

# 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 optimisation for large-scale additive manufacturing: generating designs tailored to the deposition nozzle size. <i>Virtual and Physical Prototyping</i> , 2021, 16, 196-220.	5.3	25
2	Analytical relationships for imposing minimum length scale in the robust topology optimization formulation. <i>Structural and Multidisciplinary Optimization</i> , 2021, 64, 2429-2448.	1.7	7
3	Imposing minimum and maximum member size, minimum cavity size, and minimum separation distance between solid members in topology optimization. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 368, 113157.	3.4	39
4	Misalignment topology optimization with manufacturing constraints. <i>Structural and Multidisciplinary Optimization</i> , 2020, 61, 2467-2480.	1.7	0
5	Note on spatial gradient operators and gradient-based minimum length constraints in SIMP topology optimization. <i>Structural and Multidisciplinary Optimization</i> , 2019, 60, 393-400.	1.7	18
6	An aggregation strategy of maximum size constraints in density-based topology optimization. <i>Structural and Multidisciplinary Optimization</i> , 2019, 60, 2113-2130.	1.7	29
7	Combination of topology optimization and Lie derivative-based shape optimization for electro-mechanical design. <i>Structural and Multidisciplinary Optimization</i> , 2019, 59, 1723-1731.	1.7	13
8	System-Based Approaches for Structural Optimization of Flexible Mechanisms. <i>Archives of Computational Methods in Engineering</i> , 2018, 25, 817-844.	6.0	19
9	Topology optimization for microstructural design under stress constraints. <i>Structural and Multidisciplinary Optimization</i> , 2018, 58, 2677-2695.	1.7	53
10	Shape optimization of microstructural designs subject to local stress constraints within an XFEM-level set framework. <i>Structural and Multidisciplinary Optimization</i> , 2017, 55, 2323-2338.	1.7	28
11	Design sensitivity analysis for shape optimization based on the Lie derivative. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 317, 702-722.	3.4	9
12	Topology optimization for minimum weight with compliance and simplified nominal stress constraints for fatigue resistance. <i>Structural and Multidisciplinary Optimization</i> , 2017, 55, 839-855.	1.7	53
13	Level set topology optimization considering damage. <i>Structural and Multidisciplinary Optimization</i> , 2017, 56, 737-753.	1.7	16
14	Analytical sensitivity analysis using the extended finite element method in shape optimization of bimaterial structures. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 107, 669-695.	1.5	19
15	Design Sensitivity Analysis for Shape Optimization of Nonlinear Magnetostatic Systems. <i>IEEE Transactions on Magnetics</i> , 2016, 52, 1-4.	1.2	12
16	Weakly and fully coupled methods for structural optimization of flexible mechanisms. <i>Multibody System Dynamics</i> , 2016, 38, 391-417.	1.7	14
17	Shape and topology optimization of electrical machines using lie derivative-based analytical sensitivity analysis. , 2016, , .		1
18	Unilateral contact condition enhanced with squeeze film modelling in automotive differentials. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2016, 230, 1243-1257.	1.1	0

