Omer San

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/3468694/publications.pdf

Version: 2024-02-01

105	3,388	136885	155592
papers	citations	32 h-index	55 g-index

105	105	105	1922
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Digital Twin: Values, Challenges and Enablers From a Modeling Perspective. IEEE Access, 2020, 8, 21980-22012.	2.6	746
2	Subgrid modelling for two-dimensional turbulence using neural networks. Journal of Fluid Mechanics, 2019, 858, 122-144.	1.4	185
3	A neural network approach for the blind deconvolution of turbulent flows. Journal of Fluid Mechanics, 2017, 831, 151-181.	1.4	139
4	A deep learning enabler for nonintrusive reduced order modeling of fluid flows. Physics of Fluids, 2019, 31, .	1.6	117
5	An artificial neural network framework for reduced order modeling of transient flows. Communications in Nonlinear Science and Numerical Simulation, 2019, 77, 271-287.	1.7	97
6	Neural network closures for nonlinear model order reduction. Advances in Computational Mathematics, 2018, 44, 1717-1750.	0.8	95
7	On closures for reduced order modelsâ€"A spectrum of first-principle to machine-learned avenues. Physics of Fluids, 2021, 33, .	1.6	78
8	Data-driven deconvolution for large eddy simulations of Kraichnan turbulence. Physics of Fluids, 2018, 30, 125109.	1.6	72
9	Physics guided machine learning using simplified theories. Physics of Fluids, 2021, 33, .	1.6	71
10	Data-driven recovery of hidden physics in reduced order modeling of fluid flows. Physics of Fluids, 2020, 32, .	1.6	70
11	Extreme learning machine for reduced order modeling of turbulent geophysical flows. Physical Review E, 2018, 97, 042322.	0.8	63
12	Sub-grid scale model classification and blending through deep learning. Journal of Fluid Mechanics, 2019, 870, 784-812.	1.4	57
13	Improved singlet oxygen generation and antimicrobial activity of sulphur-doped graphene quantum dots coupled with methylene blue for photodynamic therapy applications. Photodiagnosis and Photodynamic Therapy, 2018, 24, 7-14.	1.3	56
14	Approximate deconvolution large eddy simulation of a barotropic ocean circulation model. Ocean Modelling, 2011, 40, 120-132.	1.0	51
15	Nonintrusive reduced order modeling framework for quasigeostrophic turbulence. Physical Review E, 2019, 100, 053306.	0.8	51
16	Evaluation of Riemann flux solvers for WENO reconstruction schemes: Kelvinâ€"Helmholtz instability. Computers and Fluids, 2015, 117, 24-41.	1.3	49
17	Machine learning closures for model order reduction of thermal fluids. Applied Mathematical Modelling, 2018, 60, 681-710.	2.2	49
18	Principal interval decomposition framework for POD reducedâ€order modeling of convective Boussinesq flows. International Journal for Numerical Methods in Fluids, 2015, 78, 37-62.	0.9	48

