Rod Cross

List of Publications by Year
in descending order

183 papers	1,882 citations	304743 22 h-index	330143 37 g-index
184 all docs	184 docs citations	184 times ranked	923 citing authors

#	Article	IF	Citations
1	The bounce of a ball. American Journal of Physics, 1999, 67, 222-227.	0.7	181
2	Grip-slip behavior of a bouncing ball. American Journal of Physics, 2002, 70, 1093-1102.	0.7	139
3	Measurements of the horizontal coefficient of restitution for a superball and a tennis ball. American Journal of Physics, 2002, 70, 482-489.	0.7	98
4	Standing, walking, running, and jumping on a force plate. American Journal of Physics, 1999, 67, 304-309.	0.7	97
5	Elastic and viscous properties of Silly Putty. American Journal of Physics, 2012, 80, 870-875.	0.7	69
6	The sweet spot of a baseball bat. American Journal of Physics, 1998, 66, 772-779.	0.7	63
7	Effects of swing-weight on swing speed and racket power. Journal of Sports Sciences, 2006, 24, 23-30.	2.0	59
8	Impact of a ball with a bat or racket. American Journal of Physics, 1999, 67, 692-702.	0.7	48
9	Impact of sports balls with striking implements. Sports Engineering, 2014, 17, 3-22.	1.1	47
10	Coulomb's law for rolling friction. American Journal of Physics, 2016, 84, 221-230.	0.7	43
11	Customising a tennis racket by adding weights. Sports Engineering, 2001, 4, 1.	1.1	39
12	Bounce of a spinning ball near normal incidence. American Journal of Physics, 2005, 73, 914-920.	0.7	37
13	Physics of overarm throwing. American Journal of Physics, 2004, 72, 305-312.	0.7	33
14	Impact behavior of a superball. American Journal of Physics, 2015, 83, 238-248.	0.7	33
15	Scattering of a baseball by a bat. American Journal of Physics, 2006, 74, 896-904.	0.7	32
16	The fall and bounce of pencils and other elongated objects. American Journal of Physics, 2006, 74, 26-30.	0.7	31
17	Center of percussion of hand-held implements. American Journal of Physics, 2004, 72, 622-630.	0.7	26
18	The dead spot of a tennis racket. American Journal of Physics, 1997, 65, 754-764.	0.7	25

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19	Impact behavior of hollow balls. American Journal of Physics, 2014, 82, 189-195.	0.7	25
20	Mechanics of swinging a bat. American Journal of Physics, 2009, 77, 36-43.	0.7	24
21	The rise and fall of spinning tops. American Journal of Physics, 2013, 81, 280-289.	0.7	24
22	Measurements of drag and lift on tennis balls in flight. Sports Engineering, 2014, 17, 89-96.	1.1	24
23	String tension effects on tennis ball rebound speed and accuracy during playing conditions. Journal of Sports Sciences, 2005, 23, 765-771.	2.0	20
24	Measuring the Drag Force on a Falling Ball. Physics Teacher, 2014, 52, 169-170.	0.3	20
25	Measurements of the horizontal and vertical speeds of tennis courts. Sports Engineering, 2003, 6, 95-111.	1.1	19
26	A double pendulum swing experiment: In search of a better bat. American Journal of Physics, 2005, 73, 330-339.	0.7	19
27	Fatal Falls from a Height: Two Case Studies. Journal of Forensic Sciences, 2006, 51, 93-99.	1.6	19
28	Differences between bouncing balls, springs, and rods. American Journal of Physics, 2008, 76, 908-915.	0.7	19
29	Oblique impact of a tennis ball on the strings of a tennis racket. Sports Engineering, 2003, 6, 235-254.	1.1	18
30	Modeling a falling slinky. American Journal of Physics, 2012, 80, 1051-1060.	0.7	18
31	Increase in friction force with sliding speed. American Journal of Physics, 2005, 73, 812-816.	0.7	17
32	Experimental study of the gear effect in ball collisions. American Journal of Physics, 2007, 75, 658-664.	0.7	15
33	Vertical bounce of two vertically aligned balls. American Journal of Physics, 2007, 75, 1009-1016.	0.7	15
34	Bounce of an oval shaped football. Sports Technology, 2010, 3, 168-180.	0.4	15
35	Behaviour of a bouncing ball. Physics Education, 2015, 50, 335-341.	0.5	15
36	A double pendulum model of tennis strokes. American Journal of Physics, 2011, 79, 470-476.	0.7	14

