Steven J Lind

List of Publications by Year
in descending order

26 papers	1,521 citations	516710 16 h-index	552781 26 g-index
26 all docs	26 docs citations	26 times ranked	749 citing authors

#	Article	IF	Citations
1	Incompressible smoothed particle hydrodynamics for free-surface flows: A generalised diffusion-based algorithm for stability and validations for impulsive flows and propagating waves. Journal of Computational Physics, 2012, 231, 1499-1523.	3.8	496
2	Incompressible smoothed particle hydrodynamics (SPH) with reduced temporal noise and generalised Fickian smoothing applied to bodyâ€“water slam and efficient waveâ€“body interaction. Computer Methods in Applied Mechanics and Engineering, 2013, 265, 163-173.	6.6	185
3	Grand challenges for Smoothed Particle Hydrodynamics numerical schemes. Computational Particle Mechanics, 2021, 8, 575-588.	3.0	114
4	Review of smoothed particle hydrodynamics: towards converged Lagrangian flow modelling. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20190801.	2.1	76
5	Numerical predictions of waterâ€“air wave slam using incompressibleâ€“compressible smoothed particle hydrodynamics. Applied Ocean Research, 2015, 49, 57-71.	4.1	74
6	Incompressible SPH (ISPH) with fast Poisson solver on a GPU. Computer Physics Communications, 2018, 226, 81-103.	7.5	74
7	Incompressibleâ€“compressible flows with a transient discontinuous interface using smoothed particle hydrodynamics (SPH). Journal of Computational Physics, 2016, 309, 129-147.	3.8	71
8	High-order Eulerian incompressible smoothed particle hydrodynamics with transition to Lagrangian free-surface motion. Journal of Computational Physics, 2016, 326, 290-311.	3.8	60
9	Modified dynamic boundary conditions (mDBC) for general-purpose smoothed particle hydrodynamics (SPH): application to tank sloshing, dam break and fish pass problems. Computational Particle Mechanics, 2022, 9, 1-15.	3.0	59
10	New massively parallel scheme for Incompressible Smoothed Particle Hydrodynamics (ISPH) for highly nonlinear and distorted flow. Computer Physics Communications, 2018, 233, 16-28.	7.5	45
11	An Eulerianâ€“Lagrangian incompressible SPH formulation (ELI-SPH) connected with a sharp interface. Computer Methods in Applied Mechanics and Engineering, 2018, 329, 532-552.	6.6	44
12	An incompressible SPH scheme with improved pressure predictions for free-surface generalised Newtonian flows. Journal of Non-Newtonian Fluid Mechanics, 2015, 218, 1-15.	2.4	38
13	Numerical wave basin using incompressible smoothed particle hydrodynamics (ISPH) on a single GPU with vertical cylinder test cases. Computers and Fluids, 2019, 179, 543-562.	2.5	32
14	Landslides and tsunamis predicted by incompressible smoothed particle hydrodynamics (SPH) with application to the 1958 Lituya Bay event and idealized experiment. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2017, 473, 20160674.	2.1	30
15	Eulerian weakly compressible smoothed particle hydrodynamics (SPH) with the immersed boundary method for thin slender bodies. Journal of Fluids and Structures, 2019, 84, 263-282.	3.4	25
16	Fixed and moored bodies in steep and breaking waves using SPH with the Froudeâ€“Krylov approximation. Journal of Ocean Engineering and Marine Energy, 2016, 2, 331-354.	1.7	23
17	High-order consistent SPH with the pressure projection method in 2-D and 3-D. Journal of Computational Physics, 2021, 444, 110563.	3.8	15
18	High-order velocity and pressure wall boundary conditions in Eulerian incompressible SPH. Journal of Computational Physics, 2021, 434, 109793.	3.8	13

#	Article	IF	Citations
19	High order difference schemes using the local anisotropic basis function method. Journal of Computational Physics, 2020, 415, 109549.	3.8	9
20	High Weissenberg number simulations with incompressible Smoothed Particle Hydrodynamics and the log-conformation formulation. Journal of Non-Newtonian Fluid Mechanics, 2021, 293, 104556.	2.4	9
21	An incompressible smoothed particle hydrodynamics scheme for Newtonian/nonâ€Newtonian multiphase flows including semiâ€analytical solutions for twoâ€phase inelastic Poiseuille flows. International Journal for Numerical Methods in Fluids, 2020, 92, 703-726.	1.6	8
22	Eulerian incompressible smoothed particle hydrodynamics on multiple GPUs. Computer Physics Communications, 2022, 273, 108263.	7.5	7
23	New instability and mixing simulations using SPH and a novel mixing measure. Journal of Hydrodynamics, 2020, 32, 684-698.	3.2	6
24	Focused wave interaction with a partially-immersed rectangular box using 2-D incompressible SPH on a GPU comparing with experiment and linear theory. European Journal of Mechanics, B/Fluids, 2022, 95, 252-275.	2.5	5
25	The Kaye effect: New experiments and a mechanistic explanation. Journal of Non-Newtonian Fluid Mechanics, 2019, 273, 104165.	2.4	2
26	High-order simulations of isothermal flows using the local anisotropic basis function method (LABFM). Journal of Computational Physics, 2022, 449, 110760.	3.8	1