Dr. Tanweer Hussain, Ph.D.

Professor, Department of Mechanical Engineering
Mehran University of Engineering & Technology, Jamshoro
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CAREER SUMMARY:

Mechanical Engineer with vast field and research experience. Served in national and multinational industries, including sugar, polypropylene, automobile and oil and gas industries. Possess rich teaching and research experience in one of the leading Engineering University of Pakistan. Specialist in design, modelling and analysis of mechanical assemblies, stochastic and uncertainty analysis of mechanical system. In general, this research involves controlling variation propagations in Aero-engine assembly and Probabilistic/stochastic analysis of assembly tolerances.

PROJECTS COMPLETED:

- Involved in inspection of NDT and HDD of 32 inch dia. LNG line laid between Jamshoro to Nawabshah (As a consultant with Applus Velosi from 2016 to 2018).
- Power generation enhancement and Heat rate analysis of Jamshoro Thermal Power Plant (2015-2016)
- Involved in assembly design of Jet Engine Rotor at Rolls Royce Plc. UK, (Jan 2008 – Aug 2011). Studied and analysed T-500, T-900 and T-1000 jet-engines for error propagations during assembly and re-designed assembly processes of T-900 and T-1000 engines with effective method of controlling variation propagations in the assembly of these engines.
- Involved in assembly design of Jet Engine Casing with MTU Aero Engines GmbH Germany, (June 2010 – Sep 2011). Studied and analysed Outward Guide Vane (OGV) casing assembly of aero-engine. Developed method for optimisation of assembly process and controlling assembly variation propagations.

CURRENT PROJECTS:

- Condition Monitoring of rail track and rolling stock: HEC funded R&D project under National Centre for Robotics and Automation (NCRA) as Co-PI in Condition Monitoring Lab.
- Enhancing Charge Acceptance and power storage capacity in Lead acid Batteries. A Project with Rainbow High Tech Engineering Company (Pvt) Ltd (the Manufacturer of Bridge Power and Hawk Batteries in Pakistan).
- Design and modelling of Vertical Axis Wind Turbine, A Unique Spiral Bladed Turbine design. An indigenous Ph.D. Project.

ACADEMIC RECORD

Date		Name & Address of Institution	Academic Degree / Diploma / Certificate Obtained	Subject / Field of Study
From	To			
May 1996	March 2001	Mehran University of Engineering & Technology, Jamshoro	B.Eng. 1st Division (72.36 %)	Mechanical Eng.
Jan 2004	Nov 2005	Mehran University of Engineering & Technology, Jamshoro	Post Grad Diploma 1st Division (72.88 %)	Manufacturing Eng.
Nov 2007	July 2012	The University of Nottingham	PhD	Mechanical Eng.
Title of PhD Thesis		Modelling and Controlling Variation Propagation in Mechanical Assembly of High Speed Rotating Machines		

PROFESSIONAL TRAINING AND CERTIFICATIONS

1.	Condition Monitoring of Rotating Machines	One Week Training at PRUFTECHNIK, Singapore	2017
2.	NDT Level II Certification	Four Weeks Training	2016
3.	IOSH Managing Safely	One Week Training at Novax Pakistan	2014
4.	Power Generation and Various Processes at Steel Mills	Four Weeks Internship at Pakistan steel Mills	1997
5.	Fertilizer Manufacturing and Allied Processes	Four Weeks Internship at ENGRO Chemicals Pakistan Ltd. Daharki Plant	1999

TEACHING EXPERIENCE AT THE UNIVERSITY OF NOTTINGHAM, ENGLAND UK

Part-time Teaching Assistant (14-02-2008 to 10-12-2011)	During My PhD Studies at the University of Nottingham (UoN), England, UK, I worked as Part-time Teaching Assistant in the School of Mechanical, Materials and Manufacturing Engineering, UoN. As a Lab Instructor my role was: 1. To teach CAD software Pro-E Wildfire 2.0 to the undergraduate students of Mechanical Engineering. 2. To conduct solid Mechanics Lab at undergraduate Level.
School of Mechanical, Materials and Manufacturing Engineering	

