

Loyal Durand

List of Publications by Year in descending order

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98
docs citations

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734
citing authors

#	ARTICLE	IF	CITATIONS
1	QCD and rising cross sections. Physical Review Letters, 1987, 58, 303-306.	2.9	231
2	Diffraction Model for High-EnergyppScattering. Physical Review Letters, 1968, 20, 637-640.	2.9	192
3	Absorptive Processes and Single-Particle Exchange Models at High Energies. I. General Theory. Physical Review, 1965, 139, B646-B666.	2.7	113
4	Lorentz Invariance and the Kinematic Structure of Vertex Functions. Physical Review, 1962, 126, 1882-1898.	2.7	110
5	Inelastic Electron-Deuteron Scattering Cross Sections at High Energies. II. Final-State Interactions and Relativistic Corrections. Physical Review, 1961, 123, 1393-1422.	2.7	107
6	Unitarity, Absorptive Processes, and Single-Particle Exchange Models at High Energies. Physical Review Letters, 1964, 12, 399-403.	2.9	94
7	Decay of the ρ^0 Meson, and the Possible Existence of a $T=0$ Scalar Di-Pion. Physical Review Letters, 1965, 14, 329-332.	2.9	85
8	Pionic Contributions to the Magnetic Moment of the Muon. Physical Review, 1962, 128, 441-448.	2.7	82
9	Semihard QCD and high-energyppandp \bar{p} scattering. Physical Review D, 1989, 40, 1436-1445.	1.6	81
10	Vacuum Polarization Effects in Proton-Proton Scattering. Physical Review, 1957, 108, 1597-1610.	2.7	75
11	Inelastic Electron-Deuteron Scattering Cross Sections at High Energies. Physical Review, 1959, 115, 1020-1038.	2.7	72
12	Electron Screening Corrections to Beta-Decay Spectra. Physical Review, 1964, 135, B310-B313.	2.7	69
13	Relativistic description of quark-antiquark bound states. Spin-independent treatment. Physical Review D, 1989, 40, 843-854.	1.6	67
14	Salpeter equation in position space: Numerical solution for arbitrary confining potentials. Physical Review D, 1984, 30, 660-670.	1.6	66
15	Duality for heavy-quark systems. Physical Review D, 1981, 23, 1092-1102.	1.6	65
16	High-energy nucleon-nucleus scattering and cosmic-ray cross sections. Physical Review D, 1988, 38, 78-84.	1.6	63
17	One-loop perturbative unitarity and the Higgs-boson mass: A new approach. Physical Review Letters, 1990, 64, 1215-1218.	2.9	59
18	Single-Particle Exchange Models for the Reactions $\bar{p}p \rightarrow \bar{p}p$, $p\bar{p} \rightarrow p\bar{p}$, $p\bar{p} \rightarrow \bar{p}n$, and $n\bar{p} \rightarrow pn$. Physical Review, 1965, 137, B1530-B1534.	2.7	58

#	ARTICLE	IF	CITATIONS
19	Expansion formulas and addition theorems for Gegenbauer functions. Journal of Mathematical Physics, 1976, 17, 1933-1948.	0.5	55
20	Regge Poles in the Scattering of Particles of Unequal Mass. Remark on a Paper of Freedman and Wang. Physical Review, 1967, 154, 1537-1539.	2.7	50
21	Analytic solution of the relativistic Coulomb problem for a spinless Salpeter equation. Physical Review D, 1983, 28, 396-406.	1.6	49
22	Analytic derivation of the leading-order gluon distribution function $G(x, Q^2)$		

