

Iftikhar Ahmad

Professor

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About

Dr. Iftikhar Ahmad is working as Professor in the School of Electrical Engineering and Computer Science. Dr. Iftikhar Ahmad has a PhD in Robotic & Automation. Dr. Iftikhar Ahmad has published 87 research articles & conference papers having a citation count of 2187, carried out 2 projects and filed 0 intellectual property.

Qualifications

PhD in Robotic & Automation Université de Versailles Saint-Quentin-en-Yvelines , France	2009 - 2013
MS in Fluid Mechanics Of Master Of Science And Technology Université Pierre et Marie Curie (Paris VI) , France	2008 - 2009
MPhil in Applied Mathematics Government College University Lahore , Pakistan	2004 - 2006

Experience

Professor School of Electrical Engineering and Computer Science	2024- Present
Associate Professor School of Electrical Engineering and Computer Science	2020 - 2020
Assistant Professor School of Electrical Engineering and Computer Science	2014 - 2013
Assistant Professor School of Electrical Engineering and Computer Science	2013 - 2020
Lecturer School of Electrical Engineering and Computer Science	2007 - 2014

Awards

STAR LAUREATE 2007 • Selected as “STAR LAUREATE 2007” in Pakistan • Included in the prestigious book “Galaxies of who is who is Pakistan” by South Asian Publications in Karachi-Pakistan. • Pakistan Government Overseas Scholarship for pursuing MS leading to PhD program in France.	2007
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Research Projects

National Projects	
Autonomous Aerial 3D Mapping System Funding Agency: NUST Amount: PKR 1,000,000.00 Status: Approved_inprocess	2024
Pakistan’s First Indigenous Level 2 Electric Vehicle Charger Funding Agency: NUST Amount: PKR 1,250,000.00 Status: Approved_inprocess	2022

International Projects

Research Articles

Advanced nonlinear controller for hybrid energy storage system integrated with three-phase induction motor in hybrid electric vehicles <i>Atif Rehman Rimsha Ghias Iftikhar Ahmad Hammad Iqbal Sherazi</i> <i>Journal of Energy Storage</i> , Volume 131, Part A, Article Number 117388 Impact Factor: 9.800 Quartile: 1 DOI: https://doi.org/10.1016/j.est.2025.117388	2025
Regulation of depth of hypnosis through optimized AI-based robust nonlinear controller <i>Mishal Imam Iftikhar Ahmad Muhammad Saqib Nazir</i> <i>Biomedical Signal Processing and Control</i> , Volume 104, Article Number 107489 Impact Factor: 4.900 Quartile: 1 DOI: https://doi.org/10.1016/j.bspc.2024.107489	2025
