

# Aamer Iqbal Bhatti

## List of Publications by Year in descending order

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84  
papers

1,021  
citations

430843

18  
h-index

526264

27  
g-index

84  
all docs

84  
docs citations

84  
times ranked

861  
citing authors

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 1  | Estimation of Gasoline-Engine Parameters Using Higher Order Sliding Mode. IEEE Transactions on Industrial Electronics, 2008, 55, 3891-3898.   | 7.9 | 63        |
| 2  | Robust Parameter Estimation of Nonlinear Systems Using Sliding-Mode Differentiator Observer. IEEE Transactions on Industrial Electronics, 2011, 58, 680-689.                              | 7.9 | 52        |
| 3  | Guidance of Air Vehicles: A Sliding Mode Approach. IEEE Transactions on Control Systems Technology, 2015, 23, 231-244.  | 5.2 | 50        |
| 4  | Robust stabilization of underactuated nonlinear systems: A fast terminal sliding mode approach. ISA Transactions, 2017, 66, 241-248.  | 5.7 | 39        |
| 5  | Estimating SI Engine Efficiencies and Parameters in Second-Order Sliding Modes. IEEE Transactions on Industrial Electronics, 2011, 58, 4837-4846.   | 7.9 | 37        |
| 6  | Control oriented modeling and optimization of one dimensional packed bed model of underground coal gasification. Journal of Process Control, 2014, 24, 269-277.                           | 3.3 | 37        |
| 7  | Virtual Sensors for Automotive Engine Sensors Fault Diagnosis in Second-Order Sliding Modes. IEEE Sensors Journal, 2011, 11, 1832-1840.   | 4.7 | 35        |
| 8  | Dynamic integral sliding mode for MIMO uncertain nonlinear systems. International Journal of Control, Automation and Systems, 2011, 9, 151-160.   | 2.7 | 31        |
| 9  | Model validation and higher order sliding mode controller design for a research reactor. Annals of Nuclear Energy, 2009, 36, 37-45.   | 1.8 | 30        |
| 10 | Mathematical modeling and stability analysis of DC microgrid using SM hysteresis controller. International Journal of Electrical Power and Energy Systems, 2018, 95, 507-522.             | 5.5 | 30        |
| 11 | A novel anti-windup framework for cascade control systems: An application to underactuated mechanical systems. ISA Transactions, 2014, 53, 802-815.                                       | 5.7 | 27        |
| 12 | Lateral guidance and control of UAVs using second-order sliding modes. Aerospace Science and Technology, 2016, 49, 88-100.  | 4.8 | 25        |
| 13 | Modeling and online parameter estimation of intake manifold in gasoline engines using sliding mode observer. Simulation Modelling Practice and Theory, 2013, 32, 138-154.                 | 3.8 | 24        |
| 14 | Robust Backstepping Sliding Mode Control Design for a Class of Underactuated Electro-Mechanical Nonlinear Systems. Journal of Electrical Engineering and Technology, 2020, 15, 1821-1828. | 2.0 | 24        |
| 15 | Hybrid Model of the Gasoline Engine for Misfire Detection. IEEE Transactions on Industrial Electronics, 2011, 58, 3680-3692.  | 7.9 | 23        |
| 16 | Estimation of precursor concentration in a research reactor by using second order sliding mode observer. Nuclear Engineering and Design, 2009, 239, 2134-2140.                            | 1.7 | 21        |
| 17 | Cut Locus and Optimal Synthesis in Sub-Riemannian Problem on the Lie Group SH(2). Journal of Dynamical and Control Systems, 2017, 23, 155-195.  | 0.8 | 19        |
| 18 | Fixed Frequency Sliding Mode Control of Power Converters for Improved Dynamic Response in DC Micro-Grids. Energies, 2018, 11, 2799.   | 3.1 | 18        |

