

Ammar Hasan

Professor

School of Electrical Engineering and Computer Science

Email: ammar.hasan@seecs.edu.pk

Contact: 000000000

LinkedIn: <https://pk.linkedin.com/in/ammammar-hasan-98320a42>



About

Dr. Ammar Hasan is working as Professor in the School of Electrical Engineering and Computer Science. Dr. Ammar Hasan has a PhD in Control Systems. Dr. Ammar Hasan has published 29 research articles & conference papers having a citation count of 503, carried out 2 projects and filed 0 intellectual property.

Qualifications

PhD in Control Systems Imperial College London , England	2008 - 2012
MS in Control Systems Imperial College London , England	2007 - 2008
BE in Electrical Engineering NUST, Islamabad , Pakistan	2000 - 2004

Experience

Professor School of Electrical Engineering and Computer Science	2023- Present
Professor School of Electrical Engineering and Computer Science	2022 - 2023
Associate Professor School of Electrical Engineering and Computer Science	2018 - 2022
Assistant Professor School of Electrical Engineering and Computer Science	2012 - 2018
Assistant Professor School of Electrical Engineering and Computer Science	2012 - 2012
Snr / Design Engineer Comcept , Plot 291, Street 3, I-9/3, Islamabad	2004 - 2007

Awards

SEECS Best Teacher2016-17

NUST Best Teacher 2015-16

Professional Memberships

PEC

Research Projects

National Projects

Smart Load Enabler for Micro-Grids in Pakistan	2016
Funding Agency: USAID / USPCASE	
Amount: PKR 2,690,000.00	
Status: Completed	
Finite Control Set-Model Predictive Control (FCS-MPC) of Dual Active Bridge (DAB) Bidirectional Converters for Renewable Energy Systems	2017
Funding Agency: HEC	
Amount: PKR 2,755,000.00	
Status: Completed	

International Projects

Research Articles

Adaptive neuro-fuzzy inference system and barrier function based nonlinear control of three phase grid-connected fast charging station for bidirectional power flow	2025
Bibi Tabassam Gul Iftikhar Ahmad Habibur Rehman Ammar Hasan	
Journal of Energy Storage, Volume:109, Article Number: 114998	
Impact Factor: 8.9 Quartile: 1 Citations: 2	
DOI: https://doi.org/10.1016/j.est.2024.114998	
Optimized ANFIS-Based Robust Nonlinear Control of a Solar Off-Grid Charging Station for Electric Vehicles	2025
Bibi Tabassam Gul Iftikhar Ahmad Habibur Rehman Ammar Hasan	
IEEE ACCESS, Volume:13, Page(s):20361-20373	
Impact Factor: 3.4 Quartile: 2 Citations: 4	
DOI: 10.1109/ACCESS.2025.3535571	
Artificial neural network based conditional controllers with saturated action for multi-renewable hybrid alternating or direct current microgrids in islanded and grid-connected modes	2024
Rimsha Ghias Ammar Hasan Iftikhar Ahmad	
Journal of Energy Storage, Volume 94, Article Number 112139	
Impact Factor: 8.900 Quartile: 1 Citations: 12	
DOI: doi.org/10.1016/j.est.2024.112139	
Direct Model Predictive Control of Fuel Cell and Ultra-Capacitor Based Hybrid Electric Vehicle	2024
Farrukh Zain ul Abideen Hassan Abdullah Khalid Muhammad Saud Khan Habibur Rehman Ammar Hasan	
IEEE Access, Volume 12, Pages 46774-46784	
Impact Factor: 3.9 Quartile: 2 Citations: 10	
DOI: 10.1109/ACCESS.2024.3381219	
Non-linear Synergetic Control of UPFC for Efficient Damping of Local and Inter-Area Oscillations	2024
Umer Afaq Farhan Ali Ammar Hasan Iftikhar Ahmad Mansoor Asif	
IEEE Transactions on Power Systems, Volume 39, Issue 1	
Impact Factor: 7.326 Quartile: 1 Citations: 10	
DOI: 10.1109/TPWRS.2023.3263891	
A Blockchain-Based Data-Driven Fault-Tolerant Control System for Smart Factories in Industry 4.0	2023
Abdullah Bin Masood Ammar Hasan Vasos Vassiliou Marios Lestas	
Computer Communications, Volume 204, Pages 158-171	
Impact Factor: 5.047 Quartile: 1 Citations: 18	
DOI: https://doi.org/10.1016/j.comcom.2023.03.017	
FEA Based Transformer Loss Analysis for Dual Active Bridge DC-DC Converter Using Triple Phase Shift Modulation	2022
Seema Mir Akbar Ammar Hasan Alan J. Watson Pat Wheeler	
IEEE Journal of Emerging and Selected Topics in Power Electronics, Volume 10, Issue 4, Pages 4347-4360	
Impact Factor: 5.462 Quartile: 1 Citations: 10	
DOI: 10.1109/JESTPE.2022.3148355+	