Robust Control Frameworks for Heave Disturbance Suppression in Offshore Managed Pressure Drilling Environments <i>Atif Rehman Rimsha Ghias Iftikhar Ahmad Hammad Iqbal Sherazi</i> <i>IEEE Access</i> , Volume:13, Pages 79137-79149 Impact Factor: 3.600 Quartile: 2 DOI: 10.1109/ACCESS.2025.3560095	2025
Optimal novel nonlinear control law for attitude and heading control of a bi-copter system with controller-in-loop <i>Ahsan Nawaz Jadoon Abdullah Mughees Iftikhar Ahmad Hammad Iqbal Sherazi</i> <i>Expert Systems with Applications</i> , Volume:272, Article Number 126554 Impact Factor: 7.500 Quartile: 1 Citations: 2 DOI: https://doi.org/10.1016/j.eswa.2025.126554	2025
Reinforcement learning based sliding mode control for optimal chemotherapy drug in cancerous tumor <i>Atif Rehman Syed Hassan Ahmed Shah Rimsha Ghias Iftikhar Ahmad</i> <i>Biomedical Signal Processing and Control</i> , Volume 103, Article Number 107485 Impact Factor: 4.900 Quartile: 1 DOI: https://doi.org/10.1016/j.bspc.2024.107485	2025
Optimized Nonlinear Control Strategies for Solid-State Transformer-based electric locomotives with hybrid energy backup <i>Abdul Moqueet Iftikhar Ahmad Abu Zar</i> <i>Journal of Energy Storage</i> , Volume:116, Article Number: 115925 Impact Factor: 8.9 Quartile: 1 DOI: 10.1016/j.est.2025.115925	2025
Third-Order Sliding Mode Control for Trajectory Tracking of Quadcopters Using Particle Swarm Optimization <i>Muhammad rizwan Chughtai Iftikhar Ahmad Abdullah Mughees Muddesar Iqbal Dhafer Almakhlles Mahmoud Abdelrahim</i> <i>Drones</i> , Volume:9, Issue:3, Article Number 172 Impact Factor: 4.400 Quartile: 1 Citations: 2 DOI: https://doi.org/10.3390/drones9030172	2025
Adaptive neuro-fuzzy inference system and barrier function based nonlinear control of three phase grid-connected fast charging station for bidirectional power flow <i>Bibi Tabassam Gul Iftikhar Ahmad Habibur Rehman Ammar Hasan</i> <i>Journal of Energy Storage</i> , Volume:109, Article Number: 114998 Impact Factor: 8.9 Quartile: 1 Citations: 2 DOI: https://doi.org/10.1016/j.est.2024.114998	2025
Optimized ANFIS-Based Robust Nonlinear Control of a Solar Off-Grid Charging Station for Electric Vehicles <i>Bibi Tabassam Gul Iftikhar Ahmad Habibur Rehman Ammar Hasan</i> <i>IEEE ACCESS</i> , Volume:13, Page(s):20361-20373 Impact Factor: 3.4 Quartile: 2 Citations: 4 DOI: 10.1109/ACCESS.2025.3535571	2025
Integral sliding mode and Integral supertwisting sliding mode control for ship course-keeping <i>Muhammad Munir Butt Azhar Iqbal Kashif Butt Iftikhar Ahmad</i> <i>IEEE Access</i> , Volume 13, Pages 9006-9014	2025