| #  | ARTICLE   | IF  | CITATIONS |
|----|---|-----|-----------|
| 19 | Lateral track control of UAVs using the sliding mode approach: from design to flight testing. Transactions of the Institute of Measurement and Control, 2015, 37, 457-474.                  | 1.7 | 17        |
| 20 | Optimization and control of one dimensional packed bed model of underground coal gasification. Journal of Process Control, 2015, 35, 11-20.   | 3.3 | 16        |
| 21 | Prediction and parametric analysis of cavity growth for the underground coal gasification project Thar. Energy, 2019, 172, 1277-1290.   | 8.8 | 16        |
| 22 | Extremal Trajectories and Maxwell Strata in Sub-Riemannian Problem on Group of Motions of Pseudo-Euclidean Plane. Journal of Dynamical and Control Systems, 2014, 20, 341-364.              | 0.8 | 15        |
| 23 | A Novel Roll and Pitch Estimation Approach for a Ground Vehicle Stability Improvement Using a Low Cost IMU. Sensors, 2020, 20, 340.   | 3.8 | 15        |
| 24 | Robustness and performance parameterization of smooth second order sliding mode control. International Journal of Control, Automation and Systems, 2016, 14, 681-690.                       | 2.7 | 14        |
| 25 | A smooth integral sliding mode controller and disturbance estimator design. International Journal of Control, Automation and Systems, 2015, 13, 1326-1336.                                  | 2.7 | 13        |
| 26 | Chattering and stability analysis of the sliding mode control using inverse hyperbolic function. International Journal of Control, Automation and Systems, 2017, 15, 2608-2618.             | 2.7 | 13        |
| 27 | First principle based control oriented model of a gasoline engine including multi-cylinder dynamics. Control Engineering Practice, 2018, 70, 63-76.   | 5.5 | 13        |
| 28 | Trajectory Planning and Control for Lane-Change of Autonomous Vehicle. , 2019, , .  |     | 13        |
| 29 | Marine Natural Products and Drug Resistance in Latent Tuberculosis. Marine Drugs, 2019, 17, 549.  | 4.6 | 13        |
| 30 | Model development of UCG and calorific value maintenance via sliding mode control. , 2012, , .  |     | 12        |
| 31 | Energy Management Strategy for Atkinson Cycle Engine Based Parallel Hybrid Electric Vehicle. IEEE Access, 2018, 6, 28008-28018.   | 4.2 | 12        |
| 32 | Estimation of Reactivity and Average Fuel Temperature of a Pressurized Water Reactor Using Sliding Mode Differentiator Observer. IEEE Transactions on Nuclear Science, 2013, 60, 3025-3032. | 2.0 | 11        |
| 33 | Fixed frequency sliding mode control of renewable energy resources in DC micro grid. Asian Journal of Control, 2019, 21, 2074-2086.   | 3.0 | 11        |
| 34 | Design and implementation of multi-variable $\frac{H^{\infty}}$ robust control for the underground coal gasification project Thar. Energy, 2021, 216, 119000.                               | 8.8 | 11        |
| 35 | Load Varying Polytopic Based Robust Controller Design in LMI Framework for a 2DOF Stabilized Platform. Arabian Journal for Science and Engineering, 2011, 36, 311-327.                      | 1.1 | 10        |
| 36 | Higher-order sliding mode based lateral guidance for unmanned aerial vehicles. Transactions of the Institute of Measurement and Control, 2017, 39, 715-727.                                 | 1.7 | 10        |

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|----|--|-----|-----------|
| 37 | A Novel Filter Extracted Equivalent Control Based Fixed Frequency Sliding Mode Approach for Power Electronic Converters. <i>Energies</i> , 2019, 12, 853.  | 3.1 | 10        |
| 38 | Dynamical Adaptive Integral Sliding Backstepping Control of Nonlinear Nontriangular Uncertain Systems. <i>Mathematical Problems in Engineering</i> , 2014, 2014, 1-14.   | 1.1 | 9         |
| 39 | Robust gain-scheduled linear parameter-varying control algorithm for a lab helicopter: A linear matrix inequality-based approach. <i>Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering</i> , 2018, 232, 558-571. | 1.0 | 9         |
| 40 | Second order sliding mode observer for estimation of SI engine Volumetric Efficiency & Throttle Discharge Coefficient. , 2010, , .   |     | 8         |
| 41 | A novel reaching law for smooth sliding mode control using inverse hyperbolic function. , 2012, , .  |     | 8         |
| 42 | Estimation of precursor density of a power reactor using uniform second order sliding mode observer. <i>Annals of Nuclear Energy</i> , 2013, 54, 233-239.  | 1.8 | 8         |
| 43 | On p53 revival using system oriented drug dosage design. <i>Journal of Theoretical Biology</i> , 2017, 415, 53-57.   | 1.7 | 8         |
| 44 | Robust multi-objective control design for underground coal gasification energy conversion process. <i>International Journal of Control</i> , 2020, 93, 328-335.  | 1.9 | 8         |
| 45 | Maxwell Strata and Conjugate Points in the Sub-Riemannian Problem on the Lie Group SH(2). <i>Journal of Dynamical and Control Systems</i> , 2016, 22, 747-770.   | 0.8 | 7         |
| 46 | Landing control of unmanned aerial vehicle using continuous model predictive control. , 2017, , .  |     | 7         |
| 47 | Air-to-fuel ratio control of gasoline engines using smooth sliding mode algorithm. , 2017, , .   |     | 7         |
| 48 | Integral Sliding Mode Control and Gain-Scheduled Modified Utkin Observer for an Underground Coal Gasification Energy Conversion Process. , 2018, , .   |     | 7         |
| 49 | Cyclic torque imbalance detection in gasoline engines using a uniform second-order sliding mode observer. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2019, 233, 3515-3527.                               | 1.9 | 7         |
| 50 | Data-Driven Modeling and Design of Multivariable Dynamic Sliding Mode Control for the Underground Coal Gasification Project Thar. <i>IEEE Transactions on Control Systems Technology</i> , 2022, 30, 153-165.  | 5.2 | 7         |
| 51 | Dynamic Integral Sliding Mode Control of Nonlinear SISO Systems with States Dependent Matched and Mismatched Uncertainties. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011, 44, 3932-3937.                                    | 0.4 | 6         |
| 52 | Robust level flight control design for scaled Yak-54 unmanned aerial vehicle using single sliding surface.. , 2012, , .  |     | 6         |
| 53 | Gasoline engine air filter health monitoring by second-order sliding modes. <i>International Journal of Adaptive Control and Signal Processing</i> , 2013, 27, 447-461.  | 4.1 | 6         |
| 54 | Dynamic Sliding Mode Control Design Based on an Integral Manifold for Nonlinear Uncertain Systems. <i>Journal of Nonlinear Dynamics</i> , 2014, 2014, 1-10.  | 0.2 | 6         |