#	ARTICLE	IF	CITATIONS
19	On the equivalent static load method for flexible multibody systems described with a nonlinear finite element formalism. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 108, 646-664.	1.5	10
20	Structural optimization of multibody system components described using level set techniques. <i>Structural and Multidisciplinary Optimization</i> , 2015, 52, 959-971.	1.7	21
21	Simultaneous design of structural layout and discrete fiber orientation using bi-value coding parameterization and volume constraint. <i>Structural and Multidisciplinary Optimization</i> , 2013, 48, 1075-1088.	1.7	33
22	Discussion on the optimization problem formulation of flexible components in multibody systems. <i>Structural and Multidisciplinary Optimization</i> , 2013, 48, 1189-1206.	1.7	25
23	A stress-based approach to the optimal design of structures with unilateral behavior of material or supports. <i>Structural and Multidisciplinary Optimization</i> , 2013, 48, 311-326.	1.7	25
24	Modelling of Contact Between Stiff Bodies in Automotive Transmission Systems. <i>Computational Methods in Applied Sciences (Springer)</i> , 2013, , 193-214.	0.1	1
25	Modeling joints with clearance and friction in multibody dynamic simulation of automotive differentials. <i>Theoretical and Applied Mechanics Letters</i> , 2013, 3, 013003.	1.3	9
26	Contact Model Between Superelements in Dynamic Multibody Systems. , 2013, , .		4
27	Topology optimization for minimum weight with compliance and stress constraints. <i>Structural and Multidisciplinary Optimization</i> , 2012, 46, 369-384.	1.7	181
28	A bi-value coding parameterization scheme for the discrete optimal orientation design of the composite laminate. <i>International Journal for Numerical Methods in Engineering</i> , 2012, 91, 98-114.	1.5	121
29	Extensions of the Shape Functions with Penalization Parameterization for Composite-Ply Optimization. <i>AIAA Journal</i> , 2011, 49, 2325-2329.	1.5	29
30	Electrostatic simulation using XFEM for conductor and dielectric interfaces. <i>International Journal for Numerical Methods in Engineering</i> , 2011, 85, 1207-1226.	1.5	9
31	Simulation of Differentials in Four-Wheel Drive Vehicles Using Multibody Dynamics. , 2011, , .		5
32	Optimization of Multibody Systems and Their Structural Components. <i>Computational Methods in Applied Sciences (Springer)</i> , 2011, , 49-68.	0.1	23
33	Optimal synthesis of planar mechanisms via an extensible-link approach. <i>Structural and Multidisciplinary Optimization</i> , 2010, 42, 403-415.	1.7	10
34	Comparison of ultra capacitors, hydraulic accumulators and batteries technologies to optimize hybrid vehicle ecoefficiency. , 2009, , .		7
35	Microbeam pull-in voltage topology optimization including material deposition constraint. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2008, 197, 4040-4050.	3.4	13
36	Modelling the electromechanical coupling of RF switch using Extended Finite Element. , 2008, , .		1

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37	The global modal parameterization for non-linear model-order reduction in flexible multibody dynamics. <i>International Journal for Numerical Methods in Engineering</i> , 2007, 69, 948-977.	1.5	81
38	Stress concentration minimization of 2D filets using X-FEM and level set description. <i>Structural and Multidisciplinary Optimization</i> , 2007, 33, 425-438.	1.7	114
39	A Model Reduction Method for the Control of Rigid Mechanisms. <i>Multibody System Dynamics</i> , 2006, 15, 213-227.	1.7	9
40	Note on singular optima in laminate design problems. <i>Structural and Multidisciplinary Optimization</i> , 2006, 31, 156-159.	1.7	6
41	Note on topology optimization of continuum structures including self-weight. <i>Structural and Multidisciplinary Optimization</i> , 2005, 29, 245-256.	1.7	155
42	Contribution to the Optimization of Closed-Loop Multibody Systems: Application to Parallel Manipulators. <i>Multibody System Dynamics</i> , 2005, 13, 69-84.	1.7	16
43	Dual approach using a variant perimeter constraint and efficient sub-iteration scheme for topology optimization. <i>Computers and Structures</i> , 2003, 81, 2173-2181.	2.4	27
44	A family of MMA approximations for structural optimization. <i>Structural and Multidisciplinary Optimization</i> , 2002, 24, 263-276.	1.7	113
45	Topology optimization of continuum structures with local stress constraints. <i>International Journal for Numerical Methods in Engineering</i> , 1998, 43, 1453-1478.	1.5	569
46	A generalized method of moving asymptotes (G MMA) including equality constraints. <i>Structural Optimization</i> , 1996, 12, 143-146.	0.7	19
47	Topology optimization of electromechanical microsystems against pull-in voltage. , 0, , .		1
48	Traffic Situation Assessment and Intervention Strategy of a Collision Avoidance System based on Galileo Satellite Positioning. , 0, , .		0