Impact Factor: 3.400 Quartile: 2 DOI: 10.1109/ACCESS.2025.3528126	
Optimized fast non-singular integral terminal sliding mode control of immune response and HCMV infection of renal transplant recipient <i>Nimra Nazeer Iftikhar Ahmad Isra Nazir Shahzad Ahmed</i> <i>ISA Transactions</i> , Volume:155, Pages 46-68 Impact Factor: 6.300 Quartile: 1 Citations: 2 DOI: 10.1016/j.isatra.2024.09.009	2024
IGWO based robust nonlinear control design for androgen suppression therapy in prostate tumor patients <i>Atif Rehman Iftikhar Ahmad Absaar Ul Jabbar</i> <i>Biomedical Signal Processing and Control</i> , Volume 97, Article Number 106729 Impact Factor: 4.900 Quartile: 1 Citations: 8 DOI: https://doi.org/10.1016/j.bspc.2024.106729	2024
Enhancing antiviral therapies through nonlinear control of Hepatitis C virus dynamics <i>Atif Rehman Rimsha Ghias Syed Hassan Ahmed Shabab Saleem Iftikhar Ahmad Hammad Iqbal Sherazi</i> <i>Biomedical Signal Processing and Control</i> , Volume 97, Article Number 106727 Impact Factor: 4.900 Quartile: 1 Citations: 6 DOI: https://doi.org/10.1016/j.bspc.2024.106727	2024
Optimized barrier-condition nonlinear control of wireless charger-based hybrid electric vehicle <i>Bibi Tabassam Gul Syed Hassan Ahmed Iftikhar Ahmad Omar Zeb</i> <i>Journal of Energy Storage</i> , Volume 97, Part A , Article Number 112705 Impact Factor: 8.900 Quartile: 1 Citations: 5 DOI: 10.1016/j.est.2024.112705	2024
Artificial neural network based conditional controllers with saturated action for multi-renewable hybrid alternating or direct current microgrids in islanded and grid-connected modes <i>Rimsha Ghias Ammar Hasan Iftikhar Ahmad</i> <i>Journal of Energy Storage</i> , Volume 94, Article Number 112139 Impact Factor: 8.900 Quartile: 1 Citations: 12 DOI: doi.org/10.1016/j.est.2024.112139	2024
Enhanced Nonlinear Control for Trajectory Tracking Control of a Quad-Copter System Using Redfox Algorithm <i>Abdullah Mughees Iftikhar Ahmad Ahsan Nawaz Jadoon</i> <i>IEEE Access</i> , Volume 12, Pages 86618-86630 Impact Factor: 3.400 Quartile: 2 Citations: 6 DOI: 10.1109/ACCESS.2024.3404825	2024
Artificial neural network-based nonlinear control and modeling of a DC microgrid incorporating regenerative FC/HPEV and energy storage system <i>Umm e Ammara Syeda Shafia Zehra Saqib Nazir Iftikhar Ahmad</i> <i>Renewable Energy Focus</i> , Volume 49, Article Number 100565 Impact Factor: 4.200 Quartile: 2 Citations: 8 DOI: 10.1016/j.ref.2024.100565	2024
Advance Optimized Nonlinear Control Strategies for Manage Pressure Drilling <i>Atif Rehman Rimsha Ghias Iftikhar Ahmad Hammad Iqbal Sherazi</i> <i>IEEE Access</i> , Volume 12, Pages 73436-73450 Impact Factor: 3.400 Quartile: 2 Citations: 9 DOI: 10.1109/ACCESS.2024.3404054	2024
Conditioned adaptive barrier-based double integral super twisting SMC for trajectory tracking of a quadcopter and hardware in loop using IGWO algorithm <i>Abdullah Mughees Iftikhar Ahmad Neelam Mughees Anam Mughees</i> <i>Expert Systems with Applications</i> , Volume 235, Article Number 121141 Impact Factor: 8.5 Quartile: 1 Citations: 14 DOI: https://doi.org/10.1016/j.eswa.2023.121141	2024
Advanced optimized nonlinear control strategies for prosthetic knee joints <i>Atif Rehman Rimsha Ghias Syed Hassan Ahmed Shah Iftikhar Ahmad</i> <i>Biomedical Engineering Letters</i> , Volume:15, Pages: 291-300	2024

