# Wen Zhong Shen

List of Publications by Year
in descending order



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|---|---|---|---|
| 96 papers | 3,908 citations | 147801 31 h-index | 128289 60 g-index |
| 99 all docs | 99 docs citations | 99 times ranked | 1994 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Numerical Modeling of Wind Turbine Wakes. Journal of Fluids Engineering, Transactions of the ASME, 2002, 124, 393-399. | 1.5 | 842 |
| 2 | Tip loss corrections for wind turbine computations. Wind Energy, 2005, 8, 457-475. | 4.2 | 325 |
| 3 | Solving the wind farm layout optimization problem using random search algorithm. Renewable Energy, 2015, 78, 182-192. | 8.9 | 166 |
| 4 | Shape optimization of wind turbine blades. Wind Energy, 2009, 12, 781-803. | 4.2 | 140 |
| 5 | Development and validation of a new two-dimensional wake model for wind turbine wakes. Journal of Wind Engineering and Industrial Aerodynamics, 2015, 137, 90-99. | 3.9 | 118 |
| 6 | The Actuator Surface Model: A New Navierâ€“Stokes Based Model for Rotor Computations. Journal of Solar Energy Engineering, Transactions of the ASME, 2009, 131, . | 1.8 | 102 |
| 7 | Actuator line/Navierâ€“Stokes computations for the MEXICO rotor: comparison with detailed measurements. Wind Energy, 2012, 15, 811-825. | 4.2 | 102 |
| 8 | Improved Rhie-Chow Interpolation for Unsteady Flow Computations. AIAA Journal, 2001, 39, 2406-2409. | 2.6 | 100 |
| 9 | Design optimization of offshore wind farms with multiple types of wind turbines. Applied Energy, 2017, 205, 1283-1297. | 10.1 | 86 |
| 10 | Modeling of Aerodynamically Generated Noise From Wind Turbines. Journal of Solar Energy Engineering, Transactions of the ASME, 2005, 127, 517-528. | 1.8 | 79 |
| 11 | Aeroacoustic Modelling of Low-Speed Flows. Theoretical and Computational Fluid Dynamics, 1999, 13, 271-289. | 2.2 | 78 |
| 12 | Tip Loss Correction for Actuator/Navierâ€“Stokes Computations. Journal of Solar Energy Engineering, Transactions of the ASME, 2005, 127, 209-213. | 1.8 | 78 |
| 13 | Determination of the angle of attack on rotor blades. Wind Energy, 2009, 12, 91-98. | 4.2 | 78 |
| 14 | A new wake model and comparison of eight algorithms for layout optimization of wind farms in complex terrain. Applied Energy, 2020, 259, 114189. | 10.1 | 65 |
| 15 | Prediction of the wind turbine performance by using BEM with airfoil data extracted from CFD. Renewable Energy, 2014, 70, 107-115. | 8.9 | 64 |
| 16 | Evaluation of different methods for determining the angle of attack on wind turbine blades with CFD results under axial inflow conditions. Renewable Energy, 2018, 125, 866-876. | 8.9 | 64 |
| 17 | Structural optimization study of composite wind turbine blade. Materials & Design, 2013, 46, 247-255. | 5.1 | 62 |
| 18 | Modelling Wind for Wind Farm Layout Optimization Using Joint Distribution of Wind Speed and Wind Direction. Energies, 2015, 8, 3075-3092. | 3.1 | 56 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Atmospheric stability and topography effects on wind turbine performance and wake properties in complex terrain. Renewable Energy, 2018, 126, 640-651. | 8.9 | 54 |
| 20 | Wind farm power production in the changing wind: Robustness quantification and layout optimization. Energy Conversion and Management, 2017, 148, 905-914. | 9.2 | 49 |
| 21 | AN IMPROVED SIMPLEC METHOD ON COLLOCATED GRIDS FOR STEADY AND UNSTEADY FLOW COMPUTATIONS. Numerical Heat Transfer, Part B: Fundamentals, 2003, 43, 221-239. | 0.9 | 48 |
| 22 | Consistent modelling of wind turbine noise propagation from source to receiver. Journal of the Acoustical Society of America, 2017, 142, 3297-3310. | 1.1 | 48 |
| 23 | Prediction of multi-wake problems using an improved Jensen wake model. Renewable Energy, 2017, 102, 457-469. | 8.9 | 46 |
