

Michael Spannowsky

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/11518854/publications.pdf>

Version: 2024-02-01

140
papers

5,861
citations

66343

42
h-index

82547

72
g-index

140
all docs

140
docs citations

140
times ranked

7194
citing authors

#	ARTICLE	IF	CITATIONS
1	Effective connections of $a\hat{1}/4$, Higgs physics, and the collider frontier. Physical Review D, 2022, 105, .	4.7	1
2	Energy-weighted message passing: an infra-red and collinear safe graph neural network algorithm. Journal of High Energy Physics, 2022, 2022, 1.	4.7	15
3	High energy lepton colliders as the ultimate Higgs microscopes. Journal of High Energy Physics, 2022, 2022, 1.	4.7	1
4	Anomaly detection in high-energy physics using a quantum autoencoder. Physical Review D, 2022, 105, .	4.7	28
5	Effective operator bases for beyond Standard Model scenarios: an EFT compendium for discoveries. Journal of High Energy Physics, 2021, 2021, 1.	4.7	13
6	Quantum machine learning for particle physics using a variational quantum classifier. Journal of High Energy Physics, 2021, 2021, 1.	4.7	32
7	$\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle C \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle P \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \rangle$ violation at ATLAS in effective field theory. Physical Review D, 2021, 103, .	4.7	12
8	Classifying standard model extensions effectively with precision observables. Physical Review D, 2021, 103, .	4.7	13
9	The emergence of electroweak Skyrmions through Higgs bosons. Journal of High Energy Physics, 2021, 2021, 1.	4.7	7
10	Combine and conquer: event reconstruction with Bayesian Ensemble Neural Networks. Journal of High Energy Physics, 2021, 2021, 1.	4.7	16
11	Precision SMEFT bounds from the VBF Higgs at high transverse momentum. Journal of High Energy Physics, 2021, 2021, 1.	4.7	12
12	Towards a quantum computing algorithm for helicity amplitudes and parton showers. Physical Review D, 2021, 103, .	4.7	21
13	Extended Higgs boson sectors, effective field theory, and Higgs boson phenomenology. Physical Review D, 2021, 103, .	4.7	3
14	A fully differential SMEFT analysis of the golden channel using the method of moments. Journal of High Energy Physics, 2021, 2021, 1.	4.7	9
15	EFT diagrammatica: UV roots of the CP-conserving SMEFT. Journal of High Energy Physics, 2021, 2021, 1.	4.7	10
16	Anomaly detection with convolutional Graph Neural Networks. Journal of High Energy Physics, 2021, 2021, 1.	4.7	41
17	Prospects for direct CP tests of hqq interactions. Journal of High Energy Physics, 2021, 2021, 1.	4.7	2
18	Quantum-inspired event reconstruction with Tensor Networks: Matrix Product States. Journal of High Energy Physics, 2021, 2021, 1.	4.7	7

