

# Mujtaba Hassan Agha

Professor

NUST Business School

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## About

Dr. Mujtaba Hassan Agha is working as Professor in the NUST Business School. Dr. Mujtaba Hassan Agha has a PhD in Industrial Engineering. Dr. Mujtaba Hassan Agha has published 41 research articles & conference papers having a citation count of 717, carried out 6 projects and filed 0 intellectual property.

## Qualifications

<b>PhD in Industrial Engineering</b> Institut National Polytechnique de Toulouse , France	2006 - 2009
<b>MS in Fluid Mechanics &amp; Energy Transfer</b> Institut National Polytechnique de Toulouse , France	2005 - 2006
<b>MBA in Human Resource Management</b> NUST, Islamabad , Pakistan	2003 - 2006
<b>BS in Mechanical Engineering</b> Ghulam Ishaq Khan Institute of Science & Technology , Pakistan	1997 - 2001

## Experience

<b>Professor</b> NUST Business School	2023- Present
<b>Professor</b> NUST Business School	2021 - 2023
<b>Professor</b> NUST Business School	2019 - 2021
<b>Associate Professor</b> Capital University of Science and Technology (CUST) , Kahuta Road Islamabad	2011 - 2019
<b>Assistant Professor</b> National University of Sciences and Technology , H-12, Islamabad	2010 - 2011
<b>Manager</b> National Engineering and Scientific Commission , Near Wah Cantt Pakistan	2001 - 2011

## Awards

<b>Erasmus Mundus Leader Sch</b> Erasmus Mundus Leader Scholarship Three-month scholarship for the Teacher Training/Research Program. As an outcome of the scholarship a joint project is being conducted in collaboration with University of Brescia (Italy) on topic of Total Cost of Ownership. Moreover, the research resulted in signing of MoU (Memorandum of Understanding) between CUST and University of Brescia.	2017
<b>Erasmus Mundus Fusion Sch</b> Erasmus Mundus Fusion Scholarship One-month scholarship for the Teacher Training/Research Program. As an outcome of the scholarship a joint project is being conducted in collaboration with University of Bremen (Germany) on topic of Network Analysis of China Pakistan Economic Corridor	2016
<b>Leopold Escande Award</b> Leopold Escande Award Best PhD thesis of academic year 2008-2009 at Institut National Polytechnique Toulouse (INPT).	2009
<b>HEC Scholarship</b> HEC Scholarship for MS leading to PhD Studies	2005

Professional Memberships

ASCM

Since 2013

Research Projects

National Projects

Academic staff mobility

2016

Funding Agency: European Union

Amount: PKR 1,844,425.00

Status: Completed

International Projects

Industry Projects

National Projects

Decarbonization of Cement Sector in Pakistan

Client: POLICY RESEARCH INSTITUTE FOR EQUITABLE DEVELOPMENT (PRIED) (Pvt.) Ltd.Paksitan

Amount: PKR 3,600,000.00

Status: Completed

Consultancy –HRDC-IMSciences Peshawar

Client: HRDC-IMSciences Peshawar

Amount: PKR 270,000.00

Status: Completed

2022

Shifting of POL Products to Railways

Client: Pakistan Railways

Amount: PKR 1,750,000.00

Status: Approved\_inprocess

2021

Consultancy –HRDC-IMSciences Peshawar

Client: HRDC-IMSciences Peshawar

Amount: PKR 547,500.00

Status: Completed

2021

Career Orientation Test Development

Client: Merafuture

Amount: PKR 1,200,000.00

Status: Completed

2020

International Projects

Research Articles

Novel ergonomics indicator-based approach for evaluating a supplier organization's sustainable process performance

2025

Mujtaba Hassan Agha Shahid Ikram Ullah Butt Andrew Thatcher Irem Sarbat Asim Amjad

Applied Ergonomics , Volume:129, Article Number 104583

Impact Factor: 3.400 | Quartile: 2

DOI: <https://doi.org/10.1016/j.apergo.2025.104583>

An inventory-based integrated model of a hybrid electricity supply chain for sustainable electricity storage management

