

# Muhammad Munir Butt

Assistant Professor  
School of Interdisciplinary Engineering & Sciences

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## About

Dr. Muhammad Munir Butt is working as Assistant Professor in the School of Interdisciplinary Engineering & Sciences. Dr. Muhammad Munir Butt has a PhD in Mathematics. Dr. Muhammad Munir Butt has published 16 research articles & conference papers having a citation count of 87, carried out 1 projects and filed 0 intellectual property.

## Qualifications

<b>PhD in Mathematics</b> Universität Graz , Austria	2008 - 2011
<b>MPhil in Mathematics</b> Government College University Lahore , Pakistan	2003 - 2006
<b>MSc in Mathematics</b> Government College University Lahore , Pakistan	2001 - 2003

## Experience

<b>Assistant Professor</b> School of Interdisciplinary Engineering & Sciences	2024- Present
<b>Assistant Professor</b> King Fahd University of Petroleum and Minerals , Saudi Arabia	2019 - 2022
<b>Assistant Professor</b> University of Lahore , Lahore	2012 - 2016
<b>Lecturer</b> Government College University Lahore , Lahore	2004 - 2008

## Research Projects

<b>National Projects</b>	
<b>Autonomous Aerial 3D Mapping System</b> Funding Agency: NUST Amount: PKR 1,000,000.00 Status: Approved_inprocess	2024

### International Projects

## Research Articles

<b>Optimized Integral Super-Twisting Sliding Mode Control for Acute Leukemia Therapy</b> Muhammad Munir Butt Azhar Iqbal Kashif Butt Mathematics , Volume:13, Issue:07, Article Number: 1077, Pages:20 Impact Factor: 2.3   Quartile: 1 DOI: <a href="https://doi.org/10.3390/math13071077">https://doi.org/10.3390/math13071077</a>	2025
<b>Integral sliding mode and Integral supertwisting sliding mode control for ship course-keeping</b> Muhammad Munir Butt Azhar Iqbal Kashif Butt Iftikhar Ahmad IEEE Access , Volume 13, Pages 9006-9014 Impact Factor: 3.400   Quartile: 2 DOI: 10.1109/ACCESS.2025.3528126	2025
<b>A numerical scheme to solve Fokker–Planck control collective-motion problem</b>	2024