#	ARTICLE	IF	CITATIONS
19	Unsupervised event classification with graphs on classical and photonic quantum computers. Journal of High Energy Physics, 2021, 2021, 1.	4.7	19
20	Probing dark matter clumps, strings and domain walls with gravitational wave detectors. European Physical Journal C, 2021, 81, 1.	3.9	5
21	Electroweak skyrmions in the HEFT. Journal of High Energy Physics, 2021, 2021, 1.	4.7	2
22	Sensing Higgs boson cascade decays through memory. Physical Review D, 2020, 102, .	4.7	6
23	Di-Higgs resonance searches in weak boson fusion. Physical Review D, 2020, 102, .	4.7	8
24	Towards the ultimate differential SMEFT analysis. Journal of High Energy Physics, 2020, 2020, 1.	4.7	26
25	Higgs self-coupling measurements using deep learning in the $pp \rightarrow b\bar{b} + H$ final state. Journal of High Energy Physics, 2020, 2020, 1.	4.7	14
26	Probing new physics using Rydberg states of atomic hydrogen. Physical Review Research, 2020, 2, .	3.6	17
27	The effective field theory of low scale see-saw at colliders. European Physical Journal C, 2020, 80, 1.	3.9	13
28	Approaching robust EFT limits for C_P violation in the Higgs sector. Physical Review D, 2019, 99, .	4.7	14
29	HYTREES: combining matrix elements and parton shower for hypothesis testing. European Physical Journal C, 2019, 79, 1.	3.9	14
30	Revisiting the $t\bar{t} \rightarrow hh$ channel at the FCC-hh. Physical Review D, 2019, 100, .	4.7	11
31	Interplay between collider searches for vector-like quarks and dark matter searches in composite Higgs models. International Journal of Modern Physics A, 2019, 34, 1940011.	1.5	3
32	Searching new physics in rare B-meson decays into multiple muons. European Physical Journal C, 2019, 79, 1.	3.9	9
33	A fresh look at ALP searches in fixed target experiments. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 793, 281-289.	4.1	33
34	Looking Inside Jets. Lecture Notes in Physics, 2019, , .	0.7	99
35	Machine learning uncertainties with adversarial neural networks. European Physical Journal C, 2019, 79, 4.	3.9	56
36	Constraining four-fermion operators using rare top decays. Journal of High Energy Physics, 2019, 2019, 1.	4.7	22

#	ARTICLE	IF	CITATIONS
37	Gravitational wave and collider probes of a triplet Higgs sector with a low cutoff. European Physical Journal C, 2019, 79, 1.	3.9	47
38	Adversarially-trained autoencoders for robust unsupervised new physics searches. Journal of High Energy Physics, 2019, 2019, 1.	4.7	78
39	Constraining strongly coupled new physics from cosmic rays with machine learning techniques. Europhysics Letters, 2019, 127, 61002.	2.0	3
40	Higgs phenomenology as a probe of sterile neutrinos. Physical Review D, 2019, 100, .	4.7	34
41	Novel B -decay signatures of light scalars at high energy facilities. Physical Review D, 2019, 100, .	4.7	4
42	Mapping the shape of the scalar potential with gravitational waves. International Journal of Modern Physics A, 2019, 34, 1950223.	1.5	8
43	$hh + \text{ext } \{ \text{Jet} \} h h + \text{Jet}$ production at 100 TeV. European Physical Journal C, 2018, 78, 322.	3.9	24
44	Searches for vector-like quarks at future colliders and implications for composite Higgs models with dark matter. Journal of High Energy Physics, 2018, 2018, 1.	4.7	29
45	Double-charming Higgs boson identification using machine-learning assisted jet shapes. Physical Review D, 2018, 97, .	4.7	4
46	Higgspllosion: Solving the hierarchy problem via rapid decays of heavy states into multiple Higgs bosons. Nuclear Physics B, 2018, 926, 95-111.	2.5	27
47	Probing electroweak precision physics via boosted Higgs-strahlung at the LHC. Physical Review D, 2018, 98, .	4.7	33
48	Searching for leptoquarks at IceCube and the LHC. Physical Review D, 2018, 98, .	4.7	39
49	Probing the type-II seesaw mechanism through the production of Higgs bosons at a lepton collider. Physical Review D, 2018, 98, .	4.7	28
50	Top quark FCNCs in extended Higgs sectors. European Physical Journal C, 2018, 78, 1.	3.9	20
51	VBS $W^{\pm}W^{\pm}H$ production at the HL-LHC and a 100 TeV pp-collider. International Journal of Modern Physics A, 2017, 32, 1750106.	1.5	5
52	Sphalerons in composite and nonstandard Higgs models. Physical Review D, 2017, 95, .	4.7	21
53	Perturbative Higgs coupling C_P violation, unitarity, and phenomenology. Physical Review D, 2017, 95, .	4.7	6
54	Quark-gluon tagging with shower deconstruction: Unearthing dark matter and Higgs couplings. Physical Review D, 2017, 95, .	4.7	31

