

# Aamer Ahmed Baqai

Adjunct Faculty

College of Electrical & Mechanical Engineering

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## About

Dr. Aamer Ahmed Baqai is working as Adjunct Faculty in the College of Electrical & Mechanical Engineering. Dr. Aamer Ahmed Baqai has a PhD in Mechanical / Manufacturing. Dr. Aamer Ahmed Baqai has published 36 research articles & conference papers having a citation count of 313, carried out 0 projects and filed 1 intellectual property.

## Qualifications

<b>PhD in Mechanical / Manufacturing</b> Paris Tech, France , France	2006 - 2010
<b>MSc in Mech Engineering</b> Paris Tech, France , France	2005 - 2006
<b>BE in Mech Engineering</b> UET Lahore , Pakistan	1990 - 1993

## Experience

<b>Adjunct Faculty</b> College of Electrical & Mechanical Engineering	2022- Present
<b>Defence Faculty</b> College of Electrical & Mechanical Engineering	2020 - 2022
<b>Professor (Dean)</b> NUST College of E&ME , Peshawar Road, Rawalpindi	2020 - 2022
<b>Teaching Visiting Faculty</b> NUST College of E&ME , Peshawar Road, Rawalpindi	2015 - 2020
<b>Associate Professor (PG Coord &amp; HoD DME)</b> NUST College of E&ME , Peshawar Road, Rawalpindi	2011 - 2015
<b>Assistant Professor</b> NUST College of E&ME , Peshawar Road, Rawalpindi	2010 - 2011

## Research Articles

<b>Hybrid Additive Manufacturing: A Review from a Process Planning Perspective</b> <i>Rabiah Tabassum Uzair Khaleeq Uz Zaman Aamer Ahmed Baqai, Abdur Rehman Mazhar Sajid Ullah Butt</i> <i>Journal of Advanced Manufacturing Systems</i> , Volume 23, No. 01, Pages 227-262 <b>Impact Factor:</b> 0.900   <b>Quartile:</b> 4   <b>Citations:</b> 1 <b>DOI:</b> 10.1142/S0219686724500100	2024
<b>Optimization of Wire Electric Discharge Machining (WEDM) Process Parameters for AISI 1045 Medium Carbon Steel Using Taguchi Design of Experiments</b> <i>Uzair Khaleeq uz Zaman Usman Ahmed Khan Shahid Aziz Aamer Ahmed Baqai Sajid Ullah Butt Danish Hussain Ali Siadat Dong Won Jung</i> <i>Materials</i> , Volume 15(21), Article Number 7846 <b>Impact Factor:</b> 3.748   <b>Quartile:</b> 1   <b>Citations:</b> 13 <b>DOI:</b> 10.3390/ma15217846	2022
<b>Comparative analysis of tool wear progression of dry and cryogenic turning of titanium alloy Ti-6Al-4V under low, moderate and high tool wear conditions</b> <i>Muhammad Ali Khan Syed Hussain Imran Jaffery Aamer Ahmed Baqai Mushtaq Khan</i> <i>International Journal of Advanced Manufacturing Technology</i> , Volume:121, Issue:1-2, Page:1269-1287	2022