<p><i>Muhammad Munir Butt S. Roy</i>  <i>Mathematics and Computers in Simulation</i>, Volume 225, Pages 1056-1071</p> <p><b>Impact Factor:</b> 4.400   <b>Quartile:</b> 1   <b>Citations:</b> 1  <b>DOI:</b> <a href="https://doi.org/10.1016/j.matcom.2023.10.005">https://doi.org/10.1016/j.matcom.2023.10.005</a></p>	
<p><b>Numerical solution to 3D bilinear Fokker–Planck control problem</b></p> <p><i>Muhammad Munir Butt</i>  <i>International Journal of Computer Mathematics</i>, Volume 99, Issue 12, Pages 2466-2481</p> <p><b>Impact Factor:</b> 1.800   <b>Quartile:</b> 2   <b>Citations:</b> 2  <b>DOI:</b> <a href="https://doi.org/10.1080/00207160.2022.2067987">https://doi.org/10.1080/00207160.2022.2067987</a></p>	2022
<p><b>On a multigrid solver for stationary Navier–Stokes velocity–pressure tracking-type control problems</b></p> <p><i>Muhammad Munir Butt</i>  <i>Mathematics and Computers in Simulation</i>, Volume 192, Pages 246-264</p> <p><b>Impact Factor:</b> 4.6   <b>Quartile:</b> 1  <b>DOI:</b> <a href="https://doi.org/10.1016/j.matcom.2021.08.025">https://doi.org/10.1016/j.matcom.2021.08.025</a></p>	2022
<p><b>Two-level method for a time-independent Fokker–Planck control problem</b></p> <p><i>Muhammad Munir Butt</i>  <i>International Journal of Computer Mathematics</i>, Volume:98, Issue:8, Page:1542-1560</p> <p><b>Impact Factor:</b> 1.750   <b>Quartile:</b> 2   <b>Citations:</b> 3  <b>DOI:</b> <a href="https://doi.org/10.1080/00207160.2020.1825696">https://doi.org/10.1080/00207160.2020.1825696</a></p>	2021
<p><b>Multigrid method for optimal control problem constrained by stochastic stokes equations with noise</b></p> <p><i>Muhammad Munir Butt</i>  <i>Mathematics</i>, Volume 9, Issue 7, Article Number 738</p> <p><b>Impact Factor:</b> 2.592   <b>Quartile:</b> 1   <b>Citations:</b> 2  <b>DOI:</b> <a href="https://doi.org/10.3390/math9070738">https://doi.org/10.3390/math9070738</a></p>	2021
<p><b>Two-level difference scheme for the two-dimensional Fokker–Planck equation</b></p> <p><i>Muhammad Munir Butt</i>  <i>Mathematics and Computers in Simulation</i>, Volume:180, Pages:276-288</p> <p><b>Impact Factor:</b> 3.601   <b>Quartile:</b> 1   <b>Citations:</b> 7  <b>DOI:</b> <a href="https://doi.org/10.1016/j.matcom.2020.09.001">https://doi.org/10.1016/j.matcom.2020.09.001</a></p>	2021
<p><b>A multigrid solver for Stokes control problems</b></p> <p><i>Muhammad Munir Butt</i>  <i>International Journal of Computer Mathematics</i>, Volume 94, Issue 12, Pages 2297-2314</p> <p><b>Impact Factor:</b> 1.054   <b>Quartile:</b> 2   <b>Citations:</b> 5  <b>DOI:</b> <a href="https://doi.org/10.1080/00207160.2017.1283022">https://doi.org/10.1080/00207160.2017.1283022</a></p>	2017
<p><b>A feasible flow-based iterative algorithm for the two-level hierarchical time minimization transportation problem</b></p> <p><i>Fanrong Xie Muhammad Munir Butt Zuoan Li</i>  <i>Computers and Operations Research</i>, Volume 86, Pages 124-139</p> <p><b>Impact Factor:</b> 2.962   <b>Quartile:</b> 1   <b>Citations:</b> 20  <b>DOI:</b> <a href="https://doi.org/10.1016/j.cor.2017.05.003">https://doi.org/10.1016/j.cor.2017.05.003</a></p>	2017
<p><b>A Full Multigrid Method for Distributed Control Problems Constrained by Stokes Equations</b></p> <p><i>Muhammad Munir Butt Y. Yuan</i>  <i>Numerical Mathematics</i>, Volume 10, Issue 3, Pages 639-655</p> <p><b>Impact Factor:</b> 0.695   <b>Quartile:</b> 3   <b>Citations:</b> 9  <b>DOI:</b> <a href="https://doi.org/10.4208/nmtma.2017.m1637">https://doi.org/10.4208/nmtma.2017.m1637</a></p>	2017
<p><b>An upper bound on the minimal total cost of the transportation problem with varying demands and supplies</b></p> <p><i>Fanrong Xie Muhammad Munir Butt ZuoanLi LinzhiZhu</i>  <i>Omega</i>, Volume 68, Pages105-118</p> <p><b>Impact Factor:</b> 4.311   <b>Quartile:</b> 1   <b>Citations:</b> 24  <b>DOI:</b> <a href="https://doi.org/10.1016/j.omega.2016.06.007">https://doi.org/10.1016/j.omega.2016.06.007</a></p>	2017
<p><b>Formulation and multigrid solution of Cauchy-Riemann optimal control problems</b></p> <p><i>Muhammad Munir Butt Alfio Borzi</i>  <i>Computing and Visualization in Science</i>, Volume 14, Issue 2, Pages 79-90</p> <p><b>Impact Factor:</b> 0   <b>Citations:</b> 7</p>	2011

DOI: 10.1007/s00791-011-0161-9

A full multigrid solution of control-constrained CauchyRiemann optimal control problems

2011

Muhammad Munir Butt Alfio Borzi

Journal of Numerical Mathematics, Volume 19, Issue 3, Pages 189-214

Impact Factor: 0.533 | Quartile: 3 | Citations: 2

DOI: https://doi.org/10.1515/jnum.2011.009

Numerical methods for heat equation with variable coefficients

2009

M.M. Butt M.S.A. Taj

International Journal of Computer Mathematics, Volume 86, Issue 9, Pages 1612-1623

Impact Factor: 0.478 | Quartile: 4 | Citations: 5

DOI: 10.1080/00207160801965172

Conference Proceedings

A Multigrid Solver for Navier-Stokes Tracking-Type Control Problems

2024

Muhammad Munir Butt

NUST Conference on Recent Trends in Mathematical Sciences-IV (RTMS-IV), res.country(177,)

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DOI: Nil