Jacques Sainte-Marie

List of Publications by Year
in descending order

35 papers	**896** citations	516710 **16** h-index	454955 **30** g-index
36 all docs	**36** docs citations	**36** times ranked	**920** citing authors

#	Article	IF	Citations
1	Modeling and estimation of the cardiac electromechanical activity. Computers and Structures, 2006, 84, 1743-1759.	4.4	142
2	Cardiac function estimation from MRI using a heart model and data assimilation: Advances and difficulties. Medical Image Analysis, 2006, 10, 642-656.	11.6	132
3	A poroelastic model valid in large strains with applications to perfusion in cardiac modeling. Computational Mechanics, 2010, 46, 91-101.	4.0	96
4	A multilayer Saint-Venant system with mass exchanges for shallow water flows. Derivation and numerical validation. ESAIM: Mathematical Modelling and Numerical Analysis, 2011, 45, 169-200.	1.9	74
5	Galerkin approximation with proper orthogonal decomposition : new error estimates and illustrative examples. ESAIM: Mathematical Modelling and Numerical Analysis, 2012, 46, 731-757.	1.9	47
6	Approximation of the hydrostatic Navier–Stokes system for density stratified flows by a multilayer model: Kinetic interpretation and numerical solution. Journal of Computational Physics, 2011, 230, 3453-3478.	3.8	40
7	Phytoplankton growth formulation in marine ecosystem models: Should we take into account photo-acclimation and variable stoichiometry in oligotrophic areas?. Journal of Marine Systems, 2013, 125, 29-40.	2.1	38
8	An energy-consistent depth-averaged Euler system: Derivation and properties. Discrete and Continuous Dynamical Systems - Series B, 2015, 20, 961-988.	0.9	32
9	A hierarchy of dispersive layer-averaged approximations of Euler equations for free surface flows. Communications in Mathematical Sciences, 2018, 16, 1169-1202.	1.0	31
10	Numerical Simulation of the Electromechanical Activity of the Heart. Lecture Notes in Computer Science, 2009, , 357-365.	1.3	23
11	Numerical simulations of a non-hydrostatic shallow water model. Computers and Fluids, 2011, 47, 51-64.	2.5	22
12	Experimental validation of theoretical methods to estimate the energy radiated by elastic waves during an impact. Journal of Sound and Vibration, 2016, 362, 176-202.	3.9	22
13	How do microalgae perceive light in a high-rate pond? Towards more realistic Lagrangian experiments. Royal Society Open Science, 2018, 5, 180523.	2.4	22
14	VERTICALLY AVERAGED MODELS FOR THE FREE SURFACE NON-HYDROSTATIC EULER SYSTEM: DERIVATION AND KINETIC INTERPRETATION. Mathematical Models and Methods in Applied Sciences, 2011, 21, 459-490.	3.3	19
15	Kinetic entropy inequality and hydrostatic reconstruction scheme for the Saint-Venant system. Mathematics of Computation, 2016, 85, 2815-2837.	2.1	17
16	Derivation of a non-hydrostatic shallow water model; Comparison with Saint-Venant and Boussinesq systems. Discrete and Continuous Dynamical Systems - Series B, 2008, 10, 733-759.	0.9	16
17	Congested shallow water model: roof modeling in free surface flow. ESAIM: Mathematical Modelling and Numerical Analysis, 2018, 52, 1679-1707.	1.9	15
18	A kinetic interpretation of the section-averaged Saint-Venant system for natural river hydraulics. International Journal for Numerical Methods in Fluids, 2011, 67, 914-938.	1.6	14

#	Article	IF	Citations
19	A 2D model for hydrodynamics and biology coupling applied to algae growth simulations. ESAIM: Mathematical Modelling and Numerical Analysis, 2013, 47, 1387-1412.	1.9	14
20	A combined finite volume - finite element scheme for a dispersive shallow water system. Networks and Heterogeneous Media, 2016, 11, 1-27.	1.1	12
21	Solutions to muscle fiber equations and their long time behaviour. Nonlinear Analysis: Real World Applications, 2006, 7, 535-558.	1.7	9
22	Multilayer Saint-Venant equations over movable beds. Discrete and Continuous Dynamical Systems - Series B, 2011, 15, 917-934.	0.9	7
23	Gradient-based optimization of a rotating algal biofilm process. Automatica, 2019, 105, 80-88.	5.0	7
24	Analytical solutions for the free surface hydrostatic Euler equations. Communications in Mathematical Sciences, 2013, 11, 993-1010.	1.0	7
25	Growth Rate Estimation of algae in Raceway Ponds: A novel Approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 6216-6221.	0.4	6
26	A two-dimensional method for a family of dispersive shallow water models. SMAI Journal of Computational Mathematics, 0, 6, 187-226.	0.0	6
27	Data assimilation for an electro-mechanical model of the myocardium. , 2003, , 1801-1804.		5
28	Data assimilation for hyperbolic conservation laws: A Luenberger observer approach based on a kinetic description. Communications in Mathematical Sciences, 2015, 13, 587-622.	1.0	5
29	Numerical approximation of the 3D hydrostatic Navier–Stokes system with free surface. ESAIM: Mathematical Modelling and Numerical Analysis, 2019, 53, 1981-2024.	1.9	3
30	Advancing Dynamical Cores of Oceanic Models across All Scales. Bulletin of the American Meteorological Society, 2019, 100, ES109-ES115.	3.3	3
31	Congested shallow water model: on floating body. SMAI Journal of Computational Mathematics, 0, 6, 227-251.	0.0	3
32	Some analytical solutions for validation of free surface flow computational codes. Journal of Fluid Mechanics, 2021, 913, .	3.4	2
33	Numerical Simulations of a Dispersive Model Approximating Free-Surface Euler Equations. Journal of Scientific Computing, 2021, 89, 1.	2.3	2
34	Application of a Combined Finite Element–Finite Volume Method to a 2D Non-hydrostatic Shallow Water Problem. Springer Proceedings in Mathematics and Statistics, 2017, , 219-226.	0.2	1
35	A sampling technique based on transforms associated with a group representation. Sampling Theory in Signal and Information Processing, 2004, 3, 279-297.	0.2	0