

Olivier Le Maître[®]

List of Publications by Year in descending order

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Version: 2024-02-01

110
papers

4,870
citations

236612

25
h-index

95083

68
g-index

123
all docs

123
docs citations

123
times ranked

2656
citing authors

#	ARTICLE	IF	CITATIONS
1	A surrogate-based optimal likelihood function for the Bayesian calibration of catalytic recombination in atmospheric entry protection materials. Applied Mathematical Modelling, 2022, 101, 791-810.	2.2	7
2	Modeling In-Flight Ice Accretion Under Uncertain Conditions. Journal of Aircraft, 2022, 59, 799-813.	1.7	18
3	Risk-Averse Stochastic Programming vs. Adaptive Robust Optimization: A Virtual Power Plant Application. INFORMS Journal on Computing, 2022, 34, 1795-1818.	1.0	3
4	Sample average approximation for risk-averse problems: A virtual power plant scheduling application. EURO Journal on Computational Optimization, 2021, 9, 100005.	1.5	6
5	A Bayesian approach for quantile optimization problems with high-dimensional uncertainty sources. Computer Methods in Applied Mechanics and Engineering, 2021, 376, 113632.	3.4	8
6	Uncertainty quantification for in-flight ice accretion under Appendix-C and Appendix-O conditions. , 2021, , .		5
7	A tangent linear approximation of the ignition delay time. I: Sensitivity to rate parameters. Combustion and Flame, 2021, 230, 111426.	2.8	5
8	Stochastic preconditioning of domain decomposition methods for elliptic equations with random coefficients. Computer Methods in Applied Mechanics and Engineering, 2021, 381, 113845.	3.4	1
9	Bayesian calibration of order and diffusivity parameters in a fractional diffusion equation. Journal of Physics Communications, 2021, 5, 085014.	0.5	1
10	A tangent linear approximation of the ignition delay time. II: Sensitivity to thermochemical parameters. Combustion and Flame, 2021, 235, 111677.	2.8	0
11	Polynomial surrogates for Bayesian traveltime tomography. GEM - International Journal on Geomathematics, 2021, 12, 1.	0.7	0
12	On the sensitivity of structural turbulence uncertainty estimates to time and space resolution. Computers and Fluids, 2021, 229, 105081.	1.3	2
13	Bayesian calibration of a methane-air global scheme and uncertainty propagation to flame-vortex interactions. Combustion and Flame, 2021, 234, 111642.	2.8	6
14	A NON-NESTED INFILLING STRATEGY FOR MULTIFIDELITY BASED EFFICIENT GLOBAL OPTIMIZATION. , 2021, 11, 1-30.		1
15	Towards an End-to-End Analysis and Prediction System for Weather, Climate, and Marine Applications in the Red Sea. Bulletin of the American Meteorological Society, 2021, 102, E99-E122.	1.7	31
16	Particle simulation of space-fractional diffusion equations. Computational Particle Mechanics, 2020, 7, 491-507.	1.5	6
17	Numerical approximation of poroelasticity with random coefficients using Polynomial Chaos and Hybrid High-Order methods. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112736.	3.4	4
18	Bayesian inference of spatially varying Manning's n coefficients in an idealized coastal ocean model using a generalized Karhunen-Loève expansion and polynomial chaos. Ocean Dynamics, 2020, 70, 1103-1127.	0.9	4