TEACHING EXPERIENCE AT MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY, JAMSHORO

Position	Role
Professor **Department of Mechanical Engineering** **(27-10-2016 till to-date)**	1. Developing curricula and delivering course material. 2. Conducting research, fieldwork, and investigations, and writing up reports. 3. Publishing research, attending conferences, delivering presentations, and networking with others in the field. 4. Traveling to other universities or academic settings to participate in learning opportunities and gain experience. 5. Participating in committee, departmental, and faculty meetings. 6. Providing training and mentoring to teaching assistants and junior lecturers. 7. Reviewing methods and teaching materials and making recommendations for improvement. 8. Assisting with student recruitment, interviews, and academic counselling sessions. 9. Contributing to the creation of an environment that promotes growth, equality, and freedom of speech.
Associate Professor **Department of Mechanical Engineering** **(15-04-2013 to 26-10-2016)**	i. To develop and designs curriculum plans to foster student learning, stimulate class discussions, and ensures student engagement. ii. Provide tutoring and academic counselling to students, maintains classes related records, and assesses student coursework. iii. Contributing to internal and external reviews and accreditation of subjects and programs for which they are responsible iv. Participating in research projects and research teams (where appropriate) v. Succeeding in applications for research funding, whether individually or as part of a team
Assistant Professor **Department of Mechanical Engineering** **(16-07-2012 to 14-04-2013)**	1. Teaching a requisite number of classes, providing guidance and supervision to graduate students, participating in departmental meetings, and providing academic support to Professors and other faculty members. 2. Conducting tutorials, workshops, practical classes, demonstrations, and other appropriate learning activities as required 3. Acting as a subject coordinator and/or area or discipline coordinator including: managing the area/discipline including providing feedback and contributing to performance management; supervising tutors; carrying out related planning and coordination responsibilities; organising the preparation and marking of assignments and all examinations; invigilating examinations; and submitting grades. 4. Preparing high quality subject delivery and learning support materials using any web-based platforms, electronic library information systems and other teaching and learning systems developed for use in the University.
Lecturer / Lab. Lecturer **Department of Mechanical Engineering** **(27-09-2003 to 15-07-2012)**	1. Preparing and delivering lectures, tutorials, workshops, and seminars. 2. Developing curricula and course material that can be used across several platforms. 3. Collaborating with other academics and lecturers to improve teaching methods and expand knowledge base. 4. Supervising graduate students, setting and grading assignments, tests, and exams. 5. Conducting research, and writing papers, proposals, journal articles, and books.

	6. Attending and participating in meetings, conferences, and other events in and outside of the institution. 7. Participating in training opportunities and initiatives at the institution. 8. Providing support to students and other colleagues. 9. Developing course material and curricula, inspiring meaningful discussions, attending conferences, consulting with other academics and professionals, supervising graduate students, grading assignments, and being an active member of the university.
Demonstrator, Department of Mechanical Engineering (24-04-2003 to 26-09-2003)	1. To demonstrate use of Subject related software packages, practical equipment, conduct experiments, exercises, workshops and/or processes and to answer questions related to those demonstrations. 2. To assist/give guidance, where required, to students who are carrying out practical exercises etc. 3. Responsible for the day-to-day operation of the laboratory.
Visiting Teacher, Department of Mechanical Engineering (20-01-2003 to 23-04-2003)	Teach subjects and conduct Lab at undergraduate Level

INDUSTRIAL EXPERIENCE

MAINTENANCE & Q.C. ENGINEER (22-06-2001 to 20-01-2003) Dewan Sugar Mills Ltd. (Polypropylene Div), Dewan Mushtaq Group of Industries

Role:

- Maintenance of compressors, pumps, extruders, weaving looms, and other plant machinery.
- Supervise Q.C. team and to inspect the product quality to meet the customer's requirement.
- Observe quality inhibiting situation and eliminate these conditions.
- While I was working in Dewan Sugar Mills Ltd. (Polypropylene Div), time to time I was assigned additional tasks of other industries of Dewan Mushtaq Group such as Dewan Motors during their peak work demands.