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37	Unitarity constraints on grand unified models. <i>Physical Review D</i> , 1989, 40, 207-222.	1.6	27
38	Two-loop $O(GF^2 M_H^4)$ corrections to the fermionic decay rates of the Higgs boson. <i>Physical Review D</i> , 1995, 51, 5007-5015.	1.6	25
39	Analytic treatment of leading-order parton evolution equations: Theory and tests. <i>Physical Review D</i> , 2009, 79, .	1.6	25
40	Two-loop unitarity constraints on the Higgs boson coupling. <i>Physical Review D</i> , 1993, 48, 1084-1096.	1.6	24
41	Evidence for a break in the spectrum of astrophysical neutrinos. <i>Physical Review D</i> , 2017, 95, .	1.6	24
42	Matrix methods for the numerical solution of relativistic wave equations. <i>Journal of Mathematical Physics</i> , 1990, 31, 2237-2243.	0.5	23
43	Onset of strong interactions in the Higgs sector of the Standard Model: $H\hat{t}\hat{t}$ at two loops [Phys. Rev. Lett. 72, 2534 (1994)]. <i>Physical Review Letters</i> , 1995, 74, 1699-1699.	2.9	23
44	Stability and oscillations of a soap film: An analytic treatment. <i>American Journal of Physics</i> , 1981, 49, 334-343.	0.3	21
45	Field-strength formulation of gauge theories: Transformation of the functional integral. <i>Physical Review D</i> , 1982, 26, 1368-1379.	1.6	21
46	Inelastic Electron-Deuteron Scattering and the Electromagnetic Structure of the Neutron. <i>Physical Review Letters</i> , 1961, 6, 631-634.	2.9	20
47	Fibonal fit to $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle \text{and} \langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \rangle \langle \text{mml:mover accent="true"} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mo stretchy="false"} \rangle \hat{\Lambda} \langle \text{mml:mo} \rangle \langle \text{mml:mover} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ scattering and the edge in the scattering amplitude. <i>Physical Review D</i> , 2015, 92, .	1.6	19
48	The Shifman-VaÅnshteÅn-Zakharov method: Why it works, why it fails, and ways to improve it. <i>Physical Review D</i> , 1983, 28, 607-623.	1.6	17
49	Behavior of relativistic wave functions near the origin for a QCD potential. <i>Physical Review D</i> , 1985, 32, 1257-1259.	1.6	17
50	S-Matrix Description of K_L and K_S Decays. <i>Physical Review Letters</i> , 1969, 23, 59-62.	2.9	16
51	Boundary Value Treatment of Nucleon-Nucleon Phase Shifts. <i>Physical Review</i> , 1956, 104, 1102-1113.	2.7	15
52	S-matrix treatment of many overlapping resonances. <i>Physical Review D</i> , 1976, 14, 3174-3185.	1.6	15
53	Remarks on the Electromagnetic Interactions of Massless Particles. <i>Physical Review</i> , 1962, 128, 434-440.	2.7	14
54	High-energy photon-nucleon and photon-nucleus cross sections. <i>Physical Review D</i> , 1993, 48, 1048-1060.	1.6	14

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55	Improved WKB radial wave functions in several bases. <i>Physical Review A</i> , 1986, 33, 2887-2898.	1.0	13
56	Probabilistic derivation of parton splitting functions. <i>Physical Review D</i> , 1987, 36, 2840-2845.	1.6	13
57	Final-state electronic interactions in allowed beta decay. <i>Physical Review C</i> , 1988, 37, 535-543.	1.1	13
58	Ultrahigh-energy photonuclear cross sections. <i>Physical Review D</i> , 1990, 42, 263-267.	1.6	13
59	Implications of unitarity for low-energy W_L^{\pm} scattering. <i>Physical Review D</i> , 1991, 44, 127-138.	1.6	13
60	Tests for the Spin in the Decay of Particles of Arbitrary Spin. <i>Physical Review</i> , 1958, 112, 273-282.	2.7	12
61	Regge-Pole Exchange and Direct-Channel Resonances in Models for High-Energy Scattering Amplitudes. <i>Physical Review</i> , 1968, 166, 1680-1690.	2.7	12
62	Addition Formulas for Jacobi, Gegenbauer, Laguerre, and Hyperbolic Bessel Functions of the Second Kind. <i>SIAM Journal on Mathematical Analysis</i> , 1979, 10, 425-437.	0.9	12
63	Short-time perturbation theory and nonrelativistic duality. <i>Physical Review D</i> , 1983, 28, 597-606.	1.6	12
64	Effects of Vacuum Polarization Scattering in the Treatment of Proton-Proton Scattering Data. <i>Physical Review</i> , 1958, 111, 1597-1603.	2.7	10
65	The Lorentz Expansion for Scattering Amplitudes. <i>Physical Review Letters</i> , 1968, 21, 1654-1658.	2.9	8
66	Transition Radiation from Interstellar Dust Grains. <i>Astrophysical Journal</i> , 1973, 182, 417.	1.6	8
67	Meson-proton scattering at high energies. <i>Physical Review D</i> , 1991, 43, 2125-2130.	1.6	7
68	Interference Between the Decays $\rho^{\pm} \rightarrow \pi^{\pm} \pi^0$ and $\rho^{\pm} \rightarrow \pi^{\pm} \pi^{\pm} \pi^0$ in the Reaction $\pi^{\pm} N^{\pm} \rightarrow \rho^{\pm} N$. <i>Physical Review Letters</i> , 1965, 14, 1039-1043.	2.9	6
69	Regge-Pole Models for Pion Exchange Reactions. <i>Physical Review Letters</i> , 1967, 19, 1345-1348.	2.9	6
70	General Parametrization of Trajectory and Residue Functions for Daughter Regge Poles. <i>Physical Review Letters</i> , 1969, 22, 261-265.	2.9	6
71	General Form of Regge Trajectory and Residue Functions in the Scattering of Particles with Spin. <i>Physical Review Letters</i> , 1969, 23, 201-205.	2.9	6
72	Backward πN Scattering: A Regge-Pole-Cut Model without Parity Doubling. <i>Physical Review D</i> , 1971, 3, 195-198.	1.6	6

