Dr. Muhammad Abid, the award of "Tamgha-i-Imtiaz".





Pakistan Engineering Council

(Constituted under Pakistan Engineering Council Act, 1976 enacted by the Parliament)

Secretary / Registrar
Engr. Dr. Nasir Mahmood Khan
(Pride of Performance)

Ataturk Avenue (East),
G-5/2, Islamabad

PEC/ EXC_AW_2023/0010
September 05, 2024

Engr. Prof. Dr. Muhammad Abid
PEC No: MECH/10058
House 26, Street 103, Sector G-13/1, Islamabad
Contact No: 0300-5394185
drabid@ciitwah.edu.pk

Subject: **CONFERMENT OF PEC ENGINEERS' EXCELLENCE AWARDS – 2023**


Pakistan Engineering Council (PEC) being the statutory body for regulating engineering profession and quality of engineering education, is functioning as a key driving force for achieving rapid and sustainable growth in all national, economic and social fields. The Council has played a progressive role by making landmark achievements in all directions of engineering sector at national and international levels, besides extending expert support to the Government as a Think Tank matters related to Engineering Sector.

Engineers of the country have been playing pivotal role in the development and progression of Pakistan, especially mega projects and strategic initiatives making use of indigenous resources. In this regard, PEC has announced "PEC Engineers' Excellence Awards" since 2020 which are conferred every year to decorate outperforming engineers through a comprehensive evaluation process, in recognition of the efforts and outstanding contributions put in by engineering experts and professionals in their respective fields.

Keeping in view your extra-ordinary contributions and services to the engineering profession, it is my privilege to convey that PEC Excellence Awards Committee has recommended your name duly endorsed by the competent Authority for conferment of "PEC Engineers' Excellence Awards – 2023 (Lifetime Achievement for Distinguished National Service)".

The awards ceremony will be held after the charge assumption of office by the newly elected Chairman PEC and the Governing Body (2024-27) of the Pakistan Engineering Council (PEC). The date, time and venue will be communicated to you later on, please.

Best Regards



(Engr. Dr. Nasir Mahmood Khan)
Secretary/ Registrar PEC

PAKISTAN ACADEMY OF SCIENCES




This is to certify that

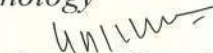
*Dr. Muhammad Abid
has been awarded*

Pakistan Academy of Sciences

GOLD MEDAL

*in Engineering & Technology
for the year 2006*


President


Secretary General



GOVERNMENT OF PAKISTAN
HIGHER EDUCATION COMMISSION, ISLAMABAD




Presents


HEC Outstanding Research Award 2005-06

on December 17, 2009

Under the Category Best Research Paper Award

To Dr. Muhammad Abid


Dr. Muhammad Latif
Director General (R&D)
Higher Education Commission


Prof. Dr. S. Sohail H. Naqvi
Executive Director
Higher Education Commission



THIS IS TO CERTIFY THAT

MUHAMMAD IOBAL
DR MUHAMMAD ABID

WERE AWARDED THE

MOSS PRIZE 2008

BY THE

**PROCESS INDUSTRIES
DIVISION**

FOR THEIR PAPER ENTITLED

**"DETERMINATION OF OPTIMIZED
NON-GASKETED FLANGE GEOMETRY
FOR SAFE STRESS AND NO LEAK
CONDITION: FINITE-ELEMENT
ANALYSIS APPROACH"**



DIVISION CHAIRMAN



CHIEF EXECUTIVE





Established for the promotion and development
of the knowledge and best practice of engineering

This is to certify that

Muhammad Abid

in membership of the

Institution of Mechanical Engineers

has been registered by the Engineering Council UK and is hereby authorised
to use the style or title of

Chartered Engineer

Chairman

Executive Director

Date of Registration 12 September 2006

Date of issue 15 September 2006

Registration No. 562557

This certificate is the property of the Engineering Council UK
Returnable on Request or de-registration



Institution of
**MECHANICAL
ENGINEERS**

THIS IS TO CERTIFY THAT

Muhammad Abid

**WAS ELECTED
A FELLOW**
OF THE
**INSTITUTION OF
MECHANICAL
ENGINEERS**

ON
11th September 2012


PRESIDENT


CHIEF EXECUTIVE



Improving the world through engineering

Patent Number: TJ 1014
Country: Republic of Tajikistan
Patent Title: Fresnel concentrator
Date of Issue: 27.09.2019
Patent Holder: Kh.S.Karimov, Kh.M.Akhmedov, M.Abid, M.Saleem,
N.R.Yumaev,



