# Babak Fahimi

List of Publications by Year
in descending order



| 108 | 2,905 | 236925 | 175258 |
|---|---|---|---|
| papers | citations | 25 h-index | 52 g-index |

| 109 | 109 | 109 | 2532 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Coil-to-Coil Efficiency Optimization of Double-Sided LCC Topology for Electric Vehicle Inductive Chargers. IEEE Transactions on Industrial Electronics, 2022, 69, 11242-11252. | 7.9 | 10 |
| 2 | Multimodal Optimization Algorithm for Torque Ripple Reduction in Synchronous Reluctance Motors. IEEE Access, 2022, 10, 26628-26636. | 4.2 | 5 |
| 3 | Rapidly Reversible Organic Crystalline Switch for Conversion of Heat into Mechanical Energy. Journal of the American Chemical Society, 2021, 143, 5951-5957. | 13.7 | 29 |
| 4 | A bidirectional hybrid switched inductor converter with wide voltage conversion range. IET Power Electronics, 2021, 14, 1753-1767. | 2.1 | 4 |
| 5 | Multiple Reference Frame-Based Torque Ripple Reduction in DFIG-DC System. IEEE Transactions on Power Electronics, 2020, 35, 4971-4983. | 7.9 | 14 |
| 6 | Electromagnetic Compatibility Analysis of an Induction Motor Drive With Integrated Power Converter. IEEE Transactions on Magnetics, 2020, 56, 1-4. | 2.1 | 5 |
| 7 | Design of a 6.8-kW Two-Phase Converter for 48V Automotive Applications. , 2020, , . | | 0 |
| 8 | Chaos in the switched reluctance motor drive employing digital speed and current control. IET Power Electronics, 2020, 13, 1656-1666. | 2.1 | 1 |
| 9 | Stateâ€space modelling of LLC resonant halfâ€bridge DCâ€“DC converter. IET Power Electronics, 2020, 13, 1583-1592. | 2.1 | 7 |
| 10 | Predicting Temperature Profile on the Surface of a Switched Reluctance Motor Using a Fast and Accurate Magneto-Thermal Model. IEEE Transactions on Energy Conversion, 2020, 35, 1394-1401. | 5.2 | 13 |
| 11 | Analytical calculation of magnetic field components in synchronous reluctance machine accounting for rotor flux barriers using combined conformal mapping and magnetic equivalent circuit methods. Journal of Magnetism and Magnetic Materials, 2020, 505, 166762. | 2.3 | 12 |
| 12 | On the Cross Coupling Effects in Structural Response of Switched Reluctance Motor Drives. IEEE Transactions on Energy Conversion, 2019, 34, 620-630. | 5.2 | 11 |
| 13 | Asymmetric Rotor Surface Design in Interior Permanent Magnet Synchronous Motors for Torque Ripple Mitigation. , 2019, , . | | 2 |
| 14 | Torque Profile Optimization in Switched Reluctance Motor. , 2019, , . | | 4 |
| 15 | Asymmetrical Magnet Shape Optimization Based on S-C Mapping for Torque Profile Mitigation in Unidirectional Application of SPMS Machine. IEEE Transactions on Transportation Electrification, 2019, 5, 630-637. | 7.8 | 11 |
| 16 | Active Cancellation of Vibration in Switched Reluctance Motor Using Mechanical Impulse Response Method. IEEE Transactions on Energy Conversion, 2019, 34, 1358-1368. | 5.2 | 19 |
| 17 | 3D multiphysics simulation and analysis of a low temperature liquid metal magnetohydrodynamic power generator prototype. Sustainable Energy Technologies and Assessments, 2019, 35, 180-188. | 2.7 | 5 |
| 18 | Induced Chaos in Speed Controlled Switched Reluctance Motor Drive. , 2019, , . | | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Machine learning based energy management system for grid disaster mitigation. IET Smart Grid, 2019, 2, 172-182. | 2.2 | 20 |
| 20 | High Torque Density Double Stator Permanent Magnet Electric Machine. , 2019, , . | | 5 |
| 21 | Optimization of Air-Gap Profile in Interior Permanent-Magnet Synchronous Motors for Torque Ripple Mitigation. IEEE Transactions on Transportation Electrification, 2019, 5, 118-125. | 7.8 | 43 |
| 22 | A Coil Detection System for Dynamic Wireless Charging of Electric Vehicle. IEEE Transactions on Transportation Electrification, 2019, 5, 988-1003. | 7.8 | 26 |
| 23 | Structural Analysis of Induction Machine and Switched Reluctance Machine. Electric Power Components and Systems, 2019, 47, 164-180. | 1.8 | 2 |
| 24 | On the Effects of Mechanical Offset Between Inner and Outer Stator in a 4-Phase Double Stator Switched Reluctance Machine. , 2019, , . | | 4 |