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73	Duality for heavy-quark systems. II. Coupled channels. Physical Review D, 1981, 23, 1531-1538.	1.6	6
74	Improved Fermi-Segrè formula for $\hat{\sigma}(\text{Rn},l/r_l)(0)\hat{\sigma}^{-2}$ for singular and nonsingular potentials. Physical Review A, 1986, 33, 2899-2906.	1.0	6
75	Coulomb-nuclear interference effects in proton-proton scattering: A simple new eikonal approach. Physical Review D, 2020, 102, .	1.6	6
76	Fractional operators and special functions. II. Legendre functions. Journal of Mathematical Physics, 2003, 44, 2266-2292.	0.5	5
77	Slope, curvature, and higher parameters in pp and \bar{p} scattering, and the extrapolation of measurements of $d\sigma/dt(s,t)/dt _{t=0}$. Physical Review D, 2016, 93, .	1.6	5
78	High-Energy Diffraction Scattering. Physical Review, 1963, 132, 1217-1225.	2.7	4
79	Coulomb Corrections to the Beta Decay of O^{14} . Physical Review, 1966, 146, 638-650.	2.7	4
80	Field-strength formulation of gauge theories. The Hamiltonian approach in the Abelian theory. Physical Review D, 1984, 30, 1754-1762.	1.6	4
81	Jets and jet multiplicities in high-energy photon-nucleon interactions. Physical Review D, 1993, 47, R4815-R4819.	1.6	4
82	Fractional operators and special functions. I. Bessel functions. Journal of Mathematical Physics, 2003, 44, 2250-2265.	0.5	4
83	A new numerical method for inverse Laplace transforms used to obtain gluon distributions from the proton structure function. European Physical Journal C, 2011, 71, 1.	1.4	4
84	Complex Asymptotics in $\hat{\sigma}$ for the Gegenbauer Functions C_n^{λ} ; $\hat{\sigma}_{\pm}$; (z) ; and $\hat{\sigma}_{1.1}$; Symmetry, 2019, 11, 1465.		4
85	Asymptotic Bessel-function expansions for Legendre and Jacobi functions. Journal of Mathematical Physics, 2019, 60, 013501.	0.5	4
86	Fermi and Bose pressures in statistical mechanics. American Journal of Physics, 2004, 72, 1082-1094.	0.3	3
87	Eikonal and asymptotic fits to high-energy data for $\hat{\sigma}$, $\hat{\sigma}_{\pm}$, and B : An update with curvature corrections. Physical Review D, 2019, 99, .	1.6	3
88	Resonance-sum model for Reggeization in the scattering of particles with arbitrary spin. Physical Review D, 1976, 13, 1409-1429.	1.6	2
89	Energy dependence and scaling of the spin-correlation and polarization parameters in elastic proton-proton scattering. Physical Review D, 1977, 15, 352-354.	1.6	2
90	A Symmetrical Addition Formula for the Laguerre Polynomials. SIAM Journal on Mathematical Analysis, 1977, 8, 541-546.	0.9	2

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91	Test of the Goldstone-boson approximation with fermions. Physical Review D, 1997, 55, 1533-1547.	1.6	2
92	Comment on "On an identity for the volume integral of the square of a vector field," by A. M. Stewart [Am. J. Phys. 75 (6), 561-564 (2007)]. American Journal of Physics, 2007, 75, 570-570.	0.3	1
93	Fractional operators and multi-integral representations for associated Legendre functions. Journal of Mathematical Physics, 2022, 63, .	0.5	1
94	Energy and Regge residues in quantum-mechanical $\tilde{\text{QCD}}$ sum rules. Physical Review D, 1986, 33, 3441-3448.	1.6	0
95	Reply to "Comment on $\tilde{\text{Coulomb-nuclear}}$ interference effects in proton-proton scattering: A simple new eikonal approach". Physical Review D, 2021, 103, .	1.6	0