

# Alessio Suman

## List of Publications by Year in descending order

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100  
papers

958  
citations

516215

16  
h-index

610482

24  
g-index

101  
all docs

101  
docs citations

101  
times ranked

447  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Stochastic Model for Nanoparticle Deposits Growth. Journal of Engineering for Gas Turbines and Power, 2022, 144, .	0.5	4
2	Measurement approaches for the analysis of soil layer by microparticle adhesion. Measurement: Journal of the International Measurement Confederation, 2022, 187, 110185.	2.5	8
3	Design considerations and numerical simulations of variable thickness scroll geometries. , 2022, , .		0
4	Performance Degradation of a Shell-and-Tube Heat Exchanger Due to Tar Deposition. Energies, 2022, 15, 1490.	1.6	2
5	A Simplified Method for the Deposition Rate Assessment on the Vanes of a Multistage Axial-Flow Compressor. Journal of Turbomachinery, 2022, 144, .	0.9	3
6	Performance losses and washing recovery of a helicopter engine compressor operating in ground-idle conditions. CEAS Aeronautical Journal, 2022, 13, 113-125.	0.9	1
7	Experimental analysis of micro-sized particles time-wise adhesion: the influence of impact velocity and surface roughness. International Journal of Heat and Mass Transfer, 2021, 165, 120632.	2.5	21
8	Performance Degradation Due to Fouling and Recovery After Washing in a Multistage Test Compressor. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	9
9	Dust Ingestion in a Rotorcraft Engine Compressor: Experimental and Numerical Study of the Fouling Rate. Aerospace, 2021, 8, 81.	1.1	10
10	Design Multistage External Gear Pumps for Dry Sump Systems: Methodology and Application. Mathematical Problems in Engineering, 2021, 2021, 1-11.	0.6	4
11	Deposition Pattern Analysis on a Fouled Multistage Test Compressor. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	12
12	Analysis of Timewise Compressor Fouling Phenomenon on a Multistage Test Compressor: Performance Losses and Particle Adhesion1. Journal of Engineering for Gas Turbines and Power, 2021, 143, .	0.5	11
13	Microstructural and Erosive Wear Characteristics of a High Chromium Cast Iron. Coatings, 2021, 11, 490.	1.2	10
14	Analysis of soil and soot deposits by X-ray computed microtomography. Powder Technology, 2021, 394, 608-621.	2.1	7
15	Outstretching population growth theory towards surface contamination. Powder Technology, 2021, 394, 597-607.	2.1	7
16	A strategy for the robust forecasting of gas turbine health subjected to fouling. E3S Web of Conferences, 2021, 312, 11002.	0.2	0
17	Off-line washing effectiveness on a multistage axial compressor. E3S Web of Conferences, 2021, 312, 11016.	0.2	0
18	CoolFOAM: The CoolProp wrapper for OpenFOAM. Computer Physics Communications, 2020, 250, 107047.	3.0	7