CONSULTANCY SERVICES IN INDUSTRIES

1. TRAINING CONSULTANT (Nov-2017 till to-date) United Energy Pakistan Limited

Role:

1. To design and develop basic orientation and various trainee courses for the Field Trainees.
2. To design and develop various refresher courses for junior to senior level Production Operators.
3. To conduct onsite training for the field trainees and the production operators.

2. SENIOR CONSULTANT (Feb-2016 to Sept-2017) Aplus Velosi Pakistan

Role:

- Monitor the quality of pipeline construction of LNG (42inch Dia.) pipeline project of SSGC as per ROW specifications.
- Coordinating the team of Engineers for inspection of weld joints quality, collection of data for RT, UT, and Hydrostatic testing and resolving pipeline construction problems.
- Instruct the team of Engineers to monitor the work of SSGC subcontractor as per work-order, issue NCRs if any Non-compliance is observed. And submit daily project status reports.
- Maintain safe and clean working environment by enforcing API standards.

3. CONSULTANT LEAD ENGINEER (Dec-2005 to Nov-2006) Total Waste Management Alliance Plc, (Contractor with ENI Gas Field, Bhit Mount, District Jamshoro, Pakistan)

Role:

- Maintain project schedule by monitoring project progress; coordinating activities; resolving problems.
- Prepare project status reports by collecting, analysing, and summarizing information and recommending actions.
- Maintain safe and clean working environment by enforcing procedures, rules, and regulations.
- Processing and recycling of Oil Based Mud / drilling waste.
- Commissioning, installation, operation, and maintenance of RotoMill.

ADDITIONAL ADMINISTRATIVE CHARGES AT MEHRAN UNIVERSITY (*From Time to Time*)

i. **Advisor to Vice Chancellor (22-02-2017 till to-date)** on Student Affairs and Career Counselling, Mehran University of Engineering & Technology, Jamshoro, Pakistan.

Responsibilities

- Lead, direct, and administer overall functions of student counselling, hostel residence, student societies and discipline in order to enhance the quality of student life both in and outside of the classroom.
- Supervise the team of Class advisors to help students to recognize and achieve their educational goals, help students to examine University programs, recognize their academic strengths, and opt for future career.
- Supervise the team of counsellors to help students with job-related issues, such as finding work, setting career goals, and dealing with stress on the job.
- Provide proactive support and capacity building services to promote co- curricular activities to enhance interpersonal skills of the students.

ii. **MEMBER,** Mehran University of Engineering & Technology, Jamshoro, Pakistan.
Examination Vigilance Board
(10-03-2017 till to-date)

Responsibilities

- Ensuring that there are no irregularities in the conduct of the Examination (at all Graduate, Post-graduate and Doctorate levels) and that it has been conducted in accordance with the University Regulations.
- To monitor and ensure that the examinations are conducted as per schedule announced and within the specified place and timings.
- To monitor that the necessary supporting staff and invigilators are available during the conduct of exams.
- To assess the quality of question papers and course is covered.
- To pay surprise visits to all examination centres of the University to ensure that exams are conducted flawlessly.

iii. **MEMBER,**
Pre-Admission Test Steering Committee
(22-02-2017 till to-date)
Mehran University of Engineering & Technology, Jamshoro, Pakistan.

Responsibilities

- Look after overall arrangements of the Pre-Admission test of Mehran UET to accommodate more than ten thousand students on single day.
- To monitor and ensure the smooth conduct of Pre-Admission test.
- To ensure that the candidates slips and are properly checked at all the stages in order to avoid any impersonation case..
- To monitor that the necessary supporting staff and invigilators are available during the conduct of Pre-Admission test.

iv. **University Focal Person,**
Prime Minister's Fees Reimbursement Scheme
(01-01-2016 till to-date)
Mehran University of Engineering & Technology, Jamshoro, Pakistan.