| 24 | Integrated airfoil and blade design method for large wind turbines. Renewable Energy, 2014, 70, 172-183. | 8.9 | 45 |
| 25 | Quasi-3D Navierâ€“Stokes Model for a Rotating Airfoil. Journal of Computational Physics, 1999, 150, 518-548. | 3.8 | 38 |
| 26 | Three-dimensional viscous-inviscid coupling method for wind turbine computations. Wind Energy, 2016, 19, 67-93. | 4.2 | 37 |
| 27 | Wall Correction Model for Wind Tunnels with Open Test Section. AIAA Journal, 2006, 44, 1890-1894. | 2.6 | 36 |
| 28 | Fatigue distribution optimization for offshore wind farms using intelligent agent control. Wind Energy, 2012, 15, 927-944. | 4.2 | 35 |
| 29 | Wind turbine noise generation and propagation modeling at DTU Wind Energy: A review. Renewable and Sustainable Energy Reviews, 2018, 88, 133-150. | 16.4 | 35 |
| 30 | Modelling the nacelle wake of a horizontal-axis wind turbine under different yaw conditions. Renewable Energy, 2021, 172, 263-275. | 8.9 | 34 |
| 31 | Aerodynamic wind-turbine rotor design using surrogate modeling and three-dimensional viscousâ€“inviscid interaction technique. Renewable Energy, 2016, 93, 620-635. | 8.9 | 33 |
| 32 | A strong viscous-inviscid interaction model for rotating airfoils. Wind Energy, 2014, 17, 1957-1984. | 4.2 | 32 |
| 33 | Effects of wind turbine wake on atmospheric sound propagation. Applied Acoustics, 2017, 122, 51-61. | 3.3 | 32 |
| 34 | An Optimization Framework for Wind Farm Design in Complex Terrain. Applied Sciences (Switzerland), 2018, 8, 2053. | 2.5 | 32 |
| 35 | CFD Simulations of Flows in a Wind Farm in Complex Terrain and Comparisons to Measurements. Applied Sciences (Switzerland), 2018, 8, 788. | 2.5 | 32 |
| 36 | Researches on vortex generators applied to wind turbines: A review. Ocean Engineering, 2022, 253, 111266. | 4.3 | 31 |

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|---|---|---|---|
| 37 | Improved blade element momentum theory for wind turbine aerodynamic computations. Renewable Energy, 2016, 96, 824-831. | 8.9 | 30 |
| 38 | A collocated grid finite volume method for aeroacoustic computations of low-speed flows. Journal of Computational Physics, 2004, 196, 348-366. | 3.8 | 28 |
| 39 | Design and validation of the high performance and low noise CQU-DTU-LN1 airfoils. Wind Energy, 2014, 17, 1817-1833. | 4.2 | 26 |
| 40 | A review: Approaches for aerodynamic performance improvement of lift-type vertical axis wind turbine. Sustainable Energy Technologies and Assessments, 2022, 49, 101789. | 2.7 | 26 |
| 41 | A tip loss correction model for wind turbine aerodynamic performance prediction. Renewable Energy, 2020, 147, 223-238. | 8.9 | 24 |
| 42 | The influence of imperfections on the flow structure of steady vortex breakdown bubbles. Journal of Fluid Mechanics, 2007, 578, 453-466. | 3.4 | 23 |
| 43 | Aeroacoustic Computations for Turbulent Airfoil Flows. AIAA Journal, 2009, 47, 1518-1527. | 2.6 | 23 |
| 44 | Advanced flow and noise simulation method for wind farm assessment in complex terrain. Renewable Energy, 2019, 143, 1812-1825. | 8.9 | 22 |
| 45 | Variable Pitch Approach for Performance Improving of Straight-Bladed VAWT at Rated Tip Speed Ratio. Applied Sciences (Switzerland), 2018, 8, 957. | 2.5 | 21 |
| 46 | Validation of a three-dimensional viscousâ€“inviscid interactive solver for wind turbine rotors. Renewable Energy, 2014, 70, 78-92. | 8.9 | 20 |
| 47 | Study on variable pitch strategy in H-type wind turbine considering effect of small angle of attack. Journal of Renewable and Sustainable Energy, 2017, 9, . | 2.0 | 18 |
| 48 | Numerical investigations into the idealized diurnal cycle of atmospheric boundary layer and its impact on wind turbine's powerÂperformance. Renewable Energy, 2020, 145, 419-427. | 8.9 | 18 |