<p>Impact Factor: 3.200 Quartile: 2</p> <p>DOI: 10.1007/s13534-024-00447-3</p>	
<p>Conditioned adaptive barrier-based double integral super twisting SMC for trajectory tracking of a quadcopter and hardware in loop using IGWO algorithm</p> <p><i>Abdullah Mughees Iftikhar Ahmad Neelam Mughees Anam Mughees</i></p> <p><i>Expert Systems with Applications</i>, Volume 235, Article Number 121141</p> <p>Impact Factor: 7.500 Quartile: 1 Citations: 14</p> <p>DOI: 10.1016/j.eswa.2023.121141</p>	2024
<p>Non-linear Synergetic Control of UPFC for Efficient Damping of Local and Inter-Area Oscillations</p> <p><i>Umer Afaq Farhan Ali Ammar Hasan Iftikhar Ahmad Mansoor Asif</i></p> <p><i>IEEE Transactions on Power Systems</i>, Volume 39, Issue 1</p> <p>Impact Factor: 7.326 Quartile: 1 Citations: 10</p> <p>DOI: 10.1109/TPWRS.2023.3263891</p>	2024
<p>Optimal wireless power transfer to hybrid energy storage system for electric vehicles: A comparative analysis of machine learning-based model-free controllers</p> <p><i>Syed Hassan Ahmed Iftikhar Ahmad</i></p> <p><i>Journal of Energy Storage</i>, Volume 75, Article Number 109534</p> <p>Impact Factor: 9.4 Quartile: 1 Citations: 12</p> <p>DOI: 10.1016/j.est.2023.109534</p>	2024
<p>Artificial intelligence based robust nonlinear controllers optimized by improved gray wolf optimization algorithm for plug-in hybrid electric vehicles in grid to vehicle applications</p> <p><i>Shabab Saleem Iftikhar Ahmad Syed Hassan Ahmed Atif Rehman</i></p> <p><i>Journal of Energy Storage</i>, Volume 75, Article Number 109332</p> <p>Impact Factor: 9.4 Quartile: 1 Citations: 32</p> <p>DOI: 10.1016/j.est.2023.109332</p>	2024
<p>Neural network based optimized barrier conditioned double super-twisting sliding mode controller of electric vehicle charger with grid to vehicle and vehicle to grid modes</p> <p><i>Abu Zar Habibur Rehman Iftikhar Ahmad</i></p> <p><i>Journal of Energy Storage</i>, Volume 74, Part B, Article Number 109234</p> <p>Impact Factor: 9.4 Quartile: 1 Citations: 5</p> <p>DOI: 10.1016/j.est.2023.109234</p>	2023
<p>Barrier function based adaptive sliding mode controller for the hybrid energy storage system of plugin hybrid electric vehicles</p> <p><i>Mubariz Ahmed Usman Masood Muhammad Kashif Azeem Iftikhar Ahmad Absaar Ul Jabbar</i></p> <p><i>Journal of Energy Storage</i>, Volume 72, Part B, Article Number 108051</p> <p>Impact Factor: 9.4 Quartile: 1 Citations: 4</p> <p>DOI: 10.1016/j.est.2023.108051</p>	2023
<p>Optimized nonlinear controller for fuel cell, supercapacitor, battery, hybrid photoelectrochemical and photovoltaic cells based hybrid electric vehicles</p> <p><i>Shahid Hassan Mian Muhammad Saqib Nazir Iftikhar Ahmad Safdar Abbas Khan</i></p> <p><i>Energy</i>, Volume 283, Article Number 129121</p> <p>Impact Factor: 8.9 Quartile: 1 Citations: 16</p> <p>DOI: 10.1016/j.energy.2023.129121</p>	2023
<p>Multi-Optimization of Novel Conditioned Adaptive Barrier Function Integral Terminal SMC for Trajectory Tracking of a Quadcopter System</p> <p><i>Abdullah Mughees Iftikhar Ahmad</i></p> <p><i>IEEE Access</i>, Volume 11, Pages 88359-88377</p> <p>Impact Factor: 3.9 Quartile: 2 Citations: 19</p> <p>DOI: 10.1109/ACCESS.2023.3304760</p>	2023
<p>Barrier function-based adaptive terminal sliding mode control of plug-in hybrid electric vehicle with saturated control actions</p> <p><i>Asad Abbas Iftikhar Ahmad Shahzad Ahmed</i></p> <p><i>Journal of Energy Storage</i>, Volume 65, Article Number 107254</p> <p>Impact Factor: 9.4 Quartile: 1 Citations: 13</p> <p>DOI: 10.1016/j.est.2023.107254</p>	2023