<b>Impact Factor:</b> 3.226   <b>Quartile:</b> 2   <b>Citations:</b> 20 <b>DOI:</b> <a href="https://doi.org/10.1007/s00170-022-09196-y">https://doi.org/10.1007/s00170-022-09196-y</a>	
<b>Locator Placement Optimization for Minimum Part Positioning Error During Machining Operation Using Genetic Algorithm</b> <i>Sajid Ullah Butt Mamoon Arshad Aamer Ahmed Baqai Hasan Aftab Saeed Naveed Akmal Din Rehan Ahmed Khan</i> <i>International Journal of Precision Engineering and Manufacturing</i> , Volume 22(5), Pages 813-829 <b>Impact Factor:</b> 2.041   <b>Quartile:</b> 3   <b>Citations:</b> 9 <b>DOI:</b> <a href="https://doi.org/10.1007/s12541-021-00500-6">https://doi.org/10.1007/s12541-021-00500-6</a>	2021
<b>Material Handling Cost Consideration in Process Plan Selection for Reconfigurable Manufacturing System</b> <i>Syeda Naela Fatima Hasan Aftab Saeed Sajid Ullah Butt Aamer Baqai</i> <i>Journal of Engineering and Applied Sciences</i> , Volume 38, Issue 1, Pages 1-14 <b>Impact Factor:</b> 0 <b>DOI:</b> 10.25211/jeas.v38i1.2302	2019
<b>Impact of fused deposition modeling (FDM) process parameters on strength of built parts using Taguchi's design of experiments</b> <i>Emilien Boesch Ali Siadat Mickael Rivette Aamer Ahmed Baqai Uzair Khaleeq uz Zaman</i> <i>International Journal of Advanced Manufacturing Technology</i> , Volume 101, Issue 5–8, Pages 1215–1226 <b>Impact Factor:</b> 2.633   <b>Quartile:</b> 2   <b>Citations:</b> 150 <b>DOI:</b> 10.1007/s00170-018-3014-6	2019
<b>Incorporation of part complexity into system scalability for flexible/reconfigurable systems</b> <i>Syed Maaz Hasan Aamer Ahmed Baqai Sajid Ullah Butt Muhammad Farhan Ausaf Uzair Khaleeq uz Zaman</i> <i>The International Journal of Advanced Manufacturing Technology</i> , Volume:99, Issue:9-12, Page:2959-2979 <b>Impact Factor:</b> 2.496   <b>Quartile:</b> 2   <b>Citations:</b> 4 <b>DOI:</b> 10.1007/s00170-018-2654-x	2018
<b>Development of a STEP-compliant design and manufacturing framework for discrete sheet metal bend parts</b> <i>Syed Husain Imran Jaffery Zahid Faraz Syed Waheed ul Haq Liaquat Ali Wasim Akram Tarar Aamer Ahmed Baqai Mushtaq Khan Rizwan Saeed Choudhry Khalid Mahmood</i> <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , Volume 232, Issue 6, Pages 1090-1104 <b>Impact Factor:</b> 1.752   <b>Quartile:</b> 3   <b>Citations:</b> 5 <b>DOI:</b> 10.1177/0954405416661007	2018
<b>Product family formation based on complexity for assembly systems</b> <i>Syed Maaz Hasan Uzair Khaleeq uz Zaman Aamer Ahmed Baqai Sajid Ullah Butt</i> <i>The International Journal of Advanced Manufacturing Technology</i> , NULL <b>Impact Factor:</b> 2.496   <b>Quartile:</b> 2   <b>Citations:</b> 13 <b>DOI:</b> DOI: <a href="https://doi.org/10.1007/s00170-017-1174-4">https://doi.org/10.1007/s00170-017-1174-4</a>	2018
<b>Framework for Part Families Associated with Setup Sequence Based Similarity in Reconfigurable Manufacturing System / Cellular Manufacturing System</b> <i>Muhammad Ali Aamer Ahmed Baqai Sajid Ullah Butt Syed Maaz Hasan</i> <i>International Journal of Materials, Mechanics and Manufacturing</i> , Volume 6 Number 1, Pages 63-68 <b>Impact Factor:</b> N/A <b>DOI:</b> 10.18178/ijmmm.2018.6.1.348	2018
<b>Optimum machine capabilities for reconfigurable manufacturing systems</b> <i>Eram Asghar Aamer Ahmed Baqai Lazhar Homri Uzair Khaleeq uz Zaman</i> <i>The International Journal of Advanced Manufacturing Technology</i> , Pages 1–21, online published on 10 Jan 2018 <b>Impact Factor:</b> 2.496   <b>Quartile:</b> 2   <b>Citations:</b> 33 <b>DOI:</b> <a href="https://doi.org/10.1007/s00170-017-1560-y">https://doi.org/10.1007/s00170-017-1560-y</a>	2018
<b>An analytical approach for positioning error and mode shape analysis of n – legged parallel manipulator</b> <i>Muhammad Sohail Sajid Ullah Butt Aamer Ahmed Baqai</i> <i>International Journal of Computer Integrated Manufacturing</i> , NULL <b>Impact Factor:</b> 1.995   <b>Quartile:</b> 2   <b>Citations:</b> 5 <b>DOI:</b> <a href="http://dx.doi.org/10.1080/0951192X.2017.1379098">http://dx.doi.org/10.1080/0951192X.2017.1379098</a>	2017
<b>Integrated product-process design to suggest appropriate manufacturing technology: a review</b> <i>Ali Siadat Mickael Rivette Aamer Ahmed Baqai Lihong Qiao Uzair Khaleeq uz Zaman</i>	2017

**Impact Factor:** 2.601 | **Quartile:** 2 | **Citations:** 33

**DOI:** 10.1007/s00170-016-9765-z

**A Novel Idea for Optimizing Condition Based Maintenance using Genetic Algorithms and Continuous Event Simulation Techniques**

2017

Mansoor Ahmed Siddiqui Shahid Ikramullah Butt Aamer Ahmed Baqai Jiping Lu Faping Zhang