Conditioned-based robust nonlinear control of plug-in hybrid electric vehicle with saturated control actions <i>Iftikhar Ahmad Shahzad Ahmed Usman Ali Afzal Ammar Hasan</i> <i>Journal of Energy Storage</i> , Volume 43, Article Number 103201 Impact Factor: 8.907 Quartile: 1 Citations: 18 DOI: 10.1016/j.est.2021.103201	2021
Model Predictive Control With Triple Phase Shift Modulation for a Dual Active Bridge DC- DC Converter <i>Seema Mir Akbar Ammar Hasan Alan J. Watson Pat Wheeler</i> <i>IEEE Access</i> , Volume 9, Pages 98603-98614 Impact Factor: 3.367 Quartile: 2 Citations: 29 DOI: 10.1109/ACCESS.2021.3095553	2021
Direct Model Predictive Control of Novel H-Bridge Multilevel Inverter Based Grid-Connected Photovoltaic System <i>Muhammad Bilal Satti Ammar Hasan</i> <i>IEEE Access</i> , Volume 7, Pages 62750-62758 Impact Factor: 3.745 Quartile: 1 Citations: 28 DOI: 10.1109/ACCESS.2019.2916195	2019
Formal periodic steady-state analysis of power converters in time-domain <i>Osman Hasan Ammar Hasan Asad Ahmed</i> <i>Journal of Applied Logics</i> , Vol.6(3), Pages 448-468 Impact Factor: 0 DOI: NA	2019
Combined Data Rate and Energy Management in Harvesting Enabled Tactile IoT Sensing Devices <i>Nouman Ashraf Ammar Hasan Hassaan Khaliq Marios Lestas</i> <i>IEEE Transactions on Industrial Informatics</i> , Volume 15, Issue 5, Pages 3006-3015 Impact Factor: 9.112 Quartile: 1 Citations: 31 DOI: 10.1109/TII.2019.2900795	2019
An efficient branch and bound algorithm for direct model predictive control of boost converter <i>Rizwan Amir Nouman Ali Ammar Hasan</i> <i>IEICE Electronics Express</i> , Volume 16, Issue 5, Article Number 20180445 Impact Factor: 0.788 Quartile: 4 Citations: 1 DOI: 10.1587/elex.16.20180445	2019
A New Multilevel Inverter Topology for Grid-Connected Photovoltaic Systems <i>Muhammad Bilal Satti Ammar Hasan Mian Ilyas Ahmad</i> <i>International Journal of Photoenergy</i> , Volume 2018, Article ID 9704346, 9 pages Impact Factor: 2.026 Quartile: 2 Citations: 13 DOI: https://doi.org/10.1155/2018/9704346	2018
MPPT for photovoltaic system using nonlinear backstepping controller with integral action <i>M. Arsalan R. Iftikhar K. Sabahat A. Javeria Iftikhar Ahmad Ammar Hasan</i> <i>Solar Energy</i> , NULL Impact Factor: 4.674 Quartile: 1 Citations: 121 DOI: 10.1016/j.solener.2018.04.061	2018
Machine Learning Based Adaptive Prediction Horizon in Finite Control Set Model Predictive Control <i>M. S. M. Gardezi AMMAR HASAN</i> <i>IEEE Access</i> , NULL Impact Factor: 4.098 Quartile: 1 DOI: https://ieeexplore.ieee.org/document/8361792/	2018
Unit Prediction Horizon Binary Search-Based Model Predictive Control of Full-Bridge DC-DC Converter <i>Junaid Saeed Ammar Hasan</i> <i>IEEE Transactions on Control Systems Technology</i> , Volume 26, Issue 2, Pages 463-474 Impact Factor: 5.371 Quartile: 1 Citations: 38 DOI: 10.1109/TCST.2017.2670530	2018
A method for estimating Hill function-based dynamic models of gene regulatory networks <i>F. Elahi Ammar Hasan</i> <i>Royal Society Open Science</i> , NULL	2018