| 25 | Low-Cost Drive for Switched Reluctance Machine Using Piezoelectric Actuators. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2019, 7, 2232-2242. | 5.4 | 3 |
| 26 | Electrothermal Modeling of Lithium-Ion Batteries for Electric Vehicles. IEEE Transactions on Vehicular Technology, 2019, 68, 170-179. | 6.3 | 44 |
| 27 | Online Estimation of Capacity Fade and Power Fade of Lithium-Ion Batteries Based on Inputâ€“Output Response Technique. IEEE Transactions on Transportation Electrification, 2018, 4, 147-156. | 7.8 | 37 |
| 28 | Power management of a self-powered multi-parameter wireless sensor for IoT application. , 2018, , . | | 0 |
| 29 | Simultaneous Optimization of Geometry and Firing Angles for In-Wheel Switched Reluctance Motor Drive. IEEE Transactions on Transportation Electrification, 2018, 4, 322-329. | 7.8 | 63 |
| 30 | Wireless Power Transfer for Vehicular Applications: Overview and Challenges. IEEE Transactions on Transportation Electrification, 2018, 4, 3-37. | 7.8 | 591 |
| 31 | Comparative Study of a New Coil Design With Traditional Shielded Figure-of-Eight Coil for Transcranial Magnetic Stimulation. IEEE Transactions on Magnetics, 2018, 54, 1-4. | 2.1 | 6 |
| 32 | On the Occurrence of Nonlinear Dynamic Phenomena in the Hysteresis-Controlled Switched Reluctance Motor Drive. , 2018, , . | | 2 |
| 33 | Inductor-free Chuaâ€™s Circuit Employing Linear Voltage-controlled Resistor. , 2018, , . | | 1 |
| 34 | Variable Stator Frequency Control of Stand-Alone DFIG with Diode Rectified Output. , 2018, , . | | 5 |
| 35 | Comprehensive Report on Design and Development of a 100-kW DSSRM. IEEE Transactions on Transportation Electrification, 2018, 4, 835-856. | 7.8 | 22 |
| 36 | On the Period-doubling Bifurcation in PWM controlled Buck Converter. , 2018, , . | | 5 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Analysis of DC-Link Voltage Ripple in Voltage Source Inverters without Electrolytic Capacitor. , 2018, , . | | 15 |
| 38 | ESC Based Optimal Stator Frequency Control of DFIG-DC System for Efficiency Enhancement. , 2018, , . | | 3 |
| 39 | Thermal signature analysis of an 8/6 switched reluctance motor under inter-turn short circuit fault. , 2018, , . | | 7 |
| 40 | Combined ON/OFF and conformal mapping method for magnet shape optimisation of SPMSM. IET Electric Power Applications, 2018, 12, 1365-1370. | 1.8 | 5 |
| 41 | Thermal Fluid Analysis of Cold Plasma Methane Reformer. Fluids, 2018, 3, 31. | 1.7 | 1 |
| 42 | Opportunities and Challenges of Switched Reluctance Motor Drives for Electric Propulsion: A Comparative Study. IEEE Transactions on Transportation Electrification, 2017, 3, 58-75. | 7.8 | 276 |
| 43 | Magneto-Thermal Modeling of Biological Tissues: A Step Toward Breast Cancer Detection. IEEE Transactions on Magnetics, 2017, 53, 1-4. | 2.1 | 13 |
| 44 | Online estimation of capacity fade and impedance of lithium-ion batteries based on impulse response technique. , 2017, , . | | 1 |
| 45 | Control Algorithm for Soft Start of Split-AC-Switched-Reluctance Motor Drives. IEEE Transactions on Industry Applications, 2017, 53, 5479-5488. | 4.9 | 7 |
| 46 | Electrothermal behavior of lithium-ion batteries with different levels of power fade. , 2017, , . | | 3 |
| 47 | Multiphysics simulation of pulsed cold plasma arc rotation for enhanced hydrogen harvesting. International Journal of Hydrogen Energy, 2017, 42, 29186-29191. | 7.1 | 1 |
| 48 | Comparison of winding configurations in doubleâ€stator switched reluctance machines. IET Electric Power Applications, 2017, 11, 1407-1415. | 1.8 | 10 |
| 49 | On the proximity effects of high-energy magnets on M-19 magnetic steel core. , 2017, , . | | 0 |
| 50 | IMPROVING THE TORQUE CHARACTERISTICS OF INTERIOR PM SYNCHRONOUS MOTOR USING AN ASYMMETRIC ON-OFF METHOD ON THE ROTOR SURFACE. Progress in Electromagnetics Research M, 2017, 54, 55-65. | 0.9 | 1 |
| 51 | Seamless transition control between motoring and generating modes of a bidirectional multi-port power converter used in automotive SRM drive. , 2016, , . | | 0 |
| 52 | Temperature dependence of efficiency in renewable magnetohydrodynamic power generation systems. , 2016, , . | | 1 |