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37	Aerodynamics in the classroom and at the ball park. American Journal of Physics, 2012, 80, 289-297.	0.7	14
38	Oblique Bounce of a Rubber Ball. Experimental Mechanics, 2014, 54, 1523-1536.	2.0	14
39	The trajectory of a ball in lawn bowls. American Journal of Physics, 1998, 66, 735-738.	0.7	13
40	Enhancing the Bounce of a Ball. Physics Teacher, 2010, 48, 450-452.	0.3	13
41	Oblique impact of a steel ball. Powder Technology, 2019, 351, 282-290.	4.2	13
42	Calculations of groundstroke trajectories in tennis. Sports Engineering, 2020, 23, 1.	1.1	13
43	Cue and ball deflection (or â€œsquirtâ€) in billiards. American Journal of Physics, 2008, 76, 205-212.	0.7	12
44	Elastic Properties of Plasticine, Silly Putty, and Tennis Strings. Physics Teacher, 2012, 50, 527-529.	0.3	12
45	Laboratory testing of tennis strings. Sports Engineering, 2000, 3, 219-230.	1.1	11
46	Player sensitivity to changes in string tension in a tennis racket. Journal of Science and Medicine in Sport, 2003, 6, 120-131.	1.3	11
47	The kick serve in tennis. Sports Technology, 2011, 4, 19-28.	0.4	11
48	The footprint of a tennis ball. Sports Engineering, 2014, 17, 239-247.	1.1	10
49	Multiple collisions of two steel balls in a Newtonâ€™s cradle. European Journal of Physics, 2018, 39, 025001.	0.6	10
50	Why does a spinning egg rise?. European Journal of Physics, 2018, 39, 025002.	0.6	10
51	Aerodynamics of a Party Balloon. Physics Teacher, 2007, 45, 334-336.	0.3	9
52	Rolling Motion of a Ball Spinning About a Near-Vertical Axis. Physics Teacher, 2012, 50, 25-27.	0.3	8
53	Factors affecting the vibration of tennis racquets. Sports Engineering, 2015, 18, 135-147.	1.1	8
54	Current transformers. American Journal of Physics, 1986, 54, 1110-1113.	0.7	7

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55	Response to â€œComment on â€˜The sweet spot of a baseball batâ€™â€Šâ€•[Am. J. Phys. 69 (2), 229â€“230 (2001)]. American Journal of Physics, 2001, 69, 231-232.	0.7	7
56	Forensic Physics 101: Falls from a height. American Journal of Physics, 2008, 76, 833-837.	0.7	7
57	Impact of a ball on a surface with tangential compliance. American Journal of Physics, 2010, 78, 716-720.	0.7	7
58	Spinning eggs and ballerinas. Physics Education, 2013, 48, 51-56.	0.5	7
59	Vertical Impact of a Sphere Falling into Water. Physics Teacher, 2016, 54, 153-155.	0.3	7
60	Validation of ball spin estimates in tennis from multi-camera tracking data. Journal of Sports Sciences, 2020, 38, 296-303.	2.0	7
61	Understanding Newtonâ€™s cradle. I: modelling the ideal cradle. Physics Education, 2021, 56, 025001.	0.5	7
62	The polar moment of inertia of striking implements. Sports Technology, 2010, 3, 215-219.	0.4	6
63	Measurement of the speed and bounce of tennis courts. Sports Technology, 2010, 3, 112-120.	0.4	6
64	Compensated RC integrators. American Journal of Physics, 1981, 49, 479-480.	0.7	5
65	Role of the centrifugal force in vehicle roll. American Journal of Physics, 1999, 67, 447-448.	0.7	5
66	Launch of a Vehicle from a Ramp. Physics Teacher, 2011, 49, 410-411.	0.3	5
67	Edme Mariotte and Newton's Cradle. Physics Teacher, 2012, 50, 206-207.	0.3	5
68	Experimenting with a spinning disk. Physics Education, 2015, 50, 197-202.	0.5	5
69	Pendulum motion of a biased cylindrical tube. European Journal of Physics, 2020, 41, 015006.	0.6	5
70	Measurements of the drag force on balls in water. European Journal of Physics, 2020, 41, 055003.	0.6	5
71	Impact forces and torques transmitted to the hand by tennis racquets. Sports Technology, 2010, 3, 102-111.	0.4	4
72	Laithwaite's Heavy Spinning Disk Demonstration. Physics Teacher, 2014, 52, 349-349.	0.3	4