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19	CFD-based optimization of scroll compressor design and uncertainty quantification of the performance under geometrical variations. <i>Energy</i> , 2020, 209, 118382.	4.5	19
20	Experimental Assessment of Fouling Effects in a Multistage Axial Compressor. <i>E3S Web of Conferences</i> , 2020, 197, 11007.	0.2	2
21	Investigation of flow characteristics in a single screw expander: A numerical approach. <i>Energy</i> , 2020, 213, 118730.	4.5	13
22	CFD Simulations of Single- and Twin-Screw Machines with OpenFOAM. <i>Designs</i> , 2020, 4, 2.	1.3	2
23	Deposition of syngas tar in fuel supplying duct of a biomass gasifier: A numerical study. <i>Fuel</i> , 2020, 273, 117579.	3.4	12
24	Computational Fluid Dynamics Modeling of Gaseous Cavitation in Lubricating Vane Pumps: An Approach Based on Dimensional Analysis. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2020, 142, .	0.8	12
25	On the design strategies for SMA-based morphing actuators: state of the art and common practices applied to a fascinating case study. <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , 2020, 234, 2114-2130.	0.7	6
26	ASSESSMENT OF THE WASHING EFFECTIVENESS OF ON-PURPOSE DESIGNED ECO-FRIENDLY CLEANER AGAINST SOOT DEPOSITS. <i>Journal of the Global Power and Propulsion Society</i> , 2020, 4, 253-263.	0.8	6
27	Structured Mesh Generation and Numerical Analysis of a Scroll Expander in an Open-Source Environment. <i>Energies</i> , 2020, 13, 666.	1.6	9
28	Porosity-Driven Approaches to Model Fouling Effects on Flow Field. <i>Journal of Turbomachinery</i> , 2020, 142, .	0.9	0
29	Pressure Pulsation and Cavitation Phenomena in a Micro-ORC System. <i>Energies</i> , 2019, 12, 2186.	1.6	14
30	Numerical Investigation of a Wood-Chip Downdraft Gasifier. <i>E3S Web of Conferences</i> , 2019, 113, 01002.	0.2	1
31	Analysis of CoolProp library for the assessment of uncertainty propagation for refrigerant fluids in state diagrams and thermodynamic properties. <i>International Journal of Refrigeration</i> , 2019, 107, 214-224.	1.8	3
32	Generalization of particle impact behavior in gas turbine via non-dimensional grouping. <i>Progress in Energy and Combustion Science</i> , 2019, 74, 103-151.	15.8	34
33	Numerical investigation of oil injection in a Roots blower operated as expander. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 604, 012075.	0.3	3
34	Gas Turbine Fouling: A Comparison Among 100 Heavy-Duty Frames. <i>Journal of Engineering for Gas Turbines and Power</i> , 2019, 141, .	0.5	2
35	Gas Turbine Fouling Tests: Review, Critical Analysis, and Particle Impact Behavior Map. <i>Journal of Engineering for Gas Turbines and Power</i> , 2019, 141, .	0.5	24
36	Optical measurements based on practical methods for detecting time-wise morphing structures. <i>Measurement: Journal of the International Measurement Confederation</i> , 2019, 136, 454-465.	2.5	3

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37	Experimental analysis of a micro-ORC driven by piston expander for low-grade heat recovery. Applied Thermal Engineering, 2019, 148, 1278-1291.	3.0	58
38	Combining lumped parameter modelling and CFD analysis for the pressure ripple estimation of tandem gear pumps. , 2019, , 369-397.		2
39	Porosity Driven Approaches to Model Fouling Effects on Flow Field. , 2019, , .		0
40	Gas Turbine Fouling: The Influence of Climate and Part-Load Operating Conditions. , 2019, , .		0
41	A Non-Dimensional Approach for Generalizing the Particle Impact Behavior of Gas Turbine Fouling. , 2019, , .		0
42	Experimental Tests With Centrifugal Pumps: Degradation of Performance, Instability and Dynamic Phenomena With Non-Newtonian Suspensions of Kaolin in Water. , 2019, , .		0
43	Numerical Simulations of a Centrifugal Pump With a Non-Newtonian Fluid: Influence on Performances of Different Rheological Modelling. , 2019, , .		0
44	Quantitative Computational Fluid Dynamics Analyses of Particle Deposition in a Heavy-Duty Subsonic Axial Compressor. Journal of Engineering for Gas Turbines and Power, 2018, 140, .	0.5	4
45	EBFOG: Deposition, Erosion, and Detachment on High-Pressure Turbine Vanes. Journal of Turbomachinery, 2018, 140, .	0.9	20
46	Full 3D numerical analysis of a twin screw compressor by employing open-source software. IOP Conference Series: Materials Science and Engineering, 2018, 425, 012017.	0.3	2
47	Reducing pressure valve with real gases: an integrated approach for the design. Energy Procedia, 2018, 148, 607-614.	1.8	3
48	Gas Turbine Fouling: A Comparison Among One Hundred Heavy-Duty Frames. , 2018, , .		0
49	An experimentally-driven approach to model bending in a thermally activated SMA-based beam. Smart Materials and Structures, 2018, 27, 125004.	1.8	4
50	A Compressor Fouling Review Based on an Historical Survey of ASME Turbo Expo Papers. Journal of Turbomachinery, 2017, 139, .	0.9	40
51	Estimation of the Particle Deposition on a Subsonic Axial Compressor Blade. Journal of Engineering for Gas Turbines and Power, 2017, 139, .	0.5	9
52	An Innovative Method for the Evaluation of Particle Deposition Accounting for Rotor/Stator Interaction. Journal of Engineering for Gas Turbines and Power, 2017, 139, .	0.5	6
53	Thermal and fluid dynamic analysis of an air-forced convection rotary bread-baking oven by means of an experimental and numerical approach. Applied Thermal Engineering, 2017, 117, 330-342.	3.0	8
54	Experimental Investigation of Stall and Surge in a Multistage Compressor. Journal of Engineering for Gas Turbines and Power, 2017, 139, .	0.5	22