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19	Bayesian inference of thermodynamic models from vapor flow experiments. Computers and Fluids, 2020, 205, 104550.	1.3	3
20	A Finite Difference Method for Space Fractional Differential Equations with Variable Diffusivity Coefficient. Communications on Applied Mathematics and Computation, 2020, 2, 671-688.	0.7	4
21	Hierarchical matrix approximations for space-fractional diffusion equations. Computer Methods in Applied Mechanics and Engineering, 2020, 369, 113191.	3.4	5
22	Second order linear differential equations with analytic uncertainties: Stochastic analysis via the computation of the probability density function. Journal of Computational and Applied Mathematics, 2020, 374, 112770.	1.1	5
23	MODEL REDUCTION FOR LARGE-SCALE EARTHQUAKE SIMULATION IN AN UNCERTAIN 3D MEDIUM. , 2020, 10, 101-127.		4
24	VARIANCE REDUCTION METHODS AND MULTILEVEL MONTE CARLO STRATEGY FOR ESTIMATING DENSITIES OF SOLUTIONS TO RANDOM SECOND-ORDER LINEAR DIFFERENTIAL EQUATIONS. , 2020, 10, 467-497.		2
25	Polynomial Chaos Level Points Method for One-Dimensional Uncertain Steep Problems. Journal of Scientific Computing, 2019, 81, 1987-2009.	1.1	0
26	Combining ensemble Kalman filter and multiresolution analysis for efficient assimilation into adaptive mesh models. Computational Geosciences, 2019, 23, 1259-1276.	1.2	5
27	Systems of Gaussian process models for directed chains of solvers. Computer Methods in Applied Mechanics and Engineering, 2019, 352, 32-55.	3.4	10
28	Flexible hydrofoil optimization for the 35th America's Cup with constrained EGO method. Ocean Engineering, 2018, 157, 62-72.	1.9	16
29	Optimal projection of observations in a Bayesian setting. Computational Statistics and Data Analysis, 2018, 124, 252-276.	0.7	4
30	Exploring the interplay of resilience and energy consumption for a task-based partial differential equations preconditioner. Parallel Computing, 2018, 73, 16-27.	1.3	2
31	Cardiovascular Modeling With Adapted Parametric Inference. ESAIM Proceedings and Surveys, 2018, 62, 91-107.	0.5	12
32	Partial differential equations preconditioner resilient to soft and hard faults. International Journal of High Performance Computing Applications, 2018, 32, 658-673.	2.4	1
33	Parallel Domain Decomposition Strategies for Stochastic Elliptic Equations Part B: Accelerated Monte Carlo Sampling with Local PC Expansions. SIAM Journal of Scientific Computing, 2018, 40, C547-C580.	1.3	8
34	Ensemble Kalman filter inference of spatially-varying Manning's n coefficients in the coastal ocean. Journal of Hydrology, 2018, 562, 664-684.	2.3	12
35	Parallel Domain Decomposition Strategies for Stochastic Elliptic Equations. Part A: Local Karhunen-Loève Representations. SIAM Journal of Scientific Computing, 2018, 40, C520-C546.	1.3	11
36	A classification approach to efficient global optimization in presence of non-computable domains. Structural and Multidisciplinary Optimization, 2018, 58, 1537-1557.	1.7	20

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37	Surrogate-based parameter inference in debris flow model. Computational Geosciences, 2018, 22, 1447-1463.	1.2	16
38	Discrete A Priori Bounds for the Detection of Corrupted PDE Solutions in Exascale Computations. SIAM Journal of Scientific Computing, 2017, 39, C1-C28.	1.3	4
39	Efficient optimization procedure in non-linear fluid-structure interaction problem: Application to mainsail trimming in upwind conditions. Journal of Fluids and Structures, 2017, 69, 209-231.	1.5	8
40	Nonintrusive Polynomial Chaos Expansions for Sensitivity Analysis in Stochastic Differential Equations. SIAM-ASA Journal on Uncertainty Quantification, 2017, 5, 378-402.	1.1	9
41	A resilient domain decomposition polynomial chaos solver for uncertain elliptic PDEs. Computer Physics Communications, 2017, 216, 18-34.	3.0	6
42	Bayesian inference of earthquake parameters from buoy data using a polynomial chaos-based surrogate. Computational Geosciences, 2017, 21, 683-699.	1.2	24
43	Assessing an ensemble Kalman filter inference of Manning's n coefficient of an idealized tidal inlet against a polynomial chaos-based MCMC. Ocean Dynamics, 2017, 67, 1067-1094.	0.9	9
44	Global sensitivity analysis in stochastic simulators of uncertain reaction networks. Journal of Chemical Physics, 2016, 145, 244106.	1.2	8
45	Sparse Pseudo Spectral Projection Methods with Directional Adaptation for Uncertainty Quantification. Journal of Scientific Computing, 2016, 68, 596-623.	1.1	22
46	Multi-model polynomial chaos surrogate dictionary for Bayesian inference in elasticity problems. Probabilistic Engineering Mechanics, 2016, 46, 107-119.	1.3	6
47	Path planning in uncertain flow fields using ensemble method. Ocean Dynamics, 2016, 66, 1231-1251.	0.9	21
48	Scalability of Partial Differential Equations Preconditioner Resilient to Soft and Hard Faults. Lecture Notes in Computer Science, 2016, , 469-485.	1.0	0
49	Quantifying initial and wind forcing uncertainties in the Gulf of Mexico. Computational Geosciences, 2016, 20, 1133-1153.	1.2	28
50	A Newton-Galerkin Method for Fluid Flow Exhibiting Uncertain Periodic Dynamics. SIAM Review, 2016, 58, 119-140.	4.2	2
51	Coordinate transformation and Polynomial Chaos for the Bayesian inference of a Gaussian process with parametrized prior covariance function. Computer Methods in Applied Mechanics and Engineering, 2016, 298, 205-228.	3.4	26
52	Variance decomposition in stochastic simulators. Journal of Chemical Physics, 2015, 142, 244115.	1.2	4
53	Simultaneous identification of elastic properties, thickness, and diameter of arteries excited with ultrasound radiation force. Physics in Medicine and Biology, 2015, 60, 5279-5296.	1.6	13
54	Fault Resilient Domain Decomposition Preconditioner for PDEs. SIAM Journal of Scientific Computing, 2015, 37, A2317-A2345.	1.3	14