*Mathematical Problems in Engineering*, Volume 2017, Article ID 6061234

**Impact Factor:** 1.145 | **Quartile:** 3 | **Citations:** 11

**DOI:** <https://doi.org/10.1155/2017/6061234>

**Sheet-metal bend sequence planning subjected to process and material variations**

2017

Zahid Faraz Syed Waheed ul Haq Liaqat Ali Khalid Mahmood Wasim Akram Tarar Aamer Ahmed Baqai Mushtaq Khan Syed Husain Imran

*The International Journal of Advanced Manufacturing Technology*, NULL

**Impact Factor:** 2.601 | **Quartile:** 2 | **Citations:** 11

**DOI:** 10.1007/s00170-016-8823-x

**Co-development of process planning and structural configurations considering machine's accessibility in a reconfigurable setup**

2016

Eram Asghar Aamer Ahmed Baqai Ramshah Ahmad Toor Sara Ayub

*Review of Computer Engineering Research*, Volume 3, No. 2, Pages 41-46

**Impact Factor:** 0

**DOI:** 10.18488/journal.76/2016.3.2/76.2.41.46

**Reconfigurable fixture locating layout for compliant sheet metal welded assemblies subjected to welding force variations**

2014

Aamer Ahmed Baqai Zahid Faraz Syed Waheed ul Haq Waseem Akram Tarar Liaqat Ali

*Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, Volume 228(5), Pages 740-750

**Impact Factor:** 0.954 | **Quartile:** 3 | **Citations:** 3

**DOI:** 10.1177/0954405413506704

**Effect of surface roughness and temperature on EHL for parallel surfaces subjected to high acceleration**

2014

Usman Ali Zia Aamer Ahmed Baqai Waseem Akram

*Tribology in Industry*, Volume 36, Issue 2, Pages 144-154

**Impact Factor:** -

**DOI:** -xyz

## Conference Proceedings

**Specific cutting energy analysis of turning Ti-6Al-4V under dry, wet and cryogenic conditions**

2022

Muhammad Ali Khan Syed Hussain Imran Jaffery Aamer Ahmed Baqai Mushtaq Khan

*11th International Conference on Through-life Engineering Services – TESConf2022*, res.country(231,)

**Citations:** N/A

**DOI:** <https://dspace.lib.cranfield.ac.uk/handle/1826/18659>

**Integrated Product-Process Design: Conceptual Framework for Data Driven Manufacturing Resource Selection**

2022

Uzair Khaleeq uz Zaman Mujtaba Rafique Ghoto Ali Siadat Aamer Ahmed Baqai Anas Bin Aqeel Usman Qamar

*2022 2nd International Conference on Digital Futures and Transformative Technologies (IcoDT2)*, res.country(177,)

**Citations:** N/A

**DOI:** 10.1109/ICoDT255437.2022.9787394

**A petri-net model for scalable systems with variable stages based on changing product demands**

2018

Syed Maaz Hasan Sajid Ullah Butt Aamer Ahmed Baqai

*28th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM 2018)*, res.country(233,)

**Citations:** N/A

**DOI:** 10.1016/j.promfg.2018.10.036

**Accuracy Analysis of 3-RSS Delta Parallel Manipulator**

2018

Mansoor Ghazi Sajid Ullah Butt Aamer Ahmed Baqai Qasim Nazir

*28th International Conference on Flexible Automation and Intelligent Manufacturing*, res.country(233,)

