

# Pierre Duysinx

## List of Publications by Year in descending order

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48  
papers

1,992  
citations

361296

20  
h-index

302012

39  
g-index

48  
all docs

48  
docs citations

48  
times ranked

1057  
citing authors

#	ARTICLE	IF	CITATIONS
1	Topology optimization of continuum structures with local stress constraints. International Journal for Numerical Methods in Engineering, 1998, 43, 1453-1478.	1.5	569
2	Topology optimization for minimum weight with compliance and stress constraints. Structural and Multidisciplinary Optimization, 2012, 46, 369-384.	1.7	181
3	Note on topology optimization of continuum structures including self-weight. Structural and Multidisciplinary Optimization, 2005, 29, 245-256.	1.7	155
4	A bi-value coding parameterization scheme for the discrete optimal orientation design of the composite laminate. International Journal for Numerical Methods in Engineering, 2012, 91, 98-114.	1.5	121
5	Stress concentration minimization of 2D fillets using X-FEM and level set description. Structural and Multidisciplinary Optimization, 2007, 33, 425-438.	1.7	114
6	A family of MMA approximations for structural optimization. Structural and Multidisciplinary Optimization, 2002, 24, 263-276.	1.7	113
7	The global modal parameterization for non-linear model-order reduction in flexible multibody dynamics. International Journal for Numerical Methods in Engineering, 2007, 69, 948-977.	1.5	81
8	Topology optimization for minimum weight with compliance and simplified nominal stress constraints for fatigue resistance. Structural and Multidisciplinary Optimization, 2017, 55, 839-855.	1.7	53
9	Topology optimization for microstructural design under stress constraints. Structural and Multidisciplinary Optimization, 2018, 58, 2677-2695.	1.7	53
10	Imposing minimum and maximum member size, minimum cavity size, and minimum separation distance between solid members in topology optimization. Computer Methods in Applied Mechanics and Engineering, 2020, 368, 113157.	3.4	39
11	Simultaneous design of structural layout and discrete fiber orientation using bi-value coding parameterization and volume constraint. Structural and Multidisciplinary Optimization, 2013, 48, 1075-1088.	1.7	33
12	Extensions of the Shape Functions with Penalization Parameterization for Composite-Ply Optimization. AIAA Journal, 2011, 49, 2325-2329.	1.5	29
13	An aggregation strategy of maximum size constraints in density-based topology optimization. Structural and Multidisciplinary Optimization, 2019, 60, 2113-2130.	1.7	29
14	Shape optimization of microstructural designs subject to local stress constraints within an XFEM-level set framework. Structural and Multidisciplinary Optimization, 2017, 55, 2323-2338.	1.7	28
15	Dual approach using a variant perimeter constraint and efficient sub-iteration scheme for topology optimization. Computers and Structures, 2003, 81, 2173-2181.	2.4	27
16	Discussion on the optimization problem formulation of flexible components in multibody systems. Structural and Multidisciplinary Optimization, 2013, 48, 1189-1206.	1.7	25
17	A stress-based approach to the optimal design of structures with unilateral behavior of material or supports. Structural and Multidisciplinary Optimization, 2013, 48, 311-326.	1.7	25
18	Topology optimisation for large-scale additive manufacturing: generating designs tailored to the deposition nozzle size. Virtual and Physical Prototyping, 2021, 16, 196-220.	5.3	25