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55	PC analysis of stochastic differential equations driven by Wiener noise. Reliability Engineering and System Safety, 2015, 135, 107-124.	5.1	17
56	Model Reduction Based on Proper Generalized Decomposition for the Stochastic Steady Incompressible Navier-Stokes Equations. SIAM Journal of Scientific Computing, 2014, 36, A1089-A1117.	1.3	31
57	Preconditioned Bayesian Regression for Stochastic Chemical Kinetics. Journal of Scientific Computing, 2014, 58, 592-626.	1.1	14
58	Polynomial Chaos expansion for subsurface flows with uncertain soil parameters. Advances in Water Resources, 2013, 62, 139-154.	1.7	43
59	A Parallel Solver for Incompressible Fluid Flows. Procedia Computer Science, 2013, 18, 439-448.	1.2	12
60	Adaptive Anisotropic Spectral Stochastic Methods for Uncertain Scalar Conservation Laws. SIAM Journal of Scientific Computing, 2012, 34, A2459-A2481.	1.3	36
61	Uncertainty quantification in a chemical system using error estimate-based mesh adaptation. Theoretical and Computational Fluid Dynamics, 2012, 26, 415-434.	0.9	1
62	Study of overland flow with uncertain infiltration using stochastic tools. Advances in Water Resources, 2012, 38, 1-12.	1.7	13
63	Simplified CSP analysis of a stiff stochastic ODE system. Computer Methods in Applied Mechanics and Engineering, 2012, 217-220, 121-138.	3.4	12
64	A compressed-sensing approach for closed-loop optimal control of nonlinear systems. Theoretical and Computational Fluid Dynamics, 2012, 26, 319-337.	0.9	12
65	Multiscale Stochastic Preconditioners in Non-intrusive Spectral Projection. Journal of Scientific Computing, 2012, 50, 306-340.	1.1	25
66	An adaptive compressed-sensing equation-free approach for closed-loop nonlinear control. , 2011, , .		0
67	Stochastic and deterministic motion of a laminar-turbulent front in a spanwisely extended Couette flow. Physical Review E, 2011, 84, 066315.	0.8	24
68	Equation-free model reduction for complex dynamical systems. International Journal for Numerical Methods in Fluids, 2010, 63, 163-184.	0.9	8
69	Intrusive Galerkin methods with upwinding for uncertain nonlinear hyperbolic systems. Journal of Computational Physics, 2010, 229, 6485-6511.	1.9	115
70	A numerical method for the simulation of low Mach number liquid-gas flows. Journal of Computational Physics, 2010, 229, 8844-8867.	1.9	21
71	Roe solver with entropy corrector for uncertain hyperbolic systems. Journal of Computational and Applied Mathematics, 2010, 235, 491-506.	1.1	22
72	Spectral Representation and Reduced Order Modeling of the Dynamics of Stochastic Reaction Networks via Adaptive Data Partitioning. SIAM Journal of Scientific Computing, 2010, 31, 4395-4421.	1.3	24