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73	Why low bounce balls exhibit high rolling resistance. Physics Education, 2015, 50, 717-721.	0.5	4
74	Precession of a Spinning Ball Rolling Down an Inclined Plane. Physics Teacher, 2015, 53, 217-219.	0.3	4
75	Launch speed, angle and spin in golf. European Journal of Physics, 2018, 39, 065003.	0.6	4
76	Energy losses in a rolling ball. European Journal of Physics, 2019, 40, 035003.	0.6	4
77	Acceleration of a ball down an inclined plane. Physics Education, 2021, 56, 035017.	0.5	4
78	How to levitate an egg. Physics Education, 2021, 56, 043010.	0.5	4
79	The effect of very small ball gaps in Newtonâ€™s cradle. European Journal of Physics, 2021, 42, 025004.	0.6	4
80	Coefficient of restitution for an obliquely bouncing ball. Physics Education, 2021, 56, 015004.	0.5	4
81	The dual function of sand on a clay tennis court. Physics Teacher, 2001, 39, 330-331.	0.3	3
82	Measuring the Effects of Lift and Drag on Projectile Motion. Physics Teacher, 2012, 50, 80-82.	0.3	3
83	Effects of rolling friction on a spinning coin or disk. European Journal of Physics, 2018, 39, 035005.	0.6	3
84	Dynamics of a spherical tippe top. European Journal of Physics, 2018, 39, 035001.	0.6	3
85	Static friction on a ball rolling down an incline. Physics Education, 2018, 53, 065014.	0.5	3
86	Backward bounce of a spinning ball. European Journal of Physics, 2018, 39, 045007.	0.6	3
87	Measuring coefficients of restitution with a piezo disk. Physics Education, 2020, 55, 035008.	0.5	3
88	Rotating ring on a vertical rod. Physics Education, 2021, 56, 023003.	0.5	3
89	Dynamics of a rolling egg. European Journal of Physics, 0, , .	0.6	3
90	The fall of an inclined rod. European Journal of Physics, 2021, 42, 055005.	0.6	3

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91	Impact force between two colliding billiard balls. Physics Education, 2020, 55, 065002.	0.5	3
92	Two-dimensional collisions of disks and spheres. European Journal of Physics, 2022, 43, 015007.	0.6	3
93	Understanding Newtonâ€™s cradle. II: exploring a real cradle. Physics Education, 2021, 56, 025002.	0.5	3
94	Tension loss along a string. American Journal of Physics, 2000, 68, 1152-1153.	0.7	2
95	Spherical Tippe Tops. Physics Teacher, 2013, 51, 144-145.	0.3	2
96	Comment on â€œAn accurate determination of the acceleration of gravity for lecture hall demonstrationâ€•[Am. J. Phys. 55, 324â€“330 (1987)]. American Journal of Physics, 2014, 82, 803-804.	0.7	2
97	Motion of a Ball on a Moving Surface. Physics Teacher, 2016, 54, 76-79.	0.3	2
98	Surprising Behavior of Spinning Tops and Eggs on an Inclined Plane. Physics Teacher, 2016, 54, 28-30.	0.3	2
99	Throwing accuracy. Physics Education, 2018, 53, 035021.	0.5	2
100	A spinning top for physics experiments. Physics Education, 2019, 54, 055028.	0.5	2
101	Spin experiments with a biased ball. European Journal of Physics, 2019, 40, 055003.	0.6	2
102	Topspin generation in tennis. Sports Engineering, 2019, 22, 1.	1.1	2
103	Elastic deformation of a bouncing ball. European Journal of Physics, 2019, 40, 035002.	0.6	2
104	Oblique impact of a spinning rubber ball. European Journal of Physics, 2019, 40, 025002.	0.6	2
105	Rolling resistance of hard balls on soft surfaces. European Journal of Physics, 2020, 41, 025005.	0.6	2
106	Two balls stuck by friction on an incline, and a four ball pyramid. Physics Education, 2020, 55, 055013.	0.5	2
107	The rolling friction formula. Physics Education, 2020, 55, 033003.	0.5	2
108	Vertical bounce of a spinning ball. Physics Education, 2021, 56, 023002.	0.5	2

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109	Effect of friction on a hula hoop. Physics Education, 2021, 56, 033001.	0.5	2
110	Oblique impact of a hard ball on a soft surface. European Journal of Physics, 2021, 42, 065006.	0.6	2
111	Physics of a hula hoop. Physics Education, 2021, 56, 025015.	0.5	2
112	Oblique impact of ice hockey and plastic pucks with a rigid surface. European Journal of Physics, 2022, 43, 025003.	0.6	2
113	An electrostatics paradox. Physics Education, 2022, 57, 023001.	0.5	2
114	Oblique angle collisions of two pendulum balls. American Journal of Physics, 2022, 90, 506-512.	0.7	2
115	Interpreting positive Hall voltages in terms of electron rather than hole motion. American Journal of Physics, 1978, 46, 771-772.	0.7	1
116	Effect of configuration on the biomechanical performance of three suture materials used in combination with a metallic bone anchor. American Journal of Veterinary Research, 2013, 74, 1487-1492.	0.6	1
117	Why Chalk Breaks into Three Pieces When Dropped. Physics Teacher, 2015, 53, 13-14.	0.3	1
118	Physics of swinging a striking implement. Physics Education, 2015, 50, 232-236.	0.5	1
119	The Chappaquiddick Incident. Physics Teacher, 2016, 54, 520-522.	0.3	1
120	A common problem with video cameras. Physics Education, 2018, 53, 055014.	0.5	1
121	Effect of topspin on the apparent speed of a tennis court. Sports Engineering, 2019, 22, 1.	1.1	1
122	A hemispherical tippe top. European Journal of Physics, 2020, 41, 025001.	0.6	1
123	Newtonâ€™s cradle with an end stop. European Journal of Physics, 2020, 41, 065004.	0.6	1
124	Bouncing along a horizontal surface. Physics Education, 2020, 55, 043001.	0.5	1
125	Bouncing a ball at rest on a surface. Physics Education, 2020, 55, 035021.	0.5	1
126	Impact of a double sphere dropped vertically onto a horizontal surface. European Journal of Physics, 2021, 42, 025014.	0.6	1