Responsibilities

- Ensuring that all the students are given proper guidance for the application process of PM Fees Reimbursement Scheme.
- Managing the verification process of all the Postgraduate Directorates of the University.
- Receiving funds from HEC, ensuring the proper utilisation of funds against the fees of all Postgraduate students.
- Generate Fund Utilisation Report (FUR) of all funds received every year from HEC and report back to HEC Islamabad.

v. **University Focal Person,**
Prime Minister's National Laptop Scheme
(03-02-2014 till to-date)
Mehran University of Engineering & Technology, Jamshoro, Pakistan.

Responsibilities

- Manage the team of Departmental and Campus Focal Persons.
- Ensuring that all the students are given proper guidance for the application process of PM Laptop Scheme.
- Ensuring that the record of all students is verified and processing the record to HEC Islamabad.
- Planning the arrangement for the distribution of Laptops to all the deserving students.
- Generate report of all assets issued every year and report to HEC Islamabad.

vi. **Co-Director, Postgraduate Studies (22-01-2015 to-22-02-2017)** Mehran University of Engineering & Technology, Jamshoro, Pakistan.

Responsibilities

- Implementing postgraduate education policy as determined by the University and Ensuring compliance with university policies and regulations.
- Schedule and Conduct Exams of All Masters and Ph.D. Programs.
- Overall monitor and supervise the team of Exam-Invigilators and Exam-Head Invigilators
- To receive and review applications of the Postgraduate students' schedule by monitoring project progress; coordinating activities; resolving problems.
- To arrange pre-admission test and interviews for prospective Postgraduate.
- To monitor the progress of Postgraduate students and deal with any issues arising in connection to their postgraduate research studentship.

vii. **Quality Coordinator (11-09-2006 to 02-11-2007)** *at* Dean Faculty of Science Technology and Humanities, Mehran University of Engineering & Technology, Jamshoro, Pakistan.

Responsibilities

- To Implement ISO-9001 standards at the faculty level.
- Ensuring that all quality standards are delivered, and the customer needs are met at their high quality.
- Interact with the department heads and departmental quality coordinators to understand the existing process and document the same.
- Set and document workflow/ procedures for all departments.
- Monitor effectiveness of the Quality Assurance process/ workflow for continuous quality improvement.

viii. **Warden (14-02-2004 to 25-07-2005) (Foreigner Students' Hostel)** Mehran University of Engineering & Technology, Jamshoro, Pakistan

Job Responsibilities

- To manage and monitor students' activities and provide basic facilities to the hostel residents.
- Welfare of students, provide pastoral support to the students.
- Actively participate to enhance the social and cultural life of the Hostel.

SERVICES RENDERED TO GOVERNMENT AND EDUCATIONAL ORGANISATIONS

i. **Curriculum Developer (2014 till to-Date)** **NAVTTC, GIZ, and STEVTA**

Responsibilities

- Responsible for working as part of a team of curriculum developers, Curriculum reviewers and learning technologists.
- Ensuring the accuracy and standardization of all training materials and content.
- Developing high-quality curriculum in the areas I am responsible for.
- Reviewing vocational coursework to ensure alignment with curriculum standards.
- Producing accurate, high-quality documentation within specified timeline.
- Setting learning outcomes and the learning objectives.
- Design content delivery and assessment methods
- Determine ways to integrate technology in classrooms.

ii. **Chairman Technical Committee (Mechanical Transport MTC-06)**
Pakistan Standards & Quality Control Authority Government of Pakistan (Ministry of Science and Technology)
Standardization Wing
(12-10-2017 till to-Date)

Role

- Design Mechanical Division Quality Standard of "Mechanical Transport" as PAKISTAN NATIONAL STANDARDS.
- Revision of Mechanical Division Quality Standard for further implementation in the Industries of Pakistan.
- To advise the Government on standardization policies, programs, and activities to promote industrial efficiency and development, as well as for consumer protection

iii. Urdu Language Teacher AL-ZAHRA FOUNDATION, Nottingham UK
(07-06-2008 to 01-01-2012)

Responsibilities

- During my stay at Nottingham England, I worked as "Urdu Language Teacher" in a Community Centre of Pakistani-British Nationals' named as "Al-Zahra Foundation". Where my responsibilities were to teach Urdu Language to British national Pakistani youth (week-end Classes) at Nottingham, England UK.