| 49 | Improvement of airfoil trailing edge bluntness noise model. Advances in Mechanical Engineering, 2016, 8, 168781401662934. | 1.6 | 17 |
| 50 | Hybrid Immersed Boundary Method for Airfoils with a Trailing-Edge Flap. AIAA Journal, 2013, 51, 30-41. | 2.6 | 16 |
| 51 | Multi-Objective Random Search Algorithm for Simultaneously Optimizing Wind Farm Layout and Number of Turbines. Journal of Physics: Conference Series, 2016, 753, 032011. | 0.4 | 16 |
| 52 | Effects of turbulence modelling in AD/RANS simulations of single wind & tidal turbine wakes and double wake interactions. Energy, 2020, 208, 118440. | 8.8 | 16 |
| 53 | Highâ€order numerical simulations of flowâ€induced noise. International Journal for Numerical Methods in Fluids, 2011, 66, 17-37. | 1.6 | 15 |
| 54 | Optimizing wind energy conversion efficiency with respect to noise: A study on multi-criteria wind farm layout design. Renewable Energy, 2020, 159, 468-485. | 8.9 | 15 |

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|---|---|---|---|
| 55 | A new three-dimensional analytical model for wind turbine wake turbulence intensity predictions. Renewable Energy, 2022, 189, 762-776. | 8.9 | 14 |
| 56 | Extraction of airfoil data using PIV and pressure measurements. Wind Energy, 2011, 14, 539-556. | 4.2 | 13 |
| 57 | LES simulation and experimental validation of the unsteady aerodynamics of blunt wind turbine airfoils. Energy, 2018, 158, 911-923. | 8.8 | 13 |
| 58 | Modeling of wind turbine vortex generators in considering the inter-effects between arrays. Journal of Renewable and Sustainable Energy, 2017, 9, . | 2.0 | 12 |
| 59 | Evaluation of the Power-Law Wind-Speed Extrapolation Method with Atmospheric Stability Classification Methods for Flows over Different Terrain Types. Applied Sciences (Switzerland), 2018, 8, 1429. | 2.5 | 12 |
| 60 | Assessment of inflow boundary conditions for RANS simulations of neutral ABL and wind turbine wake flow. Journal of Wind Engineering and Industrial Aerodynamics, 2018, 179, 215-228. | 3.9 | 12 |
| 61 | Design of the OffWindChina 5 MW Wind Turbine Rotor. Energies, 2017, 10, 777. | 3.1 | 11 |
| 62 | Vorticity-velocity formulation of the 3D Navier-Stokes equations in cylindrical co-ordinates. International Journal for Numerical Methods in Fluids, 2003, 41, 29-45. | 1.6 | 10 |
| 63 | Variability of wind turbine noise over a diurnal cycle. Renewable Energy, 2018, 126, 791-800. | 8.9 | 10 |
| 64 | Evaluation of Tip Loss Corrections to AD/NS Simulations of Wind Turbine Aerodynamic Performance. Applied Sciences (Switzerland), 2019, 9, 4919. | 2.5 | 9 |
| 65 | Development of a CFD-Based Wind Turbine Rotor Optimization Tool in Considering Wake Effects. Applied Sciences (Switzerland), 2018, 8, 1056. | 2.5 | 8 |
| 66 | Ventilation in pumped storage power stations: Influence of dehumidifiers in an underground tunnel. Applied Thermal Engineering, 2020, 172, 115162. | 6.0 | 8 |
| 67 | Improved fixed point iterative method for blade element momentum computations. Wind Energy, 2017, 20, 1585-1600. | 4.2 | 7 |
| 68 | A New Method of Determination of the Angle of Attack on Rotating Wind Turbine Blades. Energies, 2019, 12, 4012. | 3.1 | 7 |
| 69 | Investigation of wake characteristics of the MEXICO wind turbine using lattice Boltzmann method. Wind Energy, 2021, 24, 116-132. | 4.2 | 7 |
| 70 | Effect of non-uniform mean flow field on acoustic propagation problems in computational aeroacoustics. Aerospace Science and Technology, 2013, 28, 145-153. | 4.8 | 6 |
| 71 | An Aerodynamic Noise Propagation Model for Wind Turbines. Wind Engineering, 2005, 29, 129-141. | 1.9 | 5 |
| 72 | Numerical simulation and performance optimization of the centrifugal fan in a vacuum cleaner. Modern Physics Letters B, 2019, 33, 1950440. | 1.9 | 5 |