**Citations:** N/A

**DOI:** 10.1016/j.promfg.2018.10.033

<b>A new approach to predict the flexibility and precision of manufacturing systems using geometric constraints and small displacement torsors</b> <i>Hana Amin Khan Sajid Ullah Butt Aamer Ahmed Baqai Hasan Aftab Saeed</i> <i>28th International Conference on Flexible Automation and Intelligent Manufacturing (FAIM 2018), res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1016/j.promfg.2018.10.049	2018
<b>Integrated Design-Oriented Framework for Resource Selection in Additive Manufacturing</b> <i>Uzair Khaleeq Uz Zaman Mickael Rivette Aamer Ahmed Baqai</i> <i>28th CIRP Design Conference, res.country(75,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1016/j.procir.2018.02.039	2018
<b>Optimization of Locators Placement for Minimum Workpiece Positioning Error</b> <i>Mamoon Arshad Sajid Ullah Butt Aamer Ahmed Baqai</i> <i>International Conference on Intelligent Systems, Metaheuristics &amp; Swarm Intelligence (ISMSI 2017), res.country(94,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1145/3059336.3059357	2017
<b>Multiobjective optimization of a Tricept parallel manipulator using Evolutionary Algorithms</b> <i>Syed Saad Farooq Aamer Ahmed Baqai Sajid ullah Butt Wasim Akram Tarar Amjad Baig</i> <i>25th International Conference of Flexible Automation and Intelligent Manufacturing, res.country(231,)</i> <b>Citations:</b> N/A <b>DOI:</b> <a href="https://www.researchgate.net/publication/305703482_Multi_objective_Optimization_of_a_Tricept_Parallel_Manipulator_using_Evolutionary_Algorithm">https://www.researchgate.net/publication/305703482_Multi_objective_Optimization_of_a_Tricept_Parallel_Manipulator_using_Evolutionary_Algorithm</a>	2015
<b>Performance of NSGA-II and WGA in Macro Level Process Planning Considering Reconfigurable Manufacturing System</b> <i>Eram Asghar Aamer Ahmed Baqai Uzair Khaleeq uz Zaman</i> <i>International Conference on Flexible Automation and Intelligent Manufacturing, res.country(231,)</i> <b>Citations:</b> N/A <b>DOI:</b> N/A	2015
<b>Global Sequence Generation and Minimizing the Total Utility Work for Mixed Model Assembly Lines</b> <i>Amjad Baig Aamer Ahmed Baqai Uzair Khaleeq uz Zaman</i> <i>25th International Conference on Flexible Automation and Intelligent Manufacturing FAIM 2015, res.country(231,)</i> <b>Citations:</b> N/A <b>DOI:</b> <a href="https://www.researchgate.net/publication/320183172_Global_Sequence_Generation_and_Minimizing_the_Total_Utility_Work_for_Mixed_Model_Assembly_Lines">https://www.researchgate.net/publication/320183172_Global_Sequence_Generation_and_Minimizing_the_Total_Utility_Work_for_Mixed_Model_Assembly_Lines</a>	2015
<b>Mixed Model Assembly Line sequencing by Minimizing Utility Work and Using Genetic Algorithm</b> <i>Uzair Khaleeq uz Zaman Aamer Ahmed Baqai</i> <i>ASME 2014 International Mechanical Engineering Congress and Exposition IMECE2014, res.country(38,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1115/IMECE2014-38000	2014
<b>Vehicle Modeling and Performance Evaluation Using Active Torque Distribution</b> <i>Rizwan Latif Raja Amer Azim Aamer Ahmed Baqai Imran Shafi</i> <i>SAE 2014 World Congress and Exhibition, res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.4271/2014-01-0103	2014
<b>Multi-Criteria Optimization of Process Plans for Reconfigurable Manufacturing Systems: An Evolutionary Approach</b> <i>Taiba Zahid Aamer Ahmed Baqai</i> <i>ASME 2013 International Mechanical Engineering Congress and Exposition, res.country(233,)</i> <b>Citations:</b> N/A <b>DOI:</b> 10.1115/IMECE2013-64560	2013
<b>An approach for the selection of process plans based on part family changes</b> <i>Syed Maaz Hasan Aamer Ahmed Baqai</i> <i>FAIM Flexible Automation and Intelligent Manufacturing Proceedings Published in Advances in Sustainable and Competitive Manufacturing Systems, res.country(183,)</i> <b>Citations:</b> N/A <b>DOI:</b> <a href="https://doi.org/10.1007/978-3-319-00557-7">https://doi.org/10.1007/978-3-319-00557-7</a>	2013

## A Petri-Net Model for Machine Structure Configuration Approach

2012

Syed Maaz Hasan Aamer Ahmed Baqai Muhammad Nadeem Azam

ASME 2012 International Mechanical Engineering Congress and Exposition, res.country(233,)

**Citations:** N/A

**DOI:** <https://doi.org/10.1115/IMECE2012-88846>

## An algorithm for the generation/selection of process plans based upon production rate

2011

Syed Maaz Hasan Muhammad Nadeem Azam Muhammad Salman Siddiqui Aamer Ahmed Baqai

International Conference on Advance Modeling and Simulation At: NUST, Islamabad Pakistan , res.country(177,)

**Citations:** N/A

**DOI:** Nil

## Book Chapters

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### Computer-Aided Design, Computer-Aided Process Planning, and Computer-Aided Manufacturing

2023

Anas Bin Aqeel Uzair Khaleeq uz Zaman Shahid Aziz Aamer Ahmed Baqai

In: *Handbook of Manufacturing Systems and Design: An Industry 4.0 Perspective* , Chapter 2, 1st Edition, Pages:20

**Citations:** 2

**DOI:** 10.1201/9781003327523-3

## Editorial Activities

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Edited Journal Issue / Proceeding / Book

2023

**Impact Factor:** -

## Intellectual Property

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### Copyrights

### Patents

### Industrial Designs

#### Flexible Mobile Automated Guided Vehicle Platform

2021

**Status:** Filed

### Trademarks