Robust nonlinear control of regenerative fuel cell, supercapacitor, battery and wind based direct current microgrid	2023
<i>Ahmad Raza Muhammad Kashif Azeem Muhammad Saqib Nazir Ittikhar Ahmad</i> <i>Journal of Energy Storage</i> , Volume 64, Article Number 107158 Impact Factor: 8.907 Quartile: 1 Citations: 13 DOI: https://doi.org/10.1016/j.est.2023.107158	
Robust adaptive nonlinear control of plugin hybrid electric vehicles for vehicle to grid and grid to vehicle power flow with hybrid energy storage system	2023
<i>Usman Masood Muhammad Kashif Azeem Ittikhar Ahmad Absaar Ul Jabbar</i> <i>ISA Transactions</i> , Volume 139, Pages 406-424 Impact Factor: 5.911 Quartile: 1 Citations: 19 DOI: https://doi.org/10.1016/j.isatra.2023.03.035	
Fuzzy optimized conditioned-barrier nonlinear control of electric vehicle for grid to vehicle & vehicle to grid applications	2023
<i>Abu Zar Ittikhar Ahmad Muhammad Saqib Nazir Ijaz Ahmed</i> <i>Journal of Energy Storage</i> , Volume:64, Article Number 107251 Impact Factor: 8.907 Quartile: 1 Citations: 20 DOI: https://doi.org/10.1016/j.est.2023.107251	
Variable Structure-Based Control for Dynamic Temperature Setpoint Regulation in Hospital Extreme Healthcare Zones	2023
<i>Ali Hamza Muhammad Uneeb Ittikhar Ahmad Komal Saleem Zunaib Ali</i> <i>Energies</i> , Volume:16, Issue:10, Article Number: 4223 Impact Factor: 3.252 Quartile: 3 Citations: 2 DOI: 10.3390/en16104223	
Artificial intelligence based nonlinear control of hybrid DC microgrid for dynamic stability and bidirectional power flow	2023
<i>Hafiz Muhammad Mehdi Muhammad Kashif Azeem Ittikhar Ahmad</i> <i>Journal of Energy Storage</i> , Volume 58, Article Number 106333 Impact Factor: 8.907 Quartile: 1 Citations: 37 DOI: 10.1016/j.est.2022.106333	
Supertwisting and terminal sliding mode control of course keeping for ships by using particle swarm optimization	2022
<i>Muhammad Muzammal Islam Syed Ahmad Siffat Ittikhar Ahmad Muwahida Liaquat</i> <i>Ocean Engineering</i> , Volume 266, Part 3, Article Number 112942 Impact Factor: 4.372 Quartile: 1 Citations: 16 DOI: https://doi.org/10.1016/j.oceaneng.2022.112942	
Hierarchical control of hybrid direct current microgrid with variable structure based sliding mode control and fuzzy energy management system	2022
<i>Maria Badar Ittikhar Ahmad Sana Rehman Muhammad Saqib Nazir Adeel Waqas Ahmad</i> <i>Journal of the Franklin Institute</i> , Volume 359, Issue 13, Pages 6856-6892 Impact Factor: 4.100 Quartile: 1 Citations: 17 DOI: https://doi.org/10.1016/j.jfranklin.2022.06.044	
Robust nonlinear control of battery electric vehicle charger in grid to vehicle and vehicle to grid applications	2022
<i>Ijaz Ahmed Hafiz Mian Muhammad Adil Shahzad Ahmed Ittikhar Ahmad Zubair Rehman</i> <i>Journal of Energy Storage</i> , Volume 52, Part A, Article Number 104813 Impact Factor: 8.907 Quartile: 1 Citations: 38 DOI: 10.1016/j.est.2022.104813	
An autonomous hybrid DC microgrid with ANN-fuzzy and adaptive terminal sliding mode multi-level control structure	2022
<i>Maria Badar Ittikhar Ahmad Aneeqe Ahmed Mir Shahzad Ahmed Adeel Waqas</i> <i>Control Engineering Practice</i> , Volume 121, Article Number 105036 Impact Factor: 4.057 Quartile: 2 Citations: 30 DOI: 10.1016/j.conengprac.2021.105036	
Fuzzy-barrier sliding mode control of electric-hydrogen hybrid energy storage system in DC microgrid: Modelling, management and experimental investigation	2022

