

Christian Kirches

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/4043634/christian-kirches-publications-by-year.pdf>

Version: 2024-04-26

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

52
papers

1,577
citations

14
h-index

39
g-index

53
ext. papers

1,934
ext. citations

2.9
avg, IF

4.93
L-index

#	Paper	IF	Citations
52	Sequential Linearization Method for Bound-Constrained Mathematical Programs with Complementarity Constraints. <i>SIAM Journal on Optimization</i> , 2022 , 32, 75-99	2	0
51	Switching Cost Aware Rounding for Relaxations of Mixed-Integer Optimal Control Problems: The 2-D Case 2022 , 6, 548-553		1
50	Decomposition and Approximation for PDE-Constrained Mixed-Integer Optimal Control. <i>International Series of Numerical Mathematics</i> , 2022 , 283-305	0.4	
49	Compactness and convergence rates in the combinatorial integral approximation decomposition. <i>Mathematical Programming</i> , 2021 , 188, 569-598	2.1	1
48	Mixed-integer optimal control problems with switching costs: a shortest path approach. <i>Mathematical Programming</i> , 2021 , 188, 621-652	2.1	5
47	Convergence Analysis and Adaptive Order Selection for the Polynomial Chaos Approach to Direct Optimal Control under Uncertainties. <i>SIAM Journal on Control and Optimization</i> , 2021 , 59, 509-533	1.9	1
46	Mixed-integer optimal control for multimodal chromatography. <i>Computers and Chemical Engineering</i> , 2021 , 153, 107435	4	0
45	The integrated control deviation of mixed-integer optimal control problems with vanishing constraints. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2021 , 20, e202000022	0.2	
44	Increasing the Reliability of Multi-megawatt Gas Compressors. <i>Mathematics in Industry</i> , 2021 , 7-10	0.2	
43	Improved regularity assumptions for partial outer convexification of mixed-integer PDE-constrained optimization problems. <i>ESAIM - Control, Optimisation and Calculus of Variations</i> , 2020 , 26, 32	1	12
42	Approximation Properties and Tight Bounds for Constrained Mixed-Integer Optimal Control. <i>SIAM Journal on Control and Optimization</i> , 2020 , 58, 1371-1402	1.9	14
41	Mixed-Integer Nonlinear PDE-Constrained Optimization for Multi-Modal Chromatography. <i>Operations Research Proceedings: Papers of the Annual Meeting = Vorträge Der Jahrestagung / DGOR</i> , 2020 , 81-87	0.1	1
40	MultiDimensional Sum-Up Rounding for Elliptic Control Systems. <i>SIAM Journal on Numerical Analysis</i> , 2020 , 58, 3427-3447	2.4	8
39	On the relation between MPECs and optimization problems in abs-normal form. <i>Optimization Methods and Software</i> , 2020 , 35, 560-575	1.3	3
38	Optimal operation of adsorption chillers: First implementation and experimental evaluation of a nonlinear model-predictive-control strategy. <i>Applied Thermal Engineering</i> , 2019 , 149, 1503-1521	5.8	5
37	Efficient Derivative Evaluation for Rigid-Body Dynamics Based on Recursive Algorithms Subject to Kinematic and Loop Constraints 2019 , 3, 619-624		2
36	A switching cost aware rounding method for relaxations of mixed-integer optimal control problems 2019 ,		6