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127	A conical pendulum model of a rotating chain. European Journal of Physics, 2021, 42, 035007.	0.6	1
128	Oblique bounce of a double sphere on a horizontal surface. European Journal of Physics, 2021, 42, 035010.	0.6	1
129	Transition from sliding to rolling in billiards and golf. Physics Education, 2021, 56, 045003.	0.5	1
130	Bounce of a biassed ball. Physics Education, 2021, 56, 055001.	0.5	1
131	A bead on a rotating rod experiment. Physics Education, 2021, 56, 055012.	0.5	1
132	Observations of a driven pendulum at low amplitudes. European Journal of Physics, 2021, 42, 055001.	0.6	1
133	Physics of a hopping hoop. Physics Education, 2021, 56, 053005.	0.5	1
134	Rolling motion of a ball on a turntable. Physics Education, 2021, 56, 065003.	0.5	1
135	Vertical bounce of a plastic egg. Physics Education, 2021, 56, 025005.	0.5	1
136	Observations of a falling ladder. European Journal of Physics, 0, , .	0.6	1
137	Billiard ball vs rubber ball collisions. Physics Education, 2022, 57, 033001.	0.5	1
138	â€˜Levitationâ€™ of a falling pencil. Physics Education, 2022, 57, 043002.	0.5	1
139	Trajectory of a ball on an inclined plane. Physics Education, 2022, 57, 055007.	0.5	1
140	Pendulum motion on an inclined plane. Physics Education, 2022, 57, 055012.	0.5	1
141	Misinterpretation of expert evidence in Wood v R. Australian Journal of Forensic Sciences, 2014, 46, 368-382.	1.2	0
142	Comment on â€˜An impacting linear three body systemâ€™. European Journal of Physics, 2018, 39, 038001.	0.6	0
143	Further remarks on â€˜A comparative study of two types of ball-on-ball collisionâ€™ 2017 Phys. Educ. 52 045013. Physics Education, 2018, 53, 026501.	0.5	0
144	Remarks on â€˜A comparative study of two types of ball-on-ball collisionâ€™. Physics Education, 2018, 53, 016501.	0.5	0

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145	The impact of a hammer and a nail. Physics Education, 2019, 54, 055022.	0.5	0
146	Collision of a ball with the edge of a step. European Journal of Physics, 2019, 40, 065007.	0.6	0
147	Correcting camera perspective errors. Physics Education, 2019, 54, 063005.	0.5	0
148	The abrupt ending of a spinning disk. European Journal of Physics, 2019, 40, 065002.	0.6	0
149	Why some balls spin faster than others when they bounce. Physics Education, 2019, 54, 035009.	0.5	0
150	Julius Sumner Miller. Physics Education, 2019, 54, 026501.	0.5	0
151	Rolling over an obstacle. European Journal of Physics, 2019, 40, 015005.	0.6	0
152	Bounce of a perfectly elastic ball. Physics Education, 2019, 54, 013001.	0.5	0
153	Measuring the topspin and sidespin components of a rolling ball. Physics Education, 2020, 55, 015022.	0.5	0
154	Impulse excitation of mechanical resonators: massâ€“spring systems and fishing rods. European Journal of Physics, 2020, 41, 065008.	0.6	0
155	Head-on car collisions. Physics Education, 2020, 55, 033002.	0.5	0
156	Impact of a ball with a rigid rod. European Journal of Physics, 2020, 41, 035001.	0.6	0
157	Impact of a ball with a flexible beam. European Journal of Physics, 2020, 41, 045003.	0.6	0
158	Oscillation frequencies of a double pendulum. Physics Education, 2021, 56, 043003.	0.5	0
159	Simulating the flight of an oval football. Physics Education, 2021, 56, 043002.	0.5	0
160	Bouncing ball impacts. American Journal of Physics