#	Article	IF	Citations
19	High-order methods for decaying two-dimensional homogeneous isotropic turbulence. Computers and Fluids, 2012, 63, 105-127.	1.3	47
20	Feature engineering and symbolic regression methods for detecting hidden physics from sparse sensor observation data. Physics of Fluids, 2020, 32, .	1.6	47
21	A stabilized proper orthogonal decomposition reduced-order model for large scale quasigeostrophic ocean circulation. Advances in Computational Mathematics, 2015, 41, 1289-1319.	0.8	46
22	COLREG-Compliant Collision Avoidance for Unmanned Surface Vehicle Using Deep Reinforcement Learning. IEEE Access, 2020, 8, 165344-165364.	2.6	44
23	Memory embedded non-intrusive reduced order modeling of non-ergodic flows. Physics of Fluids, 2019, 31, .	1.6	40
24	Taming an Autonomous Surface Vehicle for Path Following and Collision Avoidance Using Deep Reinforcement Learning. IEEE Access, 2020, 8, 41466-41481.	2.6	40
25	Long short-term memory embedded nudging schemes for nonlinear data assimilation of geophysical flows. Physics of Fluids, 2020, 32, .	1.6	38
26	Data-driven variational multiscale reduced order models. Computer Methods in Applied Mechanics and Engineering, 2021, 373, 113470.	3.4	37
27	A priori analysis on deep learning of subgrid-scale parameterizations for Kraichnan turbulence. Theoretical and Computational Fluid Dynamics, 2020, 34, 429-455.	0.9	36
28	Approximate deconvolution large eddy simulation of a stratified two-layer quasigeostrophic ocean model. Ocean Modelling, 2013, 63, 1-20.	1.0	35
29	Numerical assessments of high-order accurate shock capturing schemes: Kelvinâ€“Helmholtz type vortical structures in high-resolutions. Computers and Fluids, 2014, 89, 254-276.	1.3	35
30	A long short-term memory embedding for hybrid uplifted reduced order models. Physica D: Nonlinear Phenomena, 2020, 409, 132471.	1.3	35
31	A coarse-grid projection method for accelerating incompressible flow computations. Journal of Computational Physics, 2013, 233, 480-508.	1.9	34
32	Learning-based robust stabilization for reduced-order models of 2D and 3D Boussinesq equations. Applied Mathematical Modelling, 2017, 49, 162-181.	2.2	33
33	AN IMPROVED MODEL FOR REDUCED-ORDER PHYSIOLOGICAL FLUID FLOWS. Journal of Mechanics in Medicine and Biology, 2012, 12, 1250052.	0.3	30
34	A dynamic closure modeling framework for model order reduction of geophysical flows. Physics of Fluids, 2019, 31, .	1.6	28
35	The digital twin revolution. Nature Computational Science, 2021, 1, 307-308.	3.8	28
36	A posteriori analysis of low-pass spatial filters for approximate deconvolution large eddy simulations of homogeneous incompressible flows. International Journal of Computational Fluid Dynamics, 2015, 29, 40-66.	0.5	26

#	Article	IF	Citations
37	Hybrid analysis and modeling, eclecticism, and multifidelity computing toward digital twin revolution. GAMM Mitteilungen, 2021, 44, e202100007.	2.7	26
38	Model fusion with physics-guided machine learning: Projection-based reduced-order modeling. Physics of Fluids, 2021, 33, .	1.6	24
39	Nonlinear proper orthogonal decomposition for convection-dominated flows. Physics of Fluids, 2021, 33, .	1.6	24
40	Analysis of low-pass filters for approximate deconvolution closure modelling in one-dimensional decaying Burgers turbulence. International Journal of Computational Fluid Dynamics, 2016, 30, 20-37.	0.5	23
41	A Hybrid Approach for Model Order Reduction of Barotropic Quasi-Geostrophic Turbulence. Fluids, 2018, 3, 86.	0.8	23
42	Data assimilation empowered neural network parametrizations for subgrid processes in geophysical flows. Physical Review Fluids, 2021, 6, .	1.0	21
43	DYNAMICS OF PULSATILE FLOWS THROUGH ELASTIC MICROTUBES. International Journal of Applied Mechanics, 2012, 04, 1250006.	1.3	20
44	Deep Reinforcement Learning Controller for 3D Path Following and Collision Avoidance by Autonomous Underwater Vehicles. Frontiers in Robotics and AI, 2020, 7, 566037.	2.0	20
45	Size and expansion ratio analysis of micro nozzle gas flow. International Communications in Heat and Mass Transfer, 2009, 36, 402-411.	2.9	18
46	A stable and scale-aware dynamic modeling framework for subgrid-scale parameterizations of two-dimensional turbulence. Computers and Fluids, 2017, 158, 11-38.	1.3	18
47	Resolution and Energy Dissipation Characteristics of Implicit LES and Explicit Filtering Models for Compressible Turbulence. Fluids, 2017, 2, 14.	0.8	17
48	Deep neural network enabled corrective source term approach to hybrid analysis and modeling. Neural Networks, 2022, 146, 181-199.	3.3	17
49	A dynamic eddy-viscosity closure model for large eddy simulations of two-dimensional decaying turbulence. International Journal of Computational Fluid Dynamics, 2014, 28, 363-382.	0.5	16
50	Stabilized principal interval decomposition method for model reduction of nonlinear convective systems with moving shocks. Computational and Applied Mathematics, 2018, 37, 6870-6902.	1.3	16
51	Sampling and resolution characteristics in reduced order models of shallow water equations: Intrusive vs nonintrusive. International Journal for Numerical Methods in Fluids, 2020, 92, 992-1036.	0.9	16
52	Multi-fidelity information fusion with concatenated neural networks. Scientific Reports, 2022, 12, 5900.	1.6	16
53	Laser-induced hydrogen generation from graphite and coal. International Journal of Hydrogen Energy, 2017, 42, 26277-26288.	3.8	15
54	Breaking the Kolmogorov Barrier in Model Reduction of Fluid Flows. Fluids, 2020, 5, 26.	0.8	15