35	Comparing Abs-Normal NLPs to MPECs. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2019 , 19, e201900263	0.2	
34	Multi-dimensional Sum-Up Rounding using Hilbert curve iterates. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2019 , 19, e201900065	0.2	7
33	trlib: a vector-free implementation of the GLTR method for iterative solution of the trust region problem. <i>Optimization Methods and Software</i> , 2018 , 33, 420-449	1.3	6
32	Numerical solution of optimal control problems with explicit and implicit switches. <i>Optimization Methods and Software</i> , 2018 , 33, 450-474	1.3	18
31	The polynomial chaos approach for reachable set propagation with application to chance-constrained nonlinear optimal control under parametric uncertainties. <i>Optimal Control Applications and Methods</i> , 2018 , 39, 471-488	1.7	7
30	Computational Approaches for Mixed Integer Optimal Control Problems with Indicator Constraints. <i>Vietnam Journal of Mathematics</i> , 2018 , 46, 1023-1051	0.5	4
29	A phenomenological model of the time course of maximal voluntary isometric contraction force for optimization of complex loading schemes. <i>European Journal of Applied Physiology</i> , 2018 , 118, 2587-2605	3.4	2
28	A Reactive Walking Pattern Generator Based on Nonlinear Model Predictive Control. <i>IEEE Robotics and Automation Letters</i> , 2017 , 2, 10-17	4.2	63
27	Benchmarking model-free and model-based optimal control. <i>Robotics and Autonomous Systems</i> , 2017 , 92, 81-90	3.5	12
26	Dynamic optimisation of adsorber-bed designs ensuring optimal control. <i>Applied Thermal Engineering</i> , 2017 , 125, 1565-1576	5.8	12
25	Structure-exploiting polynomial chaos for uncertain optimal control problems with sparse derivative generation. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2017 , 17, 717-718	0.2	
24	pySLEQP: A Sequential Linear Quadratic Programming Method Implemented in Python 2017 , 103-113		
23	An SR1/BFGS SQP algorithm for nonconvex nonlinear programs with block-diagonal Hessian matrix. <i>Mathematical Programming Computation</i> , 2016 , 8, 435-459	7.8	10
22	Applying Mathematical Optimization Methods to an ACT-R Instance-Based Learning Model. <i>PLoS ONE</i> , 2016 , 11, e0158832	3.7	3
21	An Active-Set Method for Quadratic Programming Based On Sequential Hot-Starts. <i>SIAM Journal on Optimization</i> , 2015 , 25, 967-994	2	4
20	Optimal control for whole-body motion generation using center-of-mass dynamics for predefined multi-contact configurations 2015 ,		22
19	qpOASES: a parametric active-set algorithm for quadratic programming. <i>Mathematical Programming Computation</i> , 2014 , 6, 327-363	7.8	598
18	TACO: a toolkit for AMPL control optimization. <i>Mathematical Programming Computation</i> , 2013 , 5, 227-265	5.8	7

17	Mixed-integer nonlinear optimization*□ <i>Acta Numerica</i> , 2013 , 22, 1-131	15.1	376
16	Mixed-integer NMPC for predictive cruise control of heavy-duty trucks 2013 ,		14
15	On Perspective Functions and Vanishing Constraints in Mixed-Integer Nonlinear Optimal Control 2013 , 387-417		10
14	Efficient direct multiple shooting for nonlinear model predictive control on long horizons. <i>Journal of Process Control</i> , 2012 , 22, 540-550	3.9	48
13	Using Functional Mock-up Units for Nonlinear Model Predictive Control 2012 ,		7
12	Complementary Condensing for the Direct Multiple Shooting Method 2012 , 195-206		3
11	Optimal control of Formula 1 race cars in a VDrift based virtual environment. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011 , 44, 11907-11912		14
10	Combinatorial integral approximation. <i>Mathematical Methods of Operations Research</i> , 2011 , 73, 363-380	1	53
9	A factorization with update procedures for a KKT matrix arising in direct optimal control. <i>Mathematical Programming Computation</i> , 2011 , 3, 319-348	7.8	20
8	Fast Numerical Methods for Mixed-Integer Nonlinear Model-Predictive Control 2011 ,		44
7	Determining the optimum cyclic operation of adsorption chillers by a direct method for periodic optimal control. <i>International Journal of Refrigeration</i> , 2011 , 34, 902-913	3.8	14
6	Block-structured quadratic programming for the direct multiple shooting method for optimal control. <i>Optimization Methods and Software</i> , 2011 , 26, 239-257	1.3	20
5	Time-optimal control of automobile test drives with gear shifts. <i>Optimal Control Applications and Methods</i> , 2010 , 31, 137-153	1.7	52
4	Efficient multiple objective optimal control of dynamic systems with integer controls. <i>Journal of Process Control</i> , 2010 , 20, 810-822	3.9	30
3	Efficient Numerics for Nonlinear Model Predictive Control 2010 , 339-357		17
2	Fast Nonlinear Model Predictive Control with an Application in Automotive Engineering. <i>Lecture Notes in Control and Information Sciences</i> , 2009 , 471-480	0.5	12
1	Fast solution of periodic optimal control problems in automobile test-driving with gear shifts 2008 ,		9