Waqas Ahmed Saad Salman Muhammad Imran Mujtaba Hassan Agha Muhammad Moazzam

Journal of Energy Storage , Volume 83, Article Number:110746

Impact Factor: 8.900 | Quartile: 1 | Citations: 1

DOI: [10.1016/j.est.2024.110746](https://doi.org/10.1016/j.est.2024.110746)

2024

Logistics performance system and their impact on economic corridors: a developing economy perspective

Muhammad Saleem Ullah Khan Sumbal Mujtaba Hassan Agha Aleena Nisar Felix Chan

Industrial Management & Data Systems , Volume 124, No. 3, Pages 1005-1025

2024

<b>Impact Factor:</b> 5.500   <b>Quartile:</b> 2   <b>Citations:</b> 5 <b>DOI:</b> <a href="https://doi.org/10.1108/IMDS-03-2023-0151">https://doi.org/10.1108/IMDS-03-2023-0151</a>	
<b>Integrating Ergonomics and sustainability: A framework with LDA methodology and implementation roadmap</b> <i>Shahid Ikramullah Butt Mujtaba Hassan Agha Ayyaz Ahmad Faping Zhang Shamraiz Ahmad Asim Amjad Technology in Society</i> , Volume 75, Article Number 102369 <b>Impact Factor:</b> 9.2   <b>Quartile:</b> 1   <b>Citations:</b> 2 <b>DOI:</b> <a href="https://doi.org/10.1016/j.techsoc.2023.102369">https://doi.org/10.1016/j.techsoc.2023.102369</a>	2023
<b>European transition toward climate neutrality: Is renewable energy fueling energy poverty across Europe?</b> <i>Sulaman Muhammad Yanchun Pan Xiao Ke Mujtaba Hassan Agha Prasad Siba Borah Muhammad Akhtar Renewable Energy</i> , Volume 208, Pages 181-190 <b>Impact Factor:</b> 8.634   <b>Quartile:</b> 1   <b>Citations:</b> 18 <b>DOI:</b> <a href="https://doi.org/10.1016/j.renene.2023.03.090">https://doi.org/10.1016/j.renene.2023.03.090</a>	2023
<b>Investigating the role of risk mitigation strategies on supply chain disruption impact amidst covid-19 outbreak</b> <i>Komal Abdullah Tashfah Tauqir Mujtaba Hassan Agha Rameez Khalid NUST Business Review</i> , Volume 03(02), Pages 1-28 <b>Impact Factor:</b> N/A <b>DOI:</b> <a href="https://doi.org/10.37435/NBR21031701">https://doi.org/10.37435/NBR21031701</a>	2022
<b>Industrial structure, energy intensity and environmental efficiency across developed and developing economies: The intermediary role of primary, secondary and tertiary industry</b> <i>Sulaman Muhammad Yanchun Pan Mujtaba Hassan Agha Muhammad Umar Siyuan Chen Energy</i> , Volume 247, Article Number 123576 <b>Impact Factor:</b> 8.9   <b>Quartile:</b> 1   <b>Citations:</b> 140 <b>DOI:</b> <a href="https://doi.org/10.1016/j.energy.2022.123576">10.1016/j.energy.2022.123576</a>	2022