Impact Factor: 2.515 Quartile: 2 DOI: http://rsos.royalsocietypublishing.org/content/5/2/171226.abstract	
Realization for low cost and energy efficient ceiling fans in the developing countries <i>Ammar Hasan Tauseef Tauqeer Muhammad Afnan Ansari</i> <i>Renewable and Sustainable Energy Reviews</i> , Volume 76, Pages 193-201 Impact Factor: 9.184 Quartile: 1 Citations: 4 DOI: 10.1016/j.rser.2017.03.020	2017
Control-oriented discrete-time large-signal model of phase-shift full-bridge DC?DC converter <i>Ammar Hasan Junaid Saeed</i> <i>Electrical Engineering</i> , Pages 1-9 Impact Factor: 1.269 Quartile: 3 Citations: 8 DOI: https://doi.org/10.1007/s00202-017-0601-8	2017
Variable frequency finite control set model predictive control of boost converter <i>Ammar Hasan Turrab Abid</i> <i>IEICE Electronics Express</i> , Vol.14, No.14, Article ID:14.20170526, Pages 1-6 Impact Factor: 0.475 Quartile: 4 DOI: https://www.jstage.jst.go.jp/article/elex/14/14/14_14.20170526/_article/-char/ja/	2017
Aerodynamic investigation and redesign of ceiling fan blades for enhanced energy efficienc <i>Ammar Hasan Muhammad Aaqib Afaq Adnan Maqsood Shahid Ikramullah Butt Tauseef Tauqeer</i> <i>Maejo International Journal of Science and Technology</i> , Vol.11(02), Pages 97-114 Impact Factor: 0.469 Quartile: 4 DOI: http://www.mijst.mju.ac.th/vol11/97-114.pdf	2017
4PR: Privacy preserving routing in mobile delay tolerant networks <i>J. Miao O. Hasan S. B. Mokhtar L. Brunie Ammar Hasan</i> <i>Computer Networks</i> , Volume 111, Pages 17-28 Impact Factor: 2.516 Quartile: 1 Citations: 13 DOI: 10.1016/j.comnet.2016.08.005	2016
Quadratic Optimal Control of Aerodynamic Vectored UAV at High Angle of Attack <i>Mubashra Manzoor Adnan Maqsood Ammar Hasan</i> <i>International Review of Aerospace Engineering</i> , Volume 9, Issue 3, Pages 70-79 Impact Factor: - Citations: 16 DOI: doi:10.15866/irease.v9i3.8119	2016
Control-theoretic forward error analysis of iterative numerical algorithms <i>E. C. Kerrigan G. A. Constantinides Ammar Hasan</i> <i>IEEE Transactions on Automatic Control</i> , Volume 58, Issue 6, Pages 1524-1529 Impact Factor: 3.167 Quartile: 1 Citations: 16 DOI: 10.1109/TAC.2012.2225513	2013

Conference Proceedings

Control over Blockchain for Data-Driven Fault Tolerant Control in Industry 4.0 <i>Abdullah Bin Masood Ammar Hasan Vasos Vassiliou Marios Lestas</i> <i>2022 20th Mediterranean Communication and Computer Networking Conference, MedComNet 2022</i> , res.country(55,) Citations: N/A DOI: 10.1109/MedComNet55087.2022.9810433	2022
Finite Control Set Model Predictive Control of Isolated DC/DC Modular Multilevel Converter <i>Seema Mir Akbar Ammar Hasan Alan Watson Pat Wheeler Shafiq Odhano</i> <i>46th Annual Conference of the IEEE Industrial Electronics Society</i> , res.country(197,) Citations: N/A DOI: 10.1109/IECON43393.2020.9254434	2020
Approximate Sphere Decoding Based Model Predictive Control of Cascaded H-Bridge Inverters <i>R. Amir Osman Hasan Ammar Hasan</i> <i>2019 IEEE 13th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG)</i> , res.country(59,) Citations: N/A DOI: 10.1109/CPE.2019.8862374	2019