| 53 | An improved conformal mapping aided field reconstruction method for modeling of interior permanent magnet synchronous machines. , 2016, , . | | 1 |
| 54 | Magneto-thermal modeling of biological tissues: A step towards breast cancer detection. , 2016, , . | | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Low-power LLC resonant AC-DC converter for phone charging applications. , 2016, , . | | 3 |
| 56 | Magnetohydrodynamics in thermal to electric energy conversion. , 2016, , . | | 1 |
| 57 | Temperature estimation of switched reluctance machines using thermal impulse response technique. , 2016, , . | | 4 |
| 58 | 2D simulation of magnetic field generation by pulsating AC voltage in cold plasma chamber. , 2016, , . | | 0 |
| 59 | Thermal analysis of switched reluctance motor with direct in-winding cooling system. , 2016, , . | | 17 |
| 60 | Nonparametric Estimation of Surface Temperature of Li-Ion Cells Using Thermal Impulse Response. IEEE Transactions on Transportation Electrification, 2016, 2, 407-416. | 7.8 | 5 |
| 61 | Multiphysics simulation of pulsed cold plasma arc rotation in the field of a ring permanent magnet. , 2016, , . | | 1 |
| 62 | Magnetic Design of Two-Phase Switched Reluctance Motor With Bidirectional Startup Capability. IEEE Transactions on Industry Applications, 2016, 52, 2148-2155. | 4.9 | 8 |
| 63 | Rotor Shape Investigation and Optimization of Double Stator Switched Reluctance Machine. IEEE Transactions on Magnetics, 2015, 51, 1-4. | 2.1 | 15 |
| 64 | IECON 2014 in Texas [Society News]. IEEE Industrial Electronics Magazine, 2015, 9, 88-89. | 2.6 | 0 |
| 65 | Management of capacitor voltages in split-AC switched reluctance motor drives with power factor correction. , 2015, , . | | 3 |
| 66 | Economic Dispatch of a Hybrid Microgrid With Distributed Energy Storage. IEEE Transactions on Smart Grid, 2015, 6, 2607-2614. | 9.0 | 155 |
| 67 | Stability Optimization Method Based on Virtual Resistor and Nonunity Voltage Feedback Loop for Cascaded DCâ€“DC Converters. IEEE Transactions on Industry Applications, 2015, 51, 4575-4583. | 4.9 | 25 |
| 68 | Six-Phase BLDC Reluctance Machines: FEM-Based Characterization and Four-Quadrant Control. IEEE Transactions on Industry Applications, 2015, 51, 2105-2115. | 4.9 | 15 |
| 69 | Thermal Modeling and Analysis of a Double-Stator Switched Reluctance Motor. IEEE Transactions on Energy Conversion, 2015, 30, 1209-1217. | 5.2 | 79 |
| 70 | Guest Editorial Optimal Design of Electric Machines. IEEE Transactions on Energy Conversion, 2015, 30, 1143-1143. | 5.2 | 10 |
| 71 | Design considerations for reduction of acoustic noise in switched reluctance drives. , 2014, , . | | 3 |
| 72 | Short circuit analysis of switched reluctance machine. , 2014, , . | | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Efficient multiphysics modelling of vibration and acoustic noise in switched reluctance motor drives. , 2014, , . | | 6 |
| 74 | An integrated multi-port power converter with small capacitance requirement for switched reluctance machine. , 2014, , . | | 3 |
| 75 | Comparison of Mechanical Vibration Between a Double-Stator Switched Reluctance Machine and a Conventional Switched Reluctance Machine. IEEE Transactions on Magnetics, 2014, 50, 293-296. | 2.1 | 76 |
| 76 | Fault Resilient Strategies for Position Sensorless Methods of Switched Reluctance Motors Under Single and Multiphase Fault. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 190-200. | 5.4 | 28 |
| 77 | Comparative study of structural rigidity of induction machine and Switched Reluctance Machine. , 2014, , . | | 4 |
| 78 | Electrothermal modeling and experimental validation of a LiFePO<inf>4</inf> battery cell. , 2014, , . | | 1 |
| 79 | Stability Assessment of a DC Distribution Network in a Hybrid Micro-Grid Application. IEEE Transactions on Smart Grid, 2014, 5, 2527-2534. | 9.0 | 52 |
| 80 | Fault tolerant drive module via electromechanical alteration of circuit topology. , 2014, , . | | 2 |
| 81 | Temperature effects on steady state performance of an induction machine and a Switched Reluctance machine. , 2014, , . | | 11 |
| 82 | Analytical design methodology for Double Stator Switched Reluctance Machine. , 2014, , . | | 2 |