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55	An Energy-Based Fouling Model for Gas Turbines: EBFOG. Journal of Turbomachinery, 2017, 139, .	0.9	14
56	Experimental Investigation with Steady-State Detection in a Micro-ORC Test Bench. Energy Procedia, 2017, 126, 469-476.	1.8	6
57	Experimental and Numerical Analysis of a Non-Newtonian Fluids Processing Pump. Energy Procedia, 2017, 126, 762-769.	1.8	15
58	Experimental Performance of a Micro-ORC Energy System for Low Grade Heat Recovery. Energy Procedia, 2017, 129, 899-906.	1.8	21
59	Real Gas Expansion with Dynamic Mesh in Common Positive Displacement Machines. Energy Procedia, 2017, 129, 248-255.	1.8	3
60	Experimental and Numerical Characterization of an Oil-Free Scroll Expander. Energy Procedia, 2017, 129, 403-410.	1.8	7
61	Computational Models for the Analysis of positive displacement machines: Real Gas and Dynamic Mesh. Energy Procedia, 2017, 129, 411-418.	1.8	9
62	EBFOG: Deposition, Erosion and Detachment on High Pressure Turbine Vanes. , 2017, , .		7
63	Quantitative CFD Analyses of Particle Deposition in a Heavy-Duty Subsonic Axial Compressor. , 2017, , .		2
64	The Effects of Third Substances at the Particle/Surface Interface in Compressor Fouling. , 2017, , .		3
65	Analysis of the Aerodynamic and Structural Performance of a Cooling Fan with Morphing Blade. International Journal of Turbomachinery, Propulsion and Power, 2017, 2, 7.	0.5	6
66	Centrifugal pumps performance estimation with non-Newtonian fluids: review and critical analysis. , 2017, , .		5
67	An Innovative Method for the Evaluation of Particle Deposition Accounting for the Rotor/Stator Interaction. , 2016, , .		3
68	Estimation of the Particle Deposition on a Transonic Axial Compressor Blade. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	0.5	10
69	Experimental Investigation of Stall and Surge in a Multistage Compressor. , 2016, , .		17
70	A Shape Memory Alloy-Based Morphing Axial Fan Blade: Functional Characterization and Fluid Dynamic Performance. , 2016, , .		1
71	Different Numerical Approaches for the Analysis of a Single Screw Expander. Energy Procedia, 2016, 101, 750-757.	1.8	14
72	CFD Analysis of a Non-newtonian Fluids Processing Pump. Energy Procedia, 2016, 101, 742-749.	1.8	15