Syeda Shafia Zehra Aqeel Ur Rahman Iftikhar Ahmad
Energy , Volume 239, Part D, Article Number 122260
Impact Factor: 8.9 | **Quartile:** 1 | **Citations:** 52
DOI: 10.1016/j.energy.2021.122260

Adaptive terminal and supertwisting sliding mode controllers for acute Leukemia therapy 2022

Iftikhar Ahmad Asad Islam Yasir Islam Muhammad Zubair
Biomedical Signal Processing and Control , Volume 71, Part A, Article Number 103121
Impact Factor: 5.1 | **Quartile:** 2 | **Citations:** 18
DOI: 10.1016/j.bspc.2021.103121

Dual-stage adaptive control of hybrid energy storage system for electric vehicle application 2021

Muhammad Arslan Muhammad Kashif Azeem Muhammad Arslan Iftikhar Ahmad Muhammad Kashif Azeem Muwahida Liaquat
Journal of Energy Storage , Volume 43, Article Number 103165
Impact Factor: 8.907 | **Quartile:** 1 | **Citations:** 14
DOI: 10.1016/j.est.2021.103165

Conditioned-based robust nonlinear control of plug-in hybrid electric vehicle with saturated control actions 2021

Iftikhar Ahmad Shahzad Ahmed Usman Ali Afzal Ammar Hasan
Journal of Energy Storage , Volume 43, Article Number 103201
Impact Factor: 8.907 | **Quartile:** 1 | **Citations:** 18
DOI: 10.1016/j.est.2021.103201

Robust nonlinear control of battery electric vehicle charger in grid to vehicle applications 2021

Ijaz Ahmed Iftikhar Ahmad Shahzad Ahmed Hafiz Mian Muhammad Adil
Journal of Energy Storage , Volume 42, Article Number 103039
Impact Factor: 8.907 | **Quartile:** 1 | **Citations:** 41
DOI: 10.1016/j.est.2021.103039

Robust integral backstepping controller for energy management in plugin hybrid electric vehicles 2021

Muhammad Kashif Azeem Iftikhar Ahmad Hammad Armghan Zil e Huma Shahzad Ahmed Hafiz Mian Muhammad Adil
Journal of Energy Storage , Volume 42, Article Number 103079
Impact Factor: 8.907 | **Quartile:** 1 | **Citations:** 29
DOI: 10.1016/j.est.2021.103079

Variable Structure Based Control for the Chemotherapy of Brain Tumor 2021

Muhammad Zubair Iftikhar Ahmad Yasir Islam Safdar Abbas Khan
IEEE Access , Volume 9, Pages 107333-107346
Impact Factor: 3.476 | **Quartile:** 2 | **Citations:** 15
DOI: 10.1109/ACCESS.2021.3091632

Lyapunov based nonlinear controllers for the chemotherapy of brain tumor 2021

Muhammad Zubair Iftikhar Ahmad Yasir Islam Asad Islam
Biomedical Signal Processing and Control , Volume 68, Article Number 102804
Impact Factor: 5.076 | **Quartile:** 2 | **Citations:** 8
DOI: 10.1016/j.bspc.2021.102804

Fuzzy supertwisting sliding mode-based energy management and control of hybrid energy storage system in electric vehicle considering fuel economy 2021

Aqeel Ur Rahman Syeda Shafia Zehra Hammad Armghan Aqeel Ur Rahman Syeda Shafia Zehra Iftikhar Ahmad Hammad Armghan Aqeel Ur Rahman
Syeda Shafia Zehra Hammad Armghan
Journal of Energy Storage , Volume 37, Article Number 102468
Impact Factor: 8.907 | **Quartile:** 1 | **Citations:** 73
DOI: 10.1016/j.est.2021.102468

Backstepping and Synergetic Controllers for the Chemotherapy of Brain Tumor 2021

Muhammad Zubair Iftikhar Ahmad Yasir Islam
International Journal of Control Automation and Systems , Pages 1-13
Impact Factor: 2.964 | **Quartile:** 2 | **Citations:** 5
DOI: 10.1007/s12555-020-0426-5

Control of Transformerless Inverter-Based Two-Stage Grid-Connected Photovoltaic System Using Adaptive-PI and Adaptive Sliding Mode Controllers 2021