RESEARCH PROJECTS SUPERVISED FOR MS/M.Phil/PhD STUDENTS:

PhD Student Projects	03 (In-Process)
M.Eng Student Projects	02 (In-Process) 36 (Completed)

SOFTWARE SKILLS

- **CATIA V5**
- **Solid-works**
- **ANSYS FLUENT**
- **COMSOL Multi-Physics**
- **MATLAB**
- **CREO**

MEMBERSHIPS

- Member Senate, Mehran University of Engineering and Technology, Jamshoro
- Member Syndicate, Mehran University of Engineering and Technology, Jamshoro
- Pakistan Engineering Council Lifetime Membership as Professional Engineer.
- Accreditation Council Member for the Pakistan Engineering Council Accreditation of Higher Education Institution.
- National Curriculum Review Committee member for Mechanical Engineering, and Energy Systems Engineering Programs under Higher Education Commission Pakistan.
- Member Expert Team, Chartered Inspection and Evaluation Council, Government of Sindh
- Member, Academic Council, Mehran University of Engineering and Technology, Jamshoro
- Member, Board of Studies, Mechanical Engineering Program Mehran University of Engineering and Technology, Jamshoro
- Member, Board of Studies, Energy Systems Engineering Program, Mehran University of Engineering and Technology, Jamshoro
- Member, Board of Studies, Nano Materials Program, Centre of Excellence in Nanotechnology and Materials Mehran University of Engineering and Technology, Jamshoro

FUNDED PROJECTS (COMPLETED)

S. No.	Project Title	Funded By	Funded Amount	Completion Year
01	Condition Monitoring of High Voltage Line Insulators Using Deep Learning	Under HEC's LCF 2021-2022.	PKR 1.52 Million	2024
02	2018-2020, "Condition Monitoring Systems Research Lab", PKR 40 Million under the project Robotics and Automation, Funded by Higher Education Commission (HEC) of Pakistan	Higher Education Commission (HEC), Pakistan	PKR 40 Million	2022
03	Edify Engineering, Engineering Consultancy Project under Research Incubation in Public sector University	Information Science & Technology Department, Government of Sindh (UN's Sustainable Development Goals (SDGs), Vision 2025)	PKR 0.6 Million	2017
04	Design of Small-Scale Maglev Integrated Vertical Axis Wind Turbine	ICT R&D in National Gross roots Research Initiative Program	PKR 90K	2015

BOOK CHAPTER(s):

Chowdhry, B.S., Shah, A.A., Nisar, K., **Hussain, T**., and Shaikh, M.Z., 2021. December. Everything you need to know about Intelligent Manufacturing. *In 2021 International Workshop on Functional Reverse Engineering of Machine Tools*. CRC Press. (Accepted).

PATENT(s):

Abro, A.J., Shah, A.A., Chowdhry, B.S., Abro, R., **Hussain, T**., and Shaikh, M.Z., 2022. March. "Novel Rail Shoe Design for Railway Track Surface Condition Monitoring". *In International Patent Office - Pakistan*. Provisional Patent. (Submitted). 24/03.2022 Patent Application No:197/2022 U/S 12 of Patent Ordinance, 2000 Pakistan

RESEARCH PUBLICATIONS:

1. Dileep Kumar, Sanaullah Mehran, Muhammad Zakir Shaikh, Majid Hussain, Bhawani Shankar Chowdhry, **Tanweer Hussain**; (2022) Triaxial bearing vibration dataset of induction motor under varying load conditions, Data in Brief, Volume 42,2022,108315, ISSN 2352-3409, https://doi.org/10.1016/j.dib.2022.108315. **(IF=1.133)**
2. Hussain, N; Yousif M; Mehdi, M; Ali H. F; **Hussain, T**; Hashemikia, S; Langenhove, L.V; and Kim I.S; (2022) "Electroless Deposition: A Superficial Route to Synthesis of Highly Conductive Electrospun Nylon 6 Nanofibers" Fibres and Polymers, Springer Series, Vol.23, No.3, pp. 680-689, March 2022. **(IF=2.153)**
3. Khan, S.; Shaikh, F.; Siddiqui, M. M.; **Hussain, T**.; Kumar, L. and Nahar, A. (2022) "Hourly Forecasting of Solar Photovoltaic Power in Pakistan Using Recurrent Neural Networks." International Journal of Photoenergy, 2022, 7015818. **(IF=2.113)**
4. Soother, D. K.; Ujjan, S. M.; Dev, K.; Khawaja, S. A.; Bhatti, N. A.; and Hussain, T. (2022) "Towards Soft Real-time Fault Diagnosis for Edge Devices in industrial IoT Using Deep Domain Adaptation Training Strategy." Journal of Parallel and Distributed Computing, Vol.160 (2022), pp. 90–99. **(IF=3.734)**
5. Unar, I.N.; Maitlo, G.; Abbasi, S.A.; Abro, M.; Qureshi, R. F.; Memon, S. A.; **Hussain T**.; Mangi, K. H. (2022) "Modelling and Simulation of Solar Flat Plate Collector for Energy Recovery at Varying Regional Coordinates". Journal of Environmental Science and Pollution Research, 2022 Jan;29(3):4748-4761. doi: 10.1007/s11356-021-15869-0. Epub 2021 Aug 19. PMID: 34410601. **(IF=4.2)**.
6. Palli, G. H.; Memon, K.; Chowdhry, B. S.; Memon, A.R.; and **Hussain T.** (2021) "Railway Track Fault Analysis using Dynamic ROI Detection in Cluttered Environment using Deep Learning" Gyancity Journal of Electronics and Computer Science, Vol.6, No.2, pp. 1-15, September 2021, ISSN: 2446-2918 DOI: 10.21058/gjecs.2021.62001.
7. Soother, D. K.; Daudpoto, J.; Harris, N. R.; Hussain, M.; Mehran, S.; Kalwar, I. H.; **Hussain, T**. and Memon, T. D. (2021) "The Importance of Feature Processing in Deep-Learning-Based Condition Monitoring of Motors". Journal of Mathematical Problems in Engineering, 2021, 9927151. **(IF=1.009)**.
8. D.K. Soother, I.H Kalwar, **T. Hussain**, B.S Chowdhry, S.M. Ujjan, and T.D Memon (2021) " A Novel Method Based on UNET for Bearing Fault Diagnosis," Journal of Computers, Materials & Continua 2021, Vol.69(1). **(IF=4.89)**.
9. Nadir Hussain, Mujahid Mehdi, Muhammad Yousif, Aizaz Ali, Sana Ullah, Sajid Hussain Siyal, **Tanweer Hussain**, and Ick Soo Kim (2021) "Synthesis of Highly Conductive Electrospun Recycled Polyethylene Terephthalate Nanofibers Using the Electroless Deposition Method" Nanomaterials (Basel). 2021 Feb 19; Vol. 11(2):531. doi: 10.3390/nano11020531. **(IF=4.034).**
10. A. Arain, **T. Hussain**, S.M Ujjan, B.S. Chowdhry, T.R. Memon (2021) "Rail surface faults identification from low quality image data using machine learning algorithms". Gyancity Journal of Electronics and Computer Science. Vol. 6, pp. 11-21 March 2021.
11. Intizar Ali, Dileep Kumar, **Tanweer Hussain**, Munsif Jatoi, and Safiullah, (2020) "Investigation of Varying Span-wise Waviness Wavelength Effect on Wing Aerodynamic Performance" Springer Journal of Fluid Dynamics Vol. 55, pp 657-669. (**IF= 0.729**).
12. Intizar Ali, Madad Ali Shah, **Tanweer Hussain**, Khanji Harijin, Nayyar Hussain Mirjat, and Abdul Hameed Memon (2020) "Investigation of duct augmented system effect on overall performance of straight blade Darrieus hydrokinetic turbine", Renewable Energy Journal, Vol. 153(2020), pp 143-154. (**IF= 6.274**)
13. Shams, S; **Hussain, T**.; Shaikh, S. A.; Shams, B, and Bhurgari, J. (2019) "Performance Analysis of SMAW Welding and GMAW-FCAW Combined Welding for Pipeline Construction Jobs at SSGC." Pakistan Journal of Science, 71 (4 Suppl.): 278-282, ISSN: 2411-0930
14. Bhurgari, J.; Samo, S.; **Hussain, T.**; Zulfikar, M. W.; and Shams, S (2019) "Design and Analysis of Plastic Extruder as 3D Printer Head FDM" Pakistan Journal of Science, 71 (4 Suppl.): 283-287, ISSN: 2411-0930
15. Mazari, T. A.; **Hussain, T.**; and Jamali, M. S. (2019) "Design and Analysis of Vertical Axis Wind Turbine on Small Scale Energy Production" International Journal of Scientific & Engineering Research, 10(4): 87-97
16. Mehwish, Mirza; and **Tanweer Hussain**. (2018), "Control and Analysis of Drip irrigation system ", International Journal for Research in Applied Science & Engineering Technology (IJRASET), Vol. 6(4): 5069-5074.