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73	A Micro-ORC Energy System: Preliminary Performance and Test Bench Development. Energy Procedia, 2016, 101, 814-821.	1.8	13
74	An Energy Based Fouling Model for Gas Turbines: EBFOG. , 2016, , .		4
75	Estimation of the Particle Deposition on a Subsonic Axial Compressor Blade. , 2016, , .		1
76	Eco-design of a small size industrial fan for ceramic tile cooling. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2016, 230, 502-511.	0.8	4
77	A Shape Memory Alloy-Based Morphing Axial Fan Bladeâ€™Part I: Blade Structure Design and Functional Characterization. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	0.5	12
78	A Shape Memory Alloy-Based Morphing Axial Fan Bladeâ€™Part II: Blade Shape and Computational Fluid Dynamics Analyses. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	0.5	9
79	Quantitative Computational Fluid Dynamics Analyses of Particle Deposition on a Subsonic Axial Compressor Blade. Journal of Engineering for Gas Turbines and Power, 2016, 138, .	0.5	13
80	An Interdisciplinary Approach to Study the Fouling Phenomenon. Energy Procedia, 2015, 82, 280-285.	1.8	3
81	Quantitative CFD Analyses of Particle Deposition on a Subsonic Axial Compressor Blade. , 2015, , .		3
82	Estimation of the Particle Deposition on a Transonic Axial Compressor Blade. , 2015, , .		2
83	A Shape Memory Alloy-Based Morphing Axial Fan Blade: Part II â€™ Blade Shape and CFD Analyses. , 2015, , .		6
84	A Shape Memory Alloy-Based Morphing Axial Fan Blade: Part I â€™ Blade Structure Design and Functional Characterization. , 2015, , .		1
85	A Shape Memory Alloy-based Morphing Axial Fan Blade: Functional Characterization and Perspectives. Energy Procedia, 2015, 82, 273-279.	1.8	11
86	Quantitative Computational Fluid Dynamic Analyses of Particle Deposition on a Transonic Axial Compressor Bladeâ€™Part II: Impact Kinematics and Particle Sticking Analysis. Journal of Turbomachinery, 2015, 137, .	0.9	18
87	Quantitative Computational Fluid Dynamics Analyses of Particle Deposition on a Transonic Axial Compressor Bladeâ€™Part I: Particle Zones Impact. Journal of Turbomachinery, 2015, 137, .	0.9	25
88	Analysis of a scroll machine for micro ORC applications by means of a RE/CFD methodology. Applied Thermal Engineering, 2015, 80, 132-140.	3.0	45
89	Morphing blades with embedded SMA strips: An experimental investigation. Materials and Design, 2015, 85, 785-795.	3.3	30
90	Using shape memory alloys for improving automotive fan blade performance: experimental and computational fluid dynamics analysis. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2015, 229, 477-486.	0.8	6

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91	Comparison of a Single-screw and a Scroll Expander under Part-load Conditions for Low-grade Heat Recovery ORC Systems. <i>Energy Procedia</i> , 2014, 61, 117-120.	1.8	27
92	Quantitative CFD Analyses of Particle Deposition on a Transonic Axial Compressor Blade: Part II "Impact Kinematics and Particle Sticking Analysis. ", 2014, , .		4
93	Quantitative CFD Analyses of Particle Deposition on a Transonic Axial Compressor Blade: Part I "Particle Zones Impact. ", 2014, , .		5
94	Performance Evaluation of Nonuniformly Fouled Axial Compressor Stages by Means of Computational Fluid Dynamics Analyses. <i>Journal of Turbomachinery</i> , 2014, 136, .	0.9	37
95	A numerical method for the efficient design of free opening hoods in industrial and domestic applications. <i>Energy</i> , 2014, 74, 484-493.	4.5	38
96	Numerical Analysis of the Effects of Surface Roughness Localization on the Performance of an Axial Compressor Stage. <i>Energy Procedia</i> , 2014, 45, 1057-1066.	1.8	16
97	Cross Validation of Multistage Compressor Map Generation by Means of Computational Fluid Dynamics and Stage-Stacking Techniques. , 2014, , .		1
98	Performance Evaluation of Non-Uniformly Fouled Axial Compressor Stages by Means of Computational Fluid Dynamic Analyses. , 2013, , .		2
99	Numerical Simulation of Evacuated Tube Solar Water Heaters. , 2012, , .		1
100	PROGRESSES IN PARTICLE-LADEN FLOWS SIMULATIONS IN MULTISTAGE TURBOMACHINERY WITH OPENFOAM. <i>Journal of Turbomachinery</i> , 0, , 1-19.	0.9	3