Patent Number: TJ 995
Country: Republic of Tajikistan
Patent Title: Solar thermoelectric generator
Date of Issue: 17.05.2019
Patent Holder: Kh.S.Karimov, Kh.M.Akhmedov, M. Abid,
Ch.M.S.Tariq, N.R. Yumaeв,

ҶУМҲУРИИ ТОҶИКИСТОН		ИДОРАИ ПАТЕНТИ
НАХУСТПАТЕНТ		
№ TJ 995		
БА ИХТИРОИ		
<i>Генератори термоэлектрикии офтобӣ</i>		
Дорандаи нахустпатент	Маркази рушди инноватсионии илм ва технологияҳои нави Академияи илмҳои Ҷумҳурии Тоҷикистон	
Сарзамин	Ҷумҳурии Тоҷикистон	
Муаллиф(он)	Каримов Ҳ.С., Аҳмедов Ҳ.М., Абид Муҳаммад, Ҷани Муҳаммад Саид Тарик, Юмаев Н.Р.	
Аввалияти ихтироъ	27.09.2018	
Таърихи рӯзи пешниҳоди ариза	27.09.2018	
Аризаи №	1801239	
Дар Феҳристи давлатии ихтироъҳои Ҷумҳурии Тоҷикистон	17-майи с. 2019 ба қайд гирифта шуд	
Нахустпатент этибор дорад аз	27 сентябри с. 2018 то 27 сентябри с. 2028	
	и.в. ДИРЕКТОР	М. Исмойлзода



غلام اسحاق خان انسٹیٹیوٹ برائے انجینئرنگ سائنسز و ٹیکنالوجی
Ghulam Ishaq Khan Institute of
Engineering Sciences and Technology
July 16, 2014

No. GIKI / HRD/FA. PF. 676/2001

SERVICE CERTIFICATE

This is to certify that Dr. Muhammad Abid S/o Muhammad Anwar Abbas joined the Ghulam Ishaq Khan (GIK) Institute of Engineering Sciences and Technology Topi, District Swabi, KPK as Assistant Professor in the Faculty of Mechanical Engineering on 1st February, 2001. He was promoted/appointed as Associate Professor in the Institute with effect from 1st February, 2006 and as Professor on 01-1-2012. In addition to his teaching & research assignments he also served as Dean, FME from 22-8-2011 to 20-6-2014. He resigned from service at his own and relieved of his duties in the Institute with effect from 4th August, 2014.

We wish him all success in his future endeavors!

ATTESTED
Attested
Muhammad
Assistant Professor
Department of Mechanical Engineering
COMSATS University Islamabad
Vah Campus.
(ALI AHMAD CHAUDHARY)
Deputy Director (Cons.)
Ministry of Foreign Affairs
Islamabad

Sajjad Ahmad
Sajjad Ahmad
Asstt Dir (HR / Admin) 16/7/14

Sajjad Ahmad
Assistant Director (HR/Admin)
GIK Institute of Engineering Sciences
& Technology, Topi, Dist Swabi, KPK



COMSATS University Islamabad Wah Campus

No.CUIW-1(346) -730

May 5, 2025

TO WHOM IT MAY CONCERN

This is to certified that **Prof. Dr. Muhammad Abid** (T.I) S/o **Mr. Muhammad Anwar Abbas**, bearing CNIC NO. 35200-1441733-7 is an employee COMSATS University Islamabad (CUI), Wah Campus since 23.07.2014. Currently he is working as Director CUI, Wah Campus. His service record at CUI is as under:-

S. No	Designation / Position	From	To
1	Professor (TTS), Dept. of Mechanical Engineering	23.07.2014	22.07.2018
2	Tenured Professor, Dept. of Mechanical Engineering	23.07.2018	Date
3	Director, CUI Wah Campus	15.03.2021	Date

2. Along with his primary responsibilities, he has also worked as, but not limited to:

S. No	Designation / Position	From	To
1	Director Interdisciplinary Research Centre	18.08.2014	Date
2	Head, Department of Mechanical Engineering	01.09.2016	01.08.2022
3	Chairman, Department of Mechanical Engineering	23.12.2014	01.08.2022
4	Dean, Faculty of Engineering	06.09.2019	28.02.2021
5	Focal Person for UNESCO Water Chair on Knowledge System for Integrated Water Resources Management at CUI Wah Campus	29.12.2020	Date

(Dr. Jawwad Ahmad)
Additional Registrar
jahmad@ciitwah.edu.pk