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| 73 | AD/RANS Simulations of Wind Turbine Wake Flow Employing the RSM Turbulence Model: Impact of Isotropic and Anisotropic Inflow Conditions. Energies, 2019, 12, 4026. | 3.1 | 5 |
| 74 | Aerodynamic Analysis of Coning Effects on the DTU 10 MW Wind Turbine Rotor. Energies, 2020, 13, 5753. | 3.1 | 5 |
| 75 | Verification of a novel innovative blade root design for wind turbines using a hybrid numerical method. Energy, 2017, 141, 1661-1670. | 8.8 | 4 |
| 76 | Similarity functions and a new kâ˜Îµ closure for predicting stratified atmospheric surface layer flows in complex terrain. Renewable Energy, 2020, 150, 907-917. | 8.9 | 4 |
| 77 | A new multi-fidelity flow-acoustics simulation framework for wind farm application. Renewable and Sustainable Energy Reviews, 2022, 156, 111939. | 16.4 | 4 |
| 78 | Multi-Agent Model for Fatigue Control in Large Offshore Wind Farm. , 2008, , . | | 3 |
| 79 | Special Issue on Wind Turbine Aerodynamics. Applied Sciences (Switzerland), 2019, 9, 1725. | 2.5 | 3 |
| 80 | Development of an Efficient Numerical Method for Wind Turbine Flow, Sound Generation, and Propagation under Multi-Wake Conditions. Applied Sciences (Switzerland), 2019, 9, 100. | 2.5 | 3 |
| 81 | Moninâ€“Obukhov Similarity Theory for Modeling of Wind Turbine Wakes under Atmospheric Stable Conditions: Breakdown and Modifications. Applied Sciences (Switzerland), 2019, 9, 4256. | 2.5 | 3 |
| 82 | Development of an Advanced Fluid-Structure-Acoustics Framework for Predicting and Controlling the Noise Emission from a Wind Turbine under Wind Shear and Yaw. Applied Sciences (Switzerland), 2020, 10, 7610. | 2.5 | 3 |
| 83 | An Improved Power Control Approach for Wind Turbine Fatigue Balancing in an Offshore Wind Farm. Energies, 2020, 13, 1549. | 3.1 | 3 |
| 84 | Noise Propagation Calculations of a Wind Turbine in Complex Terrain. Journal of Physics: Conference Series, 2020, 1452, 012063. | 0.4 | 3 |
| 85 | New measurement technique for ground acoustic impedance in wind farm. Renewable Energy, 2021, 164, 791-803. | 8.9 | 3 |
| 86 | Research on Unsteady Wake Characteristics of the NREL 5MW Wind Turbine Under Yaw Conditions Based on a LBM-LES Method. Frontiers in Energy Research, 2022, 10, . | 2.3 | 3 |
| 87 | Investigation of load prediction on the Mexico rotor using the technique of determination of the angle of attack. Chinese Journal of Mechanical Engineering (English Edition), 2012, 25, 506-514. | 3.7 | 2 |
| 88 | Large Wind Turbine Rotor Design using an Aero-Elastic / Free-Wake Panel Coupling Code. Journal of Physics: Conference Series, 2016, 753, 042017. | 0.4 | 2 |
| 89 | Validation of noise propagation models against detailed flow and acoustic measurements. Journal of Physics: Conference Series, 2020, 1618, 052023. | 0.4 | 2 |
| 90 | Editorial: Towards Innovation in Next Generation of Wind Turbine Rotor Design. Frontiers in Energy Research, 2021, 9, . | 2.3 | 2 |

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|---|---|---|---|
| 91 | Aero-structural optimization of wind turbine blades using a reduced set of design load cases including turbulence. Journal of Physics: Conference Series, 2018, 1037, 042018. | 0.4 | 1 |
| 92 | Numerical Simulations of Novel Conning Designs for Future Super-Large Wind Turbines. Applied Sciences (Switzerland), 2021, 11, 147. | 2.5 | 1 |
| 93 | Special Issue on Wind Turbine Aerodynamics II. Applied Sciences (Switzerland), 2021, 11, 8728. | 2.5 | 0 |
| 94 | Denmark Wind Energy Programme. , 2015, , 941-949. | | 0 |
| 95 | 10.1121/1.5012747.1. , 2017, , . | | 0 |
| 96 | Development of a streamline wake model for wind farm performance predictions. Journal of Physics: Conference Series, 2020, 1618, 062027. | 0.4 | 0 |