#	ARTICLE	IF	CITATIONS
55	Invisible decays in Higgs boson pair production. <i>Physical Review D</i> , 2017, 95, .	4.7	16
56	Type II seesaw model and multilepton signatures at hadron colliders. <i>Physical Review D</i> , 2017, 95, .	4.7	35
57	Higgsploding universe. <i>Physical Review D</i> , 2017, 96, .	4.7	12
58	Electroweak oblique parameters as a probe of the trilinear Higgs boson self-interaction. <i>Physical Review D</i> , 2017, 95, .	4.7	33
59	Prospects for new physics in $\tilde{t}, \hat{t}^{\prime}$ \tilde{t}^{\prime} at current and future colliders. <i>Journal of High Energy Physics</i> , 2017, 2017, 1.	4.7	8
60	Boost to $\hat{t}^{\prime}Z\tilde{\nu}$: From LHC to future $e+e^{-}$ colliders. <i>Physical Review D</i> , 2017, 95, .	4.7	9
61	Same-sign W pair production in composite Higgs models. <i>Physical Review D</i> , 2017, 95, .	4.7	6
62	Maxi-sizing the trilinear Higgs self-coupling: how large could it be?. <i>European Physical Journal C</i> , 2017, 77, 1.	3.9	47
63	Higgs characterisation in the presence of theoretical uncertainties and invisible decays. <i>European Physical Journal C</i> , 2017, 77, 1.	3.9	22
64	Jet-associated resonance spectroscopy. <i>European Physical Journal C</i> , 2017, 77, 842.	3.9	4
65	Determining the quantum numbers of simplified models in $t\bar{t}$ production at the LHC. <i>Physical Review D</i> , 2016, 94, .	4.7	14
66	Towards resolving strongly-interacting dark sectors at colliders. <i>Physical Review D</i> , 2016, 94, .	4.7	6
67	Search for sphalerons: IceCube vs. LHC. <i>Journal of High Energy Physics</i> , 2016, 2016, 1.	4.7	30
68	The lepton flavour violating Higgs decays at the HL-LHC and the ILC. <i>Journal of High Energy Physics</i> , 2016, 2016, 1.	4.7	24
69	Cornering diphoton resonance models at the LHC. <i>Journal of High Energy Physics</i> , 2016, 2016, 1.	4.7	2
70	Cosmic ray air showers from sphalerons. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2016, 761, 213-218.	4.1	18
71	Closing up on dark sectors at colliders: From 14 to 100 TeV. <i>Physical Review D</i> , 2016, 93, .	4.7	13