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73	Adaptive Anisotropic Stochastic Discretization Schemes for Uncertain Conservation Laws. , 2010, , .		3
74	Spectral Methods for Uncertainty Quantification. Scientific Computation, 2010, , .	0.2	612
75	Asynchronous time integration for polynomial chaos expansion of uncertain periodic dynamics. Discrete and Continuous Dynamical Systems, 2010, 28, 199-226.	0.5	38
76	Detailed Elementary Applications. Scientific Computation, 2010, , 107-156.	0.2	0
77	Galerkin Methods. Scientific Computation, 2010, , 73-105.	0.2	0
78	Wavelet and Multiresolution Analysis Schemes. Scientific Computation, 2010, , 343-389.	0.2	0
79	Uncertainty quantification in chemical systems. International Journal for Numerical Methods in Engineering, 2009, 80, 789-814.	1.5	108
80	Numerical study of liquid inclusion oscillations inside a closed 1D microchannel filled with gas. Microfluidics and Nanofluidics, 2009, 6, 163-177.	1.0	2
81	Generalized spectral decomposition for stochastic nonlinear problems. Journal of Computational Physics, 2009, 228, 202-235.	1.9	108
82	Polynomial chaos expansion for sensitivity analysis. Reliability Engineering and System Safety, 2009, 94, 1161-1172.	5.1	555
83	Robust control of uncertain cylinder wake flows based on robust reduced order models. Computers and Fluids, 2009, 38, 1168-1182.	1.3	15
84	A Newton method for the resolution of steady stochastic Navier-Stokes equations. Computers and Fluids, 2009, 38, 1566-1579.	1.3	10
85	Numerical study on the motion of microscopic oil droplets in high intensity isotropic turbulence. Physics of Fluids, 2008, 20, 073301.	1.6	3
86	Statistical analysis of small bubble dynamics in isotropic turbulence. Physics of Fluids, 2007, 19, 065108.	1.6	33
87	Multi-Resolution Analysis Scheme for Uncertainty Quantification in Chemical Systems. SIAM Journal of Scientific Computing, 2007, 29, 864-889.	1.3	76
88	The turbulent flow between two rotating stirrers: similarity laws and transitions for the driving torques fluctuations. European Journal of Mechanics, B/Fluids, 2007, 26, 258-270.	1.2	3
89	A stochastic particle-mesh scheme for uncertainty propagation in vortical flows. Journal of Computational Physics, 2007, 226, 645-671.	1.9	15
90	Dual-based error analysis for uncertainty quantification in a chemical system. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 2010007-2010008.	0.2	3

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91	Dual-based a posteriori error estimate for stochastic finite element methods. Communications in Applied Mathematics and Computational Science, 2007, 2, 83-115.	0.7	45
92	Uncertainty propagation in CFD using polynomial chaos decomposition. Fluid Dynamics Research, 2006, 38, 616-640.	0.6	208
93	A computationally efficient approach to swimming monofin optimization. Structural and Multidisciplinary Optimization, 2006, 31, 488-496.	1.7	10
94	Uncertainty propagation using Wiener-Haar expansions. Journal of Computational Physics, 2004, 197, 28-57.	1.9	368
95	Multi-resolution analysis of Wiener-type uncertainty propagation schemes. Journal of Computational Physics, 2004, 197, 502-531.	1.9	297
96	Spectral stochastic uncertainty quantification in chemical systems. Combustion Theory and Modelling, 2004, 8, 607-632.	1.0	101
97	Swimming Monofin Optimization. , 2004, , .		1
98	Numerical Challenges in the Use of Polynomial Chaos Representations for Stochastic Processes. SIAM Journal of Scientific Computing, 2004, 26, 698-719.	1.3	342
99	Natural Convection in a Closed Cavity under Stochastic Non-Boussinesq Conditions. SIAM Journal of Scientific Computing, 2004, 26, 375-394.	1.3	33
100	A multigrid solver for two-dimensional stochastic diffusion equations. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 4723-4744.	3.4	59
101	Estimation of the flutter derivatives of an NACA airfoil by means of Navier-Stokes simulation. Journal of Fluids and Structures, 2003, 17, 1-28.	1.5	37
102	Protein labeling reactions in electrochemical microchannel flow: Numerical simulation and uncertainty propagation. Physics of Fluids, 2003, 15, 2238-2250.	1.6	72
103	Sample Dispersion Due to Buffer Disturbances and Zeta Potential Variability in Electroosmotic Microchannel Flows. , 2003, , 247.		0
104	Uncertainty Quantification in Models of Microfluid Systems. , 2003, , .		1
105	A Stochastic Projection Method for Fluid Flow. Journal of Computational Physics, 2002, 181, 9-44.	1.9	427
106	A Multiscale Pressure Splitting of the Shallow-Water Equations. Journal of Computational Physics, 2001, 166, 116-151.	1.9	3
107	A Stochastic Projection Method for Fluid Flow. Journal of Computational Physics, 2001, 173, 481-511.	1.9	331
108	UNSTEADY MODEL OF SAIL AND FLOW INTERACTION. Journal of Fluids and Structures, 1999, 13, 37-59.	1.5	23

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109	Large displacement analysis for ideally flexible sails. European Journal of Mechanics, A/Solids, 1998, 17, 619-636.	2.1	6
110	Application of a non-convex model of fabric deformations to sail cut analysis. Journal of Wind Engineering and Industrial Aerodynamics, 1996, 63, 77-93.	1.7	7