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|----|---|-----|-----------|
| 55 | Condition monitoring of gasoline engine air intake system using second order sliding modes. International Journal of Vehicle Design, 2013, 62, 312.   | 0.3 | 5         |
| 56 | Sliding mode-based observer design for field-oriented control of induction machine drive for applications in hybrid electric vehicles. , 2014, , .  |     | 5         |
| 57 | Higher order sliding mode based control scheme for air path of diesel engine. , 2016, , .   |     | 5         |
| 58 | Sliding mode controller&quot;observer pair for p53 pathway. IET Systems Biology, 2019, 13, 204-211.   | 1.5 | 5         |
| 59 | Cooperative Adaptive Cruise Control with Fuel Efficiency Using PMP Technique. , 2019, , .   |     | 5         |
| 60 | A Linear Parameter Varying Strategy Based Integral Sliding Mode Control Protocol Development and Its Implementation on Ball and Beam Balancer. IEEE Access, 2021, 9, 74437-74445.   | 4.2 | 5         |
| 61 | Neuro-adaptive sliding mode control for underground coal gasification energy conversion process. International Journal of Control, 2022, 95, 2337-2348.   | 1.9 | 4         |
| 62 | Robust Feedback Linearization for Minimum Phase Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 11151-11156.  | 0.4 | 3         |
| 63 | Robust altitude tracking of a helicopter using sliding mode control structure. , 2012, , .  |     | 3         |
| 64 | Robust vehicle localization with GPS dropouts. , 2016, , .  |     | 3         |
| 65 | Eco-driving control of electric vehicle with battery dynamic model and multiple traffic signals. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2022, 236, 1133-1143. | 1.9 | 3         |
| 66 | Control of Air-to-Fuel ratio of spark ignited engine using super twisting algorithm. , 2012, , .  |     | 2         |
| 67 | Integrability by quadratures in optimal control of a unicycle on hyperbolic plane. , 2015, , .  |     | 2         |
| 68 | Robust integrated lateral guidance and control of UAVs. , 2015, , .   |     | 2         |
| 69 | Sliding mode control for efficient utilization of renewable energy sources in DC micro grid: A comparison with a linear PID controller. , 2016, , .   |     | 2         |
| 70 | High fidelity engine model for a unified control, diagnostic and condition monitoring framework. , 2017, , .  |     | 2         |
| 71 | Robust p53 recovery using chattering free sliding mode control and a gain-scheduled modified Utkin observer. Journal of Theoretical Biology, 2022, 532, 110914.   | 1.7 | 2         |
| 72 | Estimation of Reactivity in a Research Reactor by Using a Second-Order Sliding Mode Observer. Nuclear Science and Engineering, 2012, 172, 327-336.  | 1.1 | 1         |

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|----|--|-----|-----------|
| 73 | Real-time Switched Model Predictive Control of a Twin Rotor System. , 2013, , .  |     | 1         |
| 74 | Air/Fuel Ratio Estimation of SI Engine Using Higher Order Sliding Mode. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 501-506.  | 0.4 | 1         |
| 75 | Robust stabilization of underactuated systems via fast terminal sliding mode. , 2015, , .  |     | 1         |
| 76 | Exponential stabilization of kinematic nonholonomic systems using adaptive backstepping. , 2016, , .   |     | 1         |
| 77 | State feedback based intervention design in Wnt and cell cycle network. , 2017, , .  |     | 1         |
| 78 | Model-based Selective Cylinder Deactivation Strategies in an Inline Four Cylinder Gasoline Engine. , 2018, , .   |     | 1         |
| 79 | H <sup>∞</sup> Optimization-based robust decoupling control algorithm in linear parameter varying systems using Hadamard weighting. Transactions of the Institute of Measurement and Control, 2019, 41, 1833-1848. | 1.7 | 1         |
| 80 | A Framework for Model Based Detection of Misfire in a Gasoline Engine with Dynamic Skip Fire. , 0, , .   |     | 1         |
| 81 | Lateral control of UAVs: Trajectory tracking via Higher-Order Sliding Modes. , 2013, , .   |     | 0         |
| 82 | Robust nonlinear control design for scaled Yak-54 Unmanned Aerial Vehicle. , 2014, , .   |     | 0         |
| 83 | Constructive mechanism of Lead/Lag design for a class of linear systems. , 2016, , .   |     | 0         |
| 84 | A method for multimodal optimization with application to signal processing. , 2018, , .  |     | 0         |