#	ARTICLE	IF	CITATIONS
73	$\langle mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si5.gif" display="inline" overflow="scroll" \rangle \langle mml:mi \rangle S \langle /mml:mi \rangle \langle /mml:math \rangle$ -channel dark matter simplified models and unitarity. Physics of the Dark Universe, 2016, 14, 48-56.	4.9	53
74	Hearing the signal of dark sectors with gravitational wave detectors. Physical Review D, 2016, 94, .	4.7	91
75	A facility to search for hidden particles at the CERN SPS: the SHiP physics case. Reports on Progress in Physics, 2016, 79, 124201.	20.1	496
76	LHC signatures of scalar dark energy. Physical Review D, 2016, 94, .	4.7	16
77	Neutrino jets from high-mass $\langle mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle mml:mrow \rangle \langle mml:mrow \rangle \langle mml:mi \rangle W \langle /mml:mi \rangle \langle /mml:mrow \rangle \langle mml:mrow \rangle \langle mml:mi \rangle R \langle /mml:mi \rangle \langle /mml:mrow \rangle \langle /mml:math \rangle$ gauge bosons in TeV-scale left-right symmetric models. Physical Review D, 2016, 94, .	4.7	16
78	Measuring rare and exclusive Higgs boson decays into light resonances. European Physical Journal C, 2016, 76, 1.	3.9	5
79	Higgs coupling measurements at the LHC. European Physical Journal C, 2016, 76, 1.	3.9	71
80	Measuring the Higgs-bottom coupling in weak boson fusion. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 756, 103-108.	4.1	24
81	Probing MeV to 90 GeV axion-like particles with LEP and LHC. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 753, 482-487.	4.1	197
82	Unitarity-controlled resonances after the Higgs boson discovery. Physical Review D, 2015, 92, .	4.7	14
83	Augmenting the diboson excess for the LHC Run II. Physical Review D, 2015, 92, .	4.7	14
84	Tracking new physics at the LHC and beyond. Physical Review D, 2015, 92, .	4.7	11
85	Searching for a heavy Higgs boson in a Higgs-portal $\langle mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" \rangle \langle mml:mi \rangle B \langle /mml:mi \rangle \langle mml:mo \rangle \hat{\alpha} \langle /mml:mo \rangle \langle mml:mi \rangle L \langle /mml:mi \rangle \langle /mml:math \rangle$ model. Physical Review D, 2015, 92, .	4.7	15
86	Spectroscopy of scalar mediators to dark matter at the LHC and at 100ÂTeV. Physical Review D, 2015, 92, .	4.7	13
87	Publisher's Note: Constraining new colored matter from the ratio of 3 to 2 jets cross sections at the LHC [Phys. Rev. D91, 015010 (2015)]. Physical Review D, 2015, 92, .	4.7	7
88	Signs of tops from highly mixed stops. Journal of High Energy Physics, 2015, 2015, 1.	4.7	16
89	Off-shell Higgs coupling measurements in BSM scenarios. Journal of High Energy Physics, 2015, 2015, 1.	4.7	42
90	hhjj production at the LHC. European Physical Journal C, 2015, 75, 1.	3.9	44

#	ARTICLE	IF	CITATIONS
91	Probing a light CP-odd scalar in di-top-associated production at the LHC. European Physical Journal C, 2015, 75, 1.	3.9	26
92	On-shell interference effects in Higgs boson final states. Physical Review D, 2015, 91, .	4.7	12
93	Di-Higgs phenomenology in $tt\hat{A}hh$: The forgotten channel. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 743, 93-97.	4.1	53
94	Constraining dark sectors at colliders: Beyond the effective theory approach. Physical Review D, 2015, 91, .	4.7	76
95	Constraining new colored matter from the ratio of 3 to 2 jets cross sections at the LHC. Physical Review D, 2015, 91, .	4.7	23
96	Higgs self-coupling measurements at a 100 TeV hadron collider. Journal of High Energy Physics, 2015, 2015, 1.	4.7	75
97	Scattering of dark particles with light mediators. Physical Review D, 2014, 90, .	4.7	43
98	Boosted Higgs shapes. European Physical Journal C, 2014, 74, 1.	3.9	48
99	Production of $h\bar{h}jj$ at the LHC. Physical Review Letters, 2014, 112, 101802.		68
100	Limitations and opportunities of off-shell coupling measurements. Physical Review D, 2014, 90, .	4.7	57
101	Gluon-initiated associated production boosts Higgs physics. Physical Review D, 2014, 89, .	4.7	44
102	Nonstandard top substructure. Physical Review D, 2014, 89, .	4.7	12
103	Resolving the Higgs-gluon coupling with jets. Physical Review D, 2014, 90, .	4.7	42
104	Boosting top partner searches in composite Higgs models. Physical Review D, 2014, 89, .	4.7	23
105	Reconstructing singly produced top partners in decays to Wb . Physical Review D, 2014, 90, .	4.7	8
106	Constraining $C\bar{P}$ -violating Higgs sectors at the LHC using gluon fusion. Physical Review D, 2014, 90, .	4.7	49
107	Finding physics signals with event deconstruction. Physical Review D, 2014, 89, .	4.7	33
108	Standard model Higgs boson pair production in the $(\bar{b}b)(\bar{b}b)$ channel. Physical Review D, 2014, 89, .	4.7	108