17. Mir, I.; Samo, S.; **Hussain, T.**, Ali, I., and Durrani, H.A.K. (2017), "Influence of Convergent Section Length and Angle on Performance of Supersonic Nozzle ", Sindh University Research Journal (Science Series), Vol. 49(4): 727-732.

18. Ali, I.; Samo, S.; Kumar, D.; and **Hussain, T.** (2017), "Aerodynamic Performance analysis of Rough Rectangular Aircraft Wing for Subsonic flow", Sindh University Research Journal (Science Series), Vol. 49(2): 403-408.

19. Shaikh, S. A., Jumani, S., and **Hussain, T.** (2014), "Investigating the Effects of Assembly Order on the Performance in Relation to Cognitive and Physical Demands Under Takt Time", Mehran University Research Journal of Engineering and Technology, Vol. 33(4): 372-380.

20. Yang Z., McWilliam S., Popov A. A. and **Hussain T.** (2013), "A Probabilistic Approach to Variation Propagation Control for Straight Build in Mechanical Assembly", International Journal of Advanced Manufacturing Technology, Vol. 64(5-8), p. 1029-1047. **(IF= 1.205)**

21. Yang Z., McWilliam S., Popov A. A., **Hussain T.**, and Yang, H. (2013), "Dimensional Variation Propagation Analysis in Straight-Build Mechanical Assemblies Using A Probabilistic Approach", Journal of Manufacturing Systems, Vol. 32(2), p. 348–356. **(IF= 1.070)**

22. **Hussain, T.**, Memon, A. R., and Larik, J. (2013), "Analysis of Thermal Desorption System for the Chemical Treatment of Old Storages of Oil Based Mud", Mehran University Research Journal of Engineering and Technology, Vol. 32(2), p. 71-80.

23. **Hussain, T.**, Abbasi, A. F., and Daudpoto, J. (2013). "Tolerance Analysis in Straight-Build Mechanical Assemblies Using a Probabilistic Approach-2D Assembly", Mehran University Research Journal of Engineering and Technology, Vol. 32(2), p. 319-328.

24. **Hussain, T.**, Shaikh, G. Y., and Shaikh, S. A. (2013). "Variation Propagation Control in Straight-Build Assemblies: 2D Case Study", Mehran University Research Journal of Engineering and Technology, Vol. 32(1), p. 71-80.

25. Shaikh, S. A., Shaikh, G. Y., and **Hussain, T.** (2013). "Investigating the Effects of Concurrent Performance of Physical and Cognitive Demanding Task in Paced Assembly Lines", Mehran University Research Journal of Engineering and Technology, Vol. 32(3), p. 365-372.