#	ARTICLE	IF	CITATIONS
19	Optimization of Multibody Systems and Their Structural Components. Computational Methods in Applied Sciences (Springer), 2011, , 49-68.	0.1	23
20	Structural optimization of multibody system components described using level set techniques. Structural and Multidisciplinary Optimization, 2015, 52, 959-971.	1.7	21
21	A generalized method of moving asymptotes (GMMMA) including equality constraints. Structural Optimization, 1996, 12, 143-146.	0.7	19
22	Analytical sensitivity analysis using the extended finite element method in shape optimization of bimaterial structures. International Journal for Numerical Methods in Engineering, 2016, 107, 669-695.	1.5	19
23	System-Based Approaches for Structural Optimization of Flexible Mechanisms. Archives of Computational Methods in Engineering, 2018, 25, 817-844.	6.0	19
24	Note on spatial gradient operators and gradient-based minimum length constraints in SIMP topology optimization. Structural and Multidisciplinary Optimization, 2019, 60, 393-400.	1.7	18
25	Contribution to the Optimization of Closed-Loop Multibody Systems: Application to Parallel Manipulators. Multibody System Dynamics, 2005, 13, 69-84.	1.7	16
26	Level set topology optimization considering damage. Structural and Multidisciplinary Optimization, 2017, 56, 737-753.	1.7	16
27	Weakly and fully coupled methods for structural optimization of flexible mechanisms. Multibody System Dynamics, 2016, 38, 391-417.	1.7	14
28	Microbeam pull-in voltage topology optimization including material deposition constraint. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 4040-4050.	3.4	13
29	Combination of topology optimization and Lie derivative-based shape optimization for electro-mechanical design. Structural and Multidisciplinary Optimization, 2019, 59, 1723-1731.	1.7	13
30	Design Sensitivity Analysis for Shape Optimization of Nonlinear Magnetostatic Systems. IEEE Transactions on Magnetics, 2016, 52, 1-4.	1.2	12
31	Optimal synthesis of planar mechanisms via an extensible-link approach. Structural and Multidisciplinary Optimization, 2010, 42, 403-415.	1.7	10
32	On the equivalent static load method for flexible multibody systems described with a nonlinear finite element formalism. International Journal for Numerical Methods in Engineering, 2016, 108, 646-664.	1.5	10
33	A Model Reduction Method for the Control of Rigid Mechanisms. Multibody System Dynamics, 2006, 15, 213-227.	1.7	9
34	Electrostatic simulation using XFEM for conductor and dielectric interfaces. International Journal for Numerical Methods in Engineering, 2011, 85, 1207-1226.	1.5	9
35	Modeling joints with clearance and friction in multibody dynamic simulation of automotive differentials. Theoretical and Applied Mechanics Letters, 2013, 3, 013003.	1.3	9
36	Design sensitivity analysis for shape optimization based on the Lie derivative. Computer Methods in Applied Mechanics and Engineering, 2017, 317, 702-722.	3.4	9

#	ARTICLE	IF	CITATIONS
37	Comparison of ultra capacitors, hydraulic accumulators and batteries technologies to optimize hybrid vehicle ecoefficiency. , 2009, , .		7
38	Analytical relationships for imposing minimum length scale in the robust topology optimization formulation. Structural and Multidisciplinary Optimization, 2021, 64, 2429-2448.	1.7	7
39	Note on singular optima in laminate design problems. Structural and Multidisciplinary Optimization, 2006, 31, 156-159.	1.7	6
40	Simulation of Differentials in Four-Wheel Drive Vehicles Using Multibody Dynamics. , 2011, , .		5
41	Contact Model Between Superelements in Dynamic Multibody Systems. , 2013, , .		4
42	Topology optimization of electromechanical microsystems against pull-in voltage. , 0, , .		1
43	Modelling the electromechanical coupling of RF switch using Extended Finite Element. , 2008, , .		1
44	Modelling of Contact Between Stiff Bodies in Automotive Transmission Systems. Computational Methods in Applied Sciences (Springer), 2013, , 193-214.	0.1	1
45	Shape and topology optimization of electrical machines using lie derivative-based analytical sensitivity analysis. , 2016, , .		1
46	Traffic Situation Assessment and Intervention Strategy of a Collision Avoidance System based on Galileo Satellite Positioning. , 0, , .		0
47	Unilateral contact condition enhanced with squeeze film modelling in automotive differentials. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2016, 230, 1243-1257.	1.1	0
48	Misalignment topology optimization with manufacturing constraints. Structural and Multidisciplinary Optimization, 2020, 61, 2467-2480.	1.7	0