<b>Redefining Critical Tasks for Responsive and Resilient Scheduling–An Intelligent Fuzzy Heuristic Approach</b> <i>Taiba Zahid Mujtaba Hasan Agha Salman Sagheer Warsi Usman Ghafoor IEEE Access</i> , Volume 9, Pages 145513-145521 <b>Impact Factor:</b> 3.367   <b>Quartile:</b> 2   <b>Citations:</b> 2 <b>DOI:</b> <a href="https://doi.org/10.1109/ACCESS.2021.3123138">10.1109/ACCESS.2021.3123138</a>	2021
<b>A Multi-Criteria Decision Framework for Sustainable Supplier Selection and Order Allocation using Multi-objective Optimization and Fuzzy Approach</b> <i>Raja Awais Liaqait Salman Sagheer Warsi Mujtaba Hassan Agha Till Becker Taiba Zahid Engineering Optimization</i> , Pages 1-22 <b>Impact Factor:</b> 2.500   <b>Quartile:</b> 2   <b>Citations:</b> 31 <b>DOI:</b> <a href="https://doi.org/10.1080/0305215X.2021.1901898">10.1080/0305215X.2021.1901898</a>	2021
<b>Conceptualizing Audit Fatigue in the Context of Sustainable Supply Chains</b> <i>Muhammad Kamran Khalid Mujtaba Hassan Agha Syed Tasweer Hussain Shah Muhammad Naseer Akhtar Sustainability</i> , Volume 12(21), Article Number 9135 <b>Impact Factor:</b> 2.576   <b>Quartile:</b> 2   <b>Citations:</b> 7 <b>DOI:</b> <a href="https://doi.org/10.3390/su12219135">https://doi.org/10.3390/su12219135</a>	2020
<b>Simultaneous Customers and Supplier's Prioritization: An AHP-Based Fuzzy Inference Decision Support System (AHP-FIDSS)</b> <i>Muhammad Imran Mujtaba Hassan Agha Waqas Ahmed Muhammad Babar Ramzan Biswajit Sarkar International Journal of Fuzzy Systems</i> , Pages 1-27 <b>Impact Factor:</b> 4.673   <b>Quartile:</b> 1   <b>Citations:</b> 23 <b>DOI:</b> <a href="https://doi.org/10.1007/s40815-020-00977-9">https://doi.org/10.1007/s40815-020-00977-9</a>	2020
<b>Case study on the Competitiveness Comparisons of Karachi Port with the Neighbouring Emerging Ports in Persian Gulf and Indian Ocean</b> <i>Mujtaba Hassan Agha Raja Awais Liaqait Till Becker Salman Sagheer Warsi NUST Business Review</i> , Volume 2, Issue 1, Pages 12-42 <b>Impact Factor:</b> - <b>DOI:</b> <a href="https://nbr.nust.edu.pk/vol-2-issue-1/">https://nbr.nust.edu.pk/vol-2-issue-1/</a>	2020