26. **Hussain, T.**, McWilliam, S., Popov, A. A. and Yang, Z. (2012), "Geometric Error Reduction in the Assembly of Axi-symmetric Rigid Components - A 2D Case Study", Proceedings of the Institution of Mechanical Engineers, Part B, Journal of Engineering Manufacture, Vol. 226(**7**), p. 1259-1274. **(IF= 0.770)**

27. **Hussain, T.**, Memon, M. and, Ali, Z. (2012), "Prediction of Elastic-Plastic Behaviour of Structures at Notches", Mehran University Research Journal of Engineering and Technology, Vol. 31(3): 545-552.

28. Memon, M., **Hussain, T.** and, Ali, Z. (2012), "Minimizing Assembly Errors by Selecting Optimum Assembly Sequence in the Assembly of Rigid Circular Structure", Mehran University Research Journal of Engineering and Technology, Vol. 31(4): 743-754.

29. Pathan, D. M., Ali, Z., and, **Hussain, T.** (2012), "Analysis of the Controllers for the Transitional Manoeuvres of Adaptive Cruise Control Systems", Mehran University Research Journal of Engineering and Technology, Vol. 31(3): 545-552.

30. Ali, Z., Pathan, D. M. and **Hussain, T.**, (2012), "Analysis of an ACC System for Sliding Mode and MPC under Transitional Manoeuvers", Mehran University Research Journal of Engineering and Technology, Vol. 31(4): 669-676.

31. **Hussain, T.**, Ali, Z., Daudpoto, J., Khaliqdina, J.H., and Memon, I. A. (2012), "A Probabilistic Tolerance Analysis for Mechanical Assembly of Rotating Machines", Sindh University Research Journal (Science Series), Vol. 44(4): 565- 570.

32. **Hussain, T.**, Ali, Z., and Larik, J. (2012), "A Study on Tolerance Representation, Variation Propagation Analysis and Control in Mechanical Assemblies", Sindh University Research Journal (Science Series), Vol. 44(3): 427-432.

33. Ali, Z., Jumani, S., and **Hussain, T.** (2012), "Sliding Mode Control for Longitudinal Control of a Platoon of Adaptive Cruise Control Vehicles", Sindh University Research Journal (Science Series), Vol. 44(2): 245-250.

34. Ali, Z., Jumani, S., and **Hussain, T.** (2012), "Analysis of the Automotive Powertrain Model for Longitudinal Dynamics Control using Look-up Tables", Sindh University Research Journal (Science Series), Vol. 44(2): 281-290.

35. Pathan, D. M., **Hussain, T.**, Daudpoto, J., and Memon, I. A. (2012), "Neural Network Steering Controller for a Ship", Sindh University Research Journal (Science Series), Vol. 44(3): 395-398.

36. Daudpoto, J., Ali, Z., **Hussain, T.**, and Khaliqdina, J.H., (2012), "Design, Development and Characterisation of a Bundled SMA Actuator", Sindh University Research Journal (Science Series), Vol. 44(4): 641-644.

37. **Hussain T.**, Yang Z., Popov A. A. and McWilliam S. (2011), "Straight-Build Assembly Optimization: A Method to Minimize Stage-by-Stage Eccentricity Error in the Assembly of Axisymmetric Rigid Components (Two-Dimensional Case Study)", ASME Journal of Manufacturing Science and Engineering, Vol.133(**3**), p.031014/1-9. **(IF= 0.727)**

38. Yang Z., **Hussain T.**, Popov A. A. and McWilliam S. (2011), "Novel Optimization Technique for Variation Propagation Control in an Aero-Engine Assembly", Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, Vol. 225(**1**), p. 100-111. **(IF= 0.770)**

39. Yang Z., **Hussain T.**, Popov A. A. and McWilliam S. (2011), "A Comparison of Different Optimization Techniques for Variation Propagation Control in Mechanical Assembly", IOP Conference Series: Journal of Materials Science and Engineering, Vol.26(**1**), p. 1-11.

PAPERS PRESENTED AT VARIOUS INTERNATIONAL CONFERENCES

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