#	ARTICLE	IF	CITATIONS
109	Dark sector spectroscopy at the ILC. European Physical Journal C, 2014, 74, 1.	3.9	7
110	Di-Higgs final states $gg \rightarrow hh$ Selecting hh events at the high luminosity LHC. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 728, 308-313.	4.1	103
111	Triplet Higgs boson collider phenomenology after the LHC. Physical Review D, 2013, 87, .	4.7	52
112	LHC probes the hidden sector. Physics of the Dark Universe, 2013, 2, 111-117.	4.9	135
113	Making the most of missing transverse energy: Mass reconstruction from collimated decays. Physical Review D, 2013, 87, .	4.7	2
114	Finding top quarks with shower deconstruction. Physical Review D, 2013, 87, .	4.7	75
115	New physics in LHC Higgs boson pair production. Physical Review D, 2013, 87, .	4.7	90
116	Pinning down Higgs triplets at the LHC. Physical Review D, 2013, 88, .	4.7	50
117	The shape of spins. Physical Review D, 2013, 88, .	4.7	16
118	Constraining the unHiggs model with LHC data. Physical Review D, 2012, 86, .	4.7	9
119	Stop searches in 2012. Journal of High Energy Physics, 2012, 2012, 1.	4.7	48
120	Higgs self-coupling measurements at the LHC. Journal of High Energy Physics, 2012, 2012, 1.	4.7	209
121	On jet mass distributions in Z+jet and dijet processes at the LHC. Journal of High Energy Physics, 2012, 2012, 1.	4.7	75
122	How to improve top-quark tagging. Physical Review D, 2012, 85, .	4.7	31
123	Unconstraining the unHiggs model. Physical Review D, 2012, 85, .	4.7	10
124	Structure of fat jets at the Tevatron and beyond. European Physical Journal C, 2012, 72, 1.	3.9	15
125	Simplified models for LHC new physics searches. Journal of Physics G: Nuclear and Particle Physics, 2012, 39, 105005.	3.6	273
126	Evasive Higgs boson maneuvers at the LHC. Physical Review D, 2012, 85, .	4.7	44

#	ARTICLE	IF	CITATIONS
127	Measuring Higgs C and P and couplings with hadronic event shapes. Journal of High Energy Physics, 2012, 2012, 1.	4.7	56
128	AFBtmeets LHC. Physical Review D, 2011, 84, .	4.7	28
129	Finding physics signals with shower deconstruction. Physical Review D, 2011, 84, .	4.7	76
130	Boosted semileptonic tops in stop decays. Journal of High Energy Physics, 2011, 2011, 1.	4.7	45
131	Dark matter from minimal flavor violation. Journal of High Energy Physics, 2011, 2011, 1.	4.7	74
132	Combining subjet algorithms to enhance ZH detection at the LHC. Journal of High Energy Physics, 2010, 2010, 1.	4.7	66
133	Stop reconstruction with tagged tops. Journal of High Energy Physics, 2010, 2010, 1.	4.7	198
134	Fat Jets for a Light Higgs Boson. Physical Review Letters, 2010, 104, 111801.	7.8	258
135	Discovering the Higgs boson in new physics events using jet substructure. Physical Review D, 2010, 81, .	4.7	43
136	Boosting Higgs boson discovery: The forgotten channel. Physical Review D, 2010, 82, .	4.7	26
137	Discovering Higgs bosons of the MSSM using jet substructure. Physical Review D, 2010, 82, .	4.7	35
138	Measuring spin and C from semihadronic P decays using jet substructure. Physical Review D, 2010, 82, .	4.7	40
139	Charged-Higgs collider signals with or without flavor. Physical Review D, 2008, 77, .	4.7	25
140	Four generations and Higgs physics. Physical Review D, 2007, 76, .	4.7	286