| 83 | Trends in Electrical Machines Control: Samples for Classical, Sensorless, and Fault-Tolerant Techniques. IEEE Industrial Electronics Magazine, 2014, 8, 43-55. | 2.6 | 96 |
| 84 | Prediction of Acoustic Noise in Switched Reluctance Motor Drives. IEEE Transactions on Energy Conversion, 2014, 29, 250-258. | 5.2 | 124 |
| 85 | A New Synchronous Machine Modeling Using the Field Reconstruction Method. Journal of Control, Automation and Electrical Systems, 2014, 25, 481-492. | 2.0 | 5 |
| 86 | Fault tolerant control of adjustable speed switched reluctance motor drives. , 2013, , . | | 6 |
| 87 | Wide-Bandgap Semiconductor Technology: Its impact on the electrification of the transportation industry. IEEE Electrification Magazine, 2013, 1, 59-63. | 1.8 | 16 |
| 88 | Prediction of Radial Vibration in Switched Reluctance Machines. IEEE Transactions on Energy Conversion, 2013, 28, 1072-1081. | 5.2 | 53 |
| 89 | Single-Bus Star-Connected Switched Reluctance Drive. IEEE Transactions on Power Electronics, 2013, 28, 5578-5587. | 7.9 | 27 |
| 90 | Optimal scheduling of microgrid operation considering the time-of-use price of electricity. , 2013, , . | | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Performance evaluation of wide bandgap semiconductor technologies in automotive applications. , 2013, , . | | 5 |
| 92 | Active Mitigation of Electromagnetic Vibration Radiated by PMSM in Fractional-Horsepower Drives by Optimal Choice of the Carrier Frequency. IEEE Transactions on Industrial Electronics, 2012, 59, 1346-1354. | 7.9 | 38 |
| 93 | Fast Computation of Electromagnetic Vibrations in Electrical Machines via Field Reconstruction Method and Knowledge of Mechanical Impulse Response. IEEE Transactions on Industrial Electronics, 2012, 59, 839-847. | 7.9 | 67 |
| 94 | Estimation of Airgap Length in Magnetically Levitated Systems. IEEE Transactions on Industry Applications, 2012, 48, 2173-2181. | 4.9 | 8 |
| 95 | Design and Development of Very High Frequency Resonant DCâ€“DC Boost Converters. IEEE Transactions on Power Electronics, 2012, 27, 3725-3733. | 7.9 | 47 |
| 96 | An Extended Field Reconstruction Method for Modeling of Switched Reluctance Machines. IEEE Transactions on Magnetics, 2012, 48, 1051-1054. | 2.1 | 27 |
| 97 | Electric Transportation [Guest Editorial]. IEEE Power and Energy Magazine, 2011, 9, 14-16. | 1.6 | 1 |
| 98 | Multiphysics Finite-Element Modeling for Vibration and Acoustic Analysis of Permanent Magnet Synchronous Machine. IEEE Transactions on Energy Conversion, 2011, 26, 490-500. | 5.2 | 106 |
| 99 | Magnetic Flux Estimation in a Permanent Magnet Synchronous Machine Using Field Reconstruction Method. IEEE Transactions on Energy Conversion, 2011, 26, 757-765. | 5.2 | 17 |
| 100 | Remote control of smart appliances using MPEI. , 2011, , . | | 4 |
| 101 | Optimal Design of Doubly Fed Induction Generators Using Field Reconstruction Method. IEEE Transactions on Magnetics, 2010, 46, 3453-3456. | 2.1 | 27 |
| 102 | Double-Stator Switched Reluctance Machines (DSSRM): Fundamentals and Magnetic Force Analysis. IEEE Transactions on Energy Conversion, 2010, 25, 589-597. | 5.2 | 198 |
| 103 | A Field Reconstruction Technique for Efficient Modeling of the Fields and Forces Within Induction Machines. IEEE Transactions on Energy Conversion, 2009, 24, 366-374. | 5.2 | 24 |
| 104 | Special Section on Automotive Electromechanical Converters. IEEE Transactions on Vehicular Technology, 2007, 56, 1470-1476. | 6.3 | 12 |
| 105 | Guest Editorial [Electric Machinery and Adjustable-Speed Motor Drives, Part I]. IEEE Transactions on Industrial Electronics, 2007, 54, 2363-2364. | 7.9 | 5 |
| 106 | Correction to "An autocalibrating inductance model for switchedreluctance motor drives". IEEE Transactions on Industrial Electronics, 2007, 54, 2921-2921. | 7.9 | 1 |
| 107 | Investigation of Force Generation in a Permanent Magnet Synchronous Machine. IEEE Transactions on Energy Conversion, 2007, 22, 557-565. | 5.2 | 61 |
| 108 | Thyristor-Based Resonant Current Controlled Switched Reluctance Generator for Distributed Generation. Journal of Electrical Engineering and Technology, 2007, 2, 68-80. | 2.0 | 3 |