<b>Development of specific cutting energy map for sustainable turning: a study of Al 6061 T6 from conventional to high cutting speeds</b> <i>Riaz Ahmad Syed Husain Imran Jaffery Mujtaba Hassan Agha Salman Sagheer Warsi Mushtaq Khan</i> <i>The International Journal of Advanced Manufacturing Technology</i> , Volume 106, Issue 7-8, Pages 2949-2960 <b>Impact Factor:</b> 3.226   <b>Quartile:</b> 2   <b>Citations:</b> 16 <b>DOI:</b> 10.1007/s00170-019-04836-2	2020
<b>Evaluation of the China Pakistan Economic Corridor Road Network: Shortest Route, Regional Distribution, and Robustness</b> <i>Mujtaba Hassan Agha Raja Awais Liaqat Till Becker</i> <i>NUST Business Review</i> , Volume 1, Issue 1, Pages 12-43 <b>Impact Factor:</b> - <b>DOI:</b> <a href="https://nhr.nust.edu.pk/wp-content/uploads/2019/11/NBR-19-0107-Final-Proof-MHAgHa-Final.pdf">https://nhr.nust.edu.pk/wp-content/uploads/2019/11/NBR-19-0107-Final-Proof-MHAgHa-Final.pdf</a>	2019
<b>Heat coupling of the pan-European vs. regional electrical grid with excess renewable energy</b> <i>Arshid, Hirra Mujtaba Hassan Agha Zulqarnain Haider Kamali Asad Ashfaq</i> <i>Energy</i> , Volume 122, Pages 363-377 <b>Impact Factor:</b> 6.082   <b>Quartile:</b> 1   <b>Citations:</b> 20 <b>DOI:</b> 10.1016/j.energy.2017.01.084	2019
<b>Investigation of surrogate measures of robustness for project scheduling problems</b> <i>Mujtaba Hassan Agha Taiba Zahid Thorsten Schmidt</i> <i>Computers &amp; Industrial Engineering</i> , Volume 129, Pages 220-227 <b>Impact Factor:</b> 4.135   <b>Quartile:</b> 1   <b>Citations:</b> 21 <b>DOI:</b> 10.1016/j.cie.2019.01.041	2019
<b>Impact of instrumental ties, tacit knowledge sharing and affective commitment on absorptive capacity— an empirical study of pharmaceutical companies</b> <i>Mujtaba Hassan Agha Shafqat Hameed Muhammad Rafique</i> <i>Technology Analysis and Strategic Management</i> , Volume 31, Issue 2, Pages 125-139 <b>Impact Factor:</b> 1.867   <b>Quartile:</b> 3   <b>Citations:</b> 9 <b>DOI:</b> 10.1080/09537325.2018.1490017	2019
<b>Sustainable turning using multi-objective optimization: a study of Al6061 T6 at high cutting speeds</b> <i>Salman Sagheer Warsi Mujtaba Hassan Agha Riaz Ahmad Syed Husain Imran Jaffery Mushtaq Khan</i> <i>International Journal of Advanced Manufacturing Technology</i> , Volume 100, Issue 1–4, Pages 843–855 <b>Impact Factor:</b> 2.633   <b>Quartile:</b> 2   <b>Citations:</b> 51 <b>DOI:</b> 10.1007/s00170-018-2759-2	2019
<b>Development of energy consumption map for orthogonal machining of Al 6061-T6 alloy</b> <i>Salman Sagheer Warsi Syed Husain Imran Jaffery Riaz Ahmad Mushtaq Khan Mujtaba Hassan Agha Sohail Akram Liaqat Ali</i> <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , Volume 232, Issue 14, Pages 2510-2522 <b>Impact Factor:</b> 1.752   <b>Quartile:</b> 3   <b>Citations:</b> 42 <b>DOI:</b> 10.1177/0954405417703424	2018
<b>Commonality, conflict, and absorptive capacity: Clarifying middle manager roles in the pharmaceutical industry</b> <i>Mujtaba Hassan Agha Muhammad Rafique Shafqat Hameed</i> <i>Management Decision</i> , Volume 56, Issue 9, Pages 1904-1916 <b>Impact Factor:</b> 1.963   <b>Quartile:</b> 3   <b>Citations:</b> 13 <b>DOI:</b> 10.1108/MD-11-2017-1086	2018
<b>Development and analysis of energy consumption map for high-speed machining of Al 6061-T6 alloy</b> <i>Salman Sagheer Warsi Syed Husain Imran Jaffery Riaz Ahmad Mushtaq Khan Mujtaba Hassan Agha Liaqat Ali</i> <i>The International Journal of Advanced Manufacturing Technology</i> , Volume 96, Issue 1-4, Pages 91-102 <b>Impact Factor:</b> 2.496   <b>Quartile:</b> 2   <b>Citations:</b> 39 <b>DOI:</b> 10.1007/s00170-018-1588-7	2018
<b>Recent Research Trends in Genetic Algorithm based Flexible Job Shop Scheduling Problems</b> <i>Shahid Ikramullah Butt Rubeena Kousar Riaz Ahmad Zhang Faping Naveed Anjum Umer Asgher Muhammad Kamal Amjad Mujtaba Hassan Agha</i> <i>Mathematical Problems in Engineering</i> , Article Number 9270802, 32 pages <b>Impact Factor:</b> 1.179   <b>Quartile:</b> 3   <b>Citations:</b> 120 <b>DOI:</b> 10.1155/2018/9270802	2018