#	Article	IF	Citations
55	An Evolve-Then-Correct Reduced Order Model for Hidden Fluid Dynamics. Mathematics, 2020, 8, 570.	1.1	15
56	Explicit and implicit LES closures for Burgers turbulence. Journal of Computational and Applied Mathematics, 2018, 327, 12-40.	1.1	14
57	CFD Julia: A Learning Module Structuring an Introductory Course on Computational Fluid Dynamics. Fluids, 2019, 4, 159.	0.8	14
58	AN EFFICIENT COARSE GRID PROJECTION METHOD FOR QUASIGEOSTROPHIC MODELS OF LARGE-SCALE OCEAN CIRCULATION. International Journal for Multiscale Computational Engineering, 2013, 11, 463-495.	0.8	14
59	Risk-based implementation of COLREGs for autonomous surface vehicles using deep reinforcement learning. Neural Networks, 2022, 152, 17-33.	3.3	14
60	Multifidelity computing for coupling full and reduced order models. PLoS ONE, 2021, 16, e0246092.	1.1	13
61	Interface learning in fluid dynamics: Statistical inference of closures within microâ€“macro-coupling models. Physics of Fluids, 2020, 32, 091704.	1.6	12
62	Laser Shock Wave-Assisted Patterning on NiTi Shape Memory Alloy Surfaces. Shape Memory and Superelasticity, 2018, 4, 224-231.	1.1	11
63	PyDA: A Hands-On Introduction to Dynamical Data Assimilation with Python. Fluids, 2020, 5, 225.	0.8	11
64	A Hybrid Analytics Paradigm Combining Physics-Based Modeling and Data-Driven Modeling to Accelerate Incompressible Flow Solvers. Fluids, 2018, 3, 50.	0.8	10
65	Spatiotemporally dynamic implicit large eddy simulation using machine learning classifiers. Physica D: Nonlinear Phenomena, 2020, 406, 132409.	1.3	10
66	Stationary two-dimensional turbulence statistics using a Markovian forcing scheme. Computers and Fluids, 2013, 71, 1-18.	1.3	8
67	Dynamic modeling of the horizontal eddy viscosity coefficient for quasigeostrophic ocean circulation problems. Journal of Ocean Engineering and Science, 2016, 1, 300-324.	1.7	8
68	A nudged hybrid analysis and modeling approach for realtime wake-vortex transport and decay prediction. Computers and Fluids, 2021, 221, 104895.	1.3	8
69	Generalized Deconvolution Procedure for Structural Modeling of Turbulence. Journal of Scientific Computing, 2018, 75, 1187-1206.	1.1	7
70	Equation Discovery Using Fast Function Extraction: a Deterministic Symbolic Regression Approach. Fluids, 2019, 4, 111.	0.8	7
71	A Relaxation Filtering Approach for Two-Dimensional Rayleighâ€“Taylor Instability-Induced Flows. Fluids, 2019, 4, 78.	0.8	7
72	Dynamic mode decomposition with core sketch. Physics of Fluids, 0, , .	1.6	7