Waqar Uddin Hee-Je Kim Kamran Zeb Muhamamd Saqib Nazir Iftikhar Ahmad

<i>Energies</i> , Volume 14(9), Article Number 2546	
Impact Factor: 3.252 Quartile: 3 Citations: 14	
DOI: https://doi.org/10.3390/en14092546	
Adaptive Nonlinear Control of Unified Model of Fuel Cell, Battery, Ultracapacitor and Induction Motor Based Hybrid Electric Vehicles	2021
<i>Muhammad Muzammal Islam Syed Ahmad Siffat Iftikhar Ahmad Muwahida Liaquat Safdar Abbas Khan</i>	
<i>IEEE Access</i> , Volume 9, Pages 57486-57509	
Impact Factor: 3.476 Quartile: 2 Citations: 20	
DOI: 10.1109/ACCESS.2021.3072478	
Fuzzy logic and Lyapunov-based non-linear controllers for HCV infection	2021
<i>Ali Hamza Iftikhar Ahmad Muhammad Uneeb</i>	
<i>IET Systems Biology</i> , Volume 15, Issue 2, Pages 53-71	
Impact Factor: 1.468 Quartile: 4 Citations: 11	
DOI: https://doi.org/10.1049/syb2.12014	
Sliding-mode-based controllers for automation of blood glucose concentration for type 1 diabetes	2021
<i>Sheraz Ahmad Babar Iqra Shafeeq Mughal Sheraz Ahmad Babar Iftikhar Ahmad Iqra Shafeeq Mughal Sheraz Ahmad Babar Iqra Shafeeq Mughal</i>	
<i>IET Systems Biology</i> , Volume 15, Issue 2, Pages 72-82	
Impact Factor: 1.468 Quartile: 4 Citations: 19	
DOI: https://doi.org/10.1049/syb2.12015	
LCC-S-Based Integral Terminal Sliding Mode Controller for a Hybrid Energy Storage System Using a Wireless Power System	2021
<i>Naghmesh Ali Zhizhen Liu Hammad Armghan Iftikhar Ahmad Yanjin Hou</i>	
<i>Energies</i> , Volume 14(6), Article Number 1693	
Impact Factor: 3.252 Quartile: 3 Citations: 21	
DOI: 10.3390/en14061693	
Terminal Synergetic and State Feedback Linearization Based Controllers for Artificial Pancreas in Type 1 Diabetic Patients	2021
<i>Sheraz Ahmad Babar Iftikhar Ahmad Iqra Shafeeq Mughal Safdar Abbas Khan</i>	
<i>IEEE Access</i> , Volume 9, Pages 28012-28019	
Impact Factor: 3.476 Quartile: 2 Citations: 15	
DOI: 10.1109/ACCESS.2021.3057365	
Robust integral backstepping and terminal synergetic control of course keeping for ships	2021
<i>Iftikhar Ahmad Muwahida Liaquat Syed Ahmad Siffat Muzammul Islam</i>	
<i>Ocean Engineering</i> , Volume 221, Article Number 108532	
Impact Factor: 4.372 Quartile: 1 Citations: 49	
DOI: 10.1016/j.oceaneng.2020.108532	
Multistage adaptive nonlinear control of battery-ultracapacitor based plugin hybrid electric vehicles	2020
<i>Iftikhar Ahmad Muhammad Kashif Azeem Hammad Armghan Zil e Huma Mudasser Hassan</i>	
<i>Journal of Energy Storage</i> , Volume 32, Article Number 101813	
Impact Factor: 6.583 Quartile: 1 Citations: 36	
DOI: 10.1016/j.est.2020.101813	
Nonlinear controllers for fuel cell, photovoltaic cell and battery based hybrid energy management system	2020
<i>Iftikhar Ahmad Kiran Liaquat Zubair Rehman</i>	
<i>Journal of Energy Storage</i> , Volume 32, Article Number 101796	
Impact Factor: 6.583 Quartile: 1 Citations: 8	
DOI: https://doi.org/10.1016/j.est.2020.101796	
Adaptive Control of Fuel Cell and Supercapacitor Based Hybrid Electric Vehicles	2020
<i>Iftikhar Ahmad Muhammad Saqib Nazir Muhammad Jawad Khan Yasar Ayaz Hammad Armghan</i>	
<i>Energies</i> , Volume 13(21), Article Number 5587	
Impact Factor: 3.004 Quartile: 3 Citations: 15	
DOI: https://doi.org/10.3390/en13215587	
Fuzzy, synergetic and non-linear state feedback control of chemotherapy drug for a cancerous tumor	2020
<i>Hafsah Qaiser Muhammad Kashif Iftikhar Ahmad</i>	
<i>Biomedical Signal Processing and Control</i> , Volume 62, Article Number 102061	