- Impact of knowledge sharing, learning adaptability and organizational commitment on absorptive capacity in pharmaceutical firms based in Pakistan** 2018
- Muhammad Rafique Shafqat Hameed Mujtaba Hassan Agha*  
*Journal of Knowledge Management*, Volume 22, Issue 1, Pages 44-56
- Impact Factor:** 4.604 | **Quartile:** 1 | **Citations:** 70  
**DOI:** 10.1108/JKM-04-2017-0132
- Technology Transformation in Pharmaceutical Industries of Pakistan through joint efforts of R&D and Manufacturing Departments-A Process Centered Approach** 2017
- Muhammad Rafique Muhammad Tahir Nawaz Tasweer Hussain Syed Mujtaba Hassan Agha*  
*Sindh University Research Journal series*, Volume 49, Issue 1, Pages 205-212
- Impact Factor:** -  
**DOI:** <http://sujo-old.usindh.edu.pk/index.php/SURJ/article/view/3056/2301>
- SAP-ERP Implementation: Change Management Model using Qualitative Approach** 2016
- Muhammad Umar Nawar Khan Mujtaba Hassan Agha Muhammad Abbas*  
*International Journal of Computer Science and Network Security*, Volume 16, Issue 6, Pages 9-13
- Impact Factor:** -  
**DOI:** <https://www.semanticscholar.org/paper/SAP-ERP-Implementation-%3A-Change-Management-Model-Umar-Khan/edd3fbc1bfc6700103402e85a8100555c2b7e843>
- Should Organisations Compete or Collaborate when Absorbing New External Knowledge?** 2015
- Muhammad Rafique Richard David Evans Muhammad Tahir Nawaz Mujtaba Hassan Agha*  
*International Journal of Advanced Corporate Learning*, Volume 8, Issue 3
- Impact Factor:** -  
**DOI:** <http://dx.doi.org/10.3991/ijac.v8i3.4741>
- Utilizing Quality Tools: A Predictive Maintenance Perspective** 2012
- Aamer Hanif Mujtaba*  
*International Journal of Performability Engineering*, Volume 8, Issue 6, Pages 699-704
- Impact Factor:** 0  
**DOI:** [https://pdfs.semanticscholar.org/7752/f68bc0082cae1a0792b6825369e80a6b4376.pdf?\\_ga=2.73579412.747353376.1562656673-1515754438.1561970583](https://pdfs.semanticscholar.org/7752/f68bc0082cae1a0792b6825369e80a6b4376.pdf?_ga=2.73579412.747353376.1562656673-1515754438.1561970583)
- A Survey of Lean Implementation Gap Analysis in Public Sector Organizations** 2012
- Irfan Ghalib Mujtaba Hassan Agha Shafqat Hameed Muhammad Abbas Choudhar*  
*Life Science Journal*, Volume 9, Pages 1261-1269
- Impact Factor:** 0.165 | **Quartile:** 4  
**DOI:** 10.7537/marslsj090412.191
- The Role of Data Protection Technologies: A Case Study** 2012
- Shafqat Hameed Mujtaba Hassan Agha Muhammad Abbas Choudhary*  
*Life Science Journal*, Volume: 9, Issue: 4, Pages: 1270-1279
- Impact Factor:** 0.165 | **Quartile:** 4  
**DOI:** <http://www.dx.doi.org/10.7537/marslsj090412.192>
- The extended resource task network: a framework for the combined scheduling of batch processes and CHP plants** 2012
- Raphaela Thery Gilles Hetreux Mujtaba Hassan Agha Alain Hait Jean Marc Le Lann*  
*International Journal of Production Research*, Volume 50, Issue 3, Pages 623-646
- Impact Factor:** 1.46 | **Quartile:** 2 | **Citations:** 11  
**DOI:** 10.1080/00207543.2010.545444
- Integrated production and utility system approach for optimizing industrial unit operations** 2010
- Mujtaba Hassan Agha Raphaela Thery Gilles Hetreux Alain Hait Jean Marc Le Lann*  
*Energy*, Volume 35, Issue 2, Pages 611-627
- Impact Factor:** 3.597 | **Quartile:** 1 | **Citations:** 74  
**DOI:** 10.1016/j.energy.2009.10.032