#	Article	IF	Citations
73	A dynamic subgrid-scale modeling framework for Boussinesq turbulence. International Journal of Heat and Mass Transfer, 2017, 108, 1656-1675.	2.5	6
74	Stratified Kelvinâ€“Helmholtz turbulence of compressible shear flows. Nonlinear Processes in Geophysics, 2018, 25, 457-476.	0.6	6
75	Interface learning of multiphysics and multiscale systems. Physical Review E, 2020, 102, 053304.	0.8	6
76	Geometric Change Detection in Digital Twins. Digital, 2021, 1, 111-129.	1.1	6
77	Applying object detection to marine data and exploring explainability of a fully convolutional neural network using principal component analysis. Ecological Informatics, 2021, 62, 101269.	2.3	6
78	A nonintrusive hybrid neural-physics modeling of incomplete dynamical systems: Lorenz equations. GEM - International Journal on Geomathematics, 2021, 12, 1.	0.7	6
79	GANs enabled super-resolution reconstruction of wind field. Journal of Physics: Conference Series, 2020, 1669, 012029.	0.3	6
80	Numerical assessments of ocean energy extraction from western boundary currents using a quasi-geostrophic ocean circulation model. International Journal of Marine Energy, 2016, 16, 12-29.	1.8	5
81	Forward sensitivity approach for estimating eddy viscosity closures in nonlinear model reduction. Physical Review E, 2020, 102, 043302.	0.8	5
82	Reduced order modeling of fluid flows: Machine learning, Kolmogorov barrier, closure modeling, and partitioning (Invited). , 2020, , .		5
83	Hybrid analysis and modeling for next generation of digital twins. Journal of Physics: Conference Series, 2021, 2018, 012031.	0.3	5
84	Scalable patterning using laser-induced shock waves. Optical Engineering, 2018, 57, 1.	0.5	5
85	A dynamic framework for functional parameterisations of the eddy viscosity coefficient in two-dimensional turbulence. International Journal of Computational Fluid Dynamics, 2017, 31, 69-92.	0.5	4
86	A novel dynamic framework for subgrid scale parametrization of mesoscale eddies in quasigeostrophic turbulent flows. Computers and Mathematics With Applications, 2017, 74, 420-445.	1.4	4
87	A Novel High-Order Accurate Compact Stencil Poisson Solver: Application to Cavity Flows. International Journal of Applied Mechanics, 2015, 07, 1550006.	1.3	3
88	An adaptive multilevel wavelet framework for scaleâ€selective WENO reconstruction schemes. International Journal for Numerical Methods in Fluids, 2018, 87, 239-269.	0.9	3
89	A dynamic closure modeling framework for large eddy simulation using approximate deconvolution: Burgers equation. Cogent Physics, 2018, 5, 1464368.	0.7	3
90	A localised dynamic closure model for Euler turbulence. International Journal of Computational Fluid Dynamics, 2018, 32, 326-378.	0.5	3

#	Article	IF	Citations
91	Numerical investigation of air mixer for HVAC testing applications (ASHRAE RP-1733). Science and Technology for the Built Environment, 2020, 26, 1252-1273.	0.8	3
92	Optimal Control of Heat Transfer in Unsteady Stokes Flows. , 2018, , .		2
93	Sketching Methods for Dynamic Mode Decomposition in Spherical Shallow Water Equations. , 2022, , .		2
94	Numerical Modeling of Gas Flow in Converging-Diverging Micronozzles. , 2007, , .		1
95	Comparative study of sequential data assimilation methods for the Kuramoto-Sivashinsky equation. , 2021, , .		1
96	A non-intrusive parametric reduced order model for urban wind flow using deep learning and Grassmann manifold.. Journal of Physics: Conference Series, 2021, 2018, 012038.	0.3	1
97	Light induced bacterial deactivation using graphene quantum dot. , 2020, , .		1
98	Hyperparameter Search using the Genetic Algorithm for Surrogate Modeling of Geophysical Flows. , 2022, , .		1
99	Analysis of radial expansion, eversion, and cavitation of soft functionally graded material spheres. Mathematics and Mechanics of Solids, 2023, 28, 208-228.	1.5	1
100	Comparing Piezoelectric and Electroosmotic Micropumps for Biomedical Devices. , 2008, , .		0
101	Acknowledgement to Reviewers of Fluids in 2018. Fluids, 2019, 4, 9.	0.8	0
102	Recent Numerical Advances in Fluid Mechanics. Fluids, 2020, 5, 73.	0.8	0
103	Numerical assessments of a parametric implicit large eddy simulation model. Journal of Computational and Applied Mathematics, 2020, 376, 112866.	1.1	0
104	Nonlinear Filtering for Simultaneous State Correction and Eddy Viscosity Estimation in Computational Fluid Dynamics. , 2021, , .		0
105	Formation of two-way shape memory effect in NiTi alloy using pulsed laser irradiation. , 2018, , .		0