Impact Factor: 3.880 Quartile: 2 Citations: 19 DOI: 10.1016/j.bspc.2020.102061	
Double Integral Sliding Mode Control of Leukemia Therapy <i>Yasir Islam Muhammad Zubair Khurram Shahzad Iftikhar Ahmad</i> <i>Biomedical Signal Processing and Control</i> , Volume 61, Article Number 102046 Impact Factor: 3.880 Quartile: 2 Citations: 29 DOI: 10.1016/j.bspc.2020.102046	2020
Supertwisting Sliding Mode Algorithm Based Nonlinear MPPT Control for a Solar PV System with Artificial Neural Networks Based Reference Generation <i>Safdar Abbas Khan Shahzad Ahmed Hafiz Mian Muhammad Adil Muhammad Kashif Azeem Zil e Huma Iftikhar Ahmad</i> <i>Energies</i> , Volume 13(14), Article Number 3695 Impact Factor: 2.702 Quartile: 3 Citations: 54 DOI: 10.3390/en13143695	2020
Non-linear control for electric power stage of fuel cell vehicles <i>Iftikhar Ahmad Muhammad Faizan Munir Syed Ahmad Siffat Syed Ahmed Qureshi Hammad Armghan Naghmash Ali</i> <i>ISA Transactions</i> , Volume 102, Pages 117-134 Impact Factor: 5.468 Quartile: 2 Citations: 16 DOI: 10.1016/j.isatra.2020.02.033	2020
Design of integral terminal sliding mode controller for the hybrid AC/DC microgrids involving renewables and energy storage systems <i>Iftikhar Ahmad Hammad Armghan Ming Yang Ammar Armghan Naghmash Ali M. Q. Wang</i> <i>International Journal of Electrical Power and Energy Systems</i> , Volume 119, Article Number 105857 Impact Factor: 4.630 Quartile: 1 Citations: 96 DOI: 10.1016/j.ijepes.2020.105857	2020
Variable structure-based control of fuel cell-supercapacitor-battery based hybrid electric vehicle <i>Iftikhar Ahmad Aqeel Ur Rahman Ali Shafiq Malik</i> <i>Journal of Energy Storage</i> , Volume 29, Article Number 101365 Impact Factor: 6.583 Quartile: 1 Citations: 95 DOI: 10.1016/j.est.2020.101365	2020
Control of MagLev System Using Supertwisting and Integral Backstepping Sliding Mode Algorithm <i>Iftikhar Ahmad Hafiz Mian Muhammad Adil Shahzad Ahmed</i> <i>IEEE Access</i> , Volume 8, Pages 51352-51362 Impact Factor: 3.367 Quartile: 2 Citations: 71 DOI: 10.1109/ACCESS.2020.2980687	2020
Robust Integral Backstepping Control for Unified Model of Hybrid Electric Vehicles <i>Iftikhar Ahmad Syed Ahmad Siffat Aqeel Ur Rahman Yasir Islam</i> <i>IEEE Access</i> , Volume 8, Pages 49038-49052 Impact Factor: 3.367 Quartile: 2 Citations: 25 DOI: 10.1109/ACCESS.2020.2978258	2020
Nonlinear Control for Growth of Cancerous Tumor Cells <i>muwahida liaquat Imran Lodhi Iftikhar Ahmad Muhammad Uneeb</i> <i>IEEE Access</i> , Volume 7, Pages 177628-177636 Impact Factor: 3.745 Quartile: 1 Citations: 16 DOI: 10.1109/ACCESS.2019.2953254	2019
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