- Audit fatigue in sustainable supply chains - A case study of Pakistan textile industry** 2021  
*Muhammad Kamran Khalid Mujtaba Hassan Agha Muhammad Naseer Akhtar Syed Tasweer Hussain Shah*  
*1st International Conference on Business, Management and Social Sciences (ICBMAS)*., res.country(177,)  
**Citations:** N/A  
**DOI:** Nil
- Supply Chain Complexity and Audit Performance** 2020  
*Muhammad Kamran Khalid Mujtaba Hassan Agha Syed Tasweer Hussain Shah Muhammad Naseer Akhtar*  
*7th International Conference on Business Management - (ICoBM)*, res.country(177,)  
**Citations:** N/A  
**DOI:** <https://icobm.umt.edu.pk/>
- Integration of Triple Sustainable Management by Considering the Multi-period Supply Chain for Next-Generation Fuel** 2020  
*Waqas Ahmed Biswajit Sarkar Mujtaba Hassan Agha*  
*IFIP International Conference on Advances in Production Management Systems*, res.country(189,)  
**Citations:** N/A  
**DOI:** [https://doi.org/10.1007/978-3-030-57993-7\\_25](https://doi.org/10.1007/978-3-030-57993-7_25)
- Flexible cell formation and scheduling of robotics coordinated dynamic cellular manufacturing system: A gateway to industry 4.0** 2019  
*Abdul Saboor Muhammad Imran Mujtaba Hassan Agha Waqas Ahmed*  
*International Conference on Robotics and Automation in Industry (ICRAI)*, res.country(177,)  
**Citations:** N/A  
**DOI:** 10.1109/ICRAI47710.2019.8967369
- A formalism for integrated production and site utility system scheduling** 2010  
*Raphael Thery Mujtaba Hassan Agha Gilles Hétreux Alain Hait Jean Marc Le Lann*  
*8th International Conference of Modeling and Simulation (MOSIM'10)*, Hammamet, Tunisia, res.country(221,)  
**Citations:** N/A  
**DOI:** <https://www.semanticscholar.org/paper/A-FORMALISM-FOR-INTEGRATED-PRODUCTION-AND-SITE-Thery-Agha/17c370e24495bc6471ff3aff08818b10c2bab23c>
- Optimization of auto-production using industrial unit** 2009  
*Mujtaba Hassan Agha Raphael Thery Gilles Hétreux Alain Hait Jean Marc Le Lann*  
*8th World Congress of Chemical Engineering, WCCE8 2009, Montreal, Canada.*, res.country(38,)  
**Citations:** N/A  
**DOI:** <https://www.ceb.cam.ac.uk/news/news-list/8th-world-congress-of-chemical-engineering-wcce8>
- Vers un ordonnancement intégré des ateliers batch et des centrales de cogénération associées** 2009  
*Mujtaba Hassan Agha Raphael Thery Gilles Hetreux Alain Hait Jean Marc Le Lann*  
*8ème Congrès International de Génie Industriel, CIGI 2009, Tarbes, France.* , res.country(75,)  
**Citations:** N/A  
**DOI:** <https://www.worldcat.org/title/8eme-congres-international-de-genie-industriel-cigi09-8th-international-industrial-engineering-conference-interoperabilite-et-integration-actes-resumes-bagneres-de-bigorre-france-juin-2009/oclc/835664836>
- Collaboration among companies for better energy management** 2008  
*Mujtaba Hassan Agha Raphael Thery Gilles Hetreux Alain Hait Jean Marc Le Lann*  
*18th European Symposium on Computer Aided Process Engineering, ESCAPE 18, Lyon, France.*, res.country(75,)  
**Citations:** N/A  
**DOI:** <https://www.elsevier.com/books/18th-european-symposium-on-computer-aided-process-engineering/braunschweig/978-0-444-53227-5>
- Modèle intégré pour l'ordonnancement d'ateliers batch et la planification de centrales de cogénération** 2008  
*Raphael Thery Gilles Hetreux Mujtaba Hassan Agha*  
*7ème Conférence Internationale de Modélisation et Simulation, MOSIM 08, Paris, France.*, res.country(75,)  
**Citations:** N/A  
**DOI:** [http://homepages.laas.fr/sungueve/Docs/ICP/MOSIMVol\\_3\\_2008\\_05\\_21.pdf](http://homepages.laas.fr/sungueve/Docs/ICP/MOSIMVol_3_2008_05_21.pdf)

## Book Chapters

**Algorithm for Integrated Production and Utility System Scheduling for Batch Plants** 2009  
*Mujtaba Hassan Agha Raphaelae Thery Gilles Hétreux Alain HaitbJean M.Le Lann*  
 In: *Book on Computer Aided Chemical Engineering*, Volume 27, Pages 1497-1502  
**Citations:** 2  
**DOI:** doi.org/10.1016/S1570-7946(09)70640-6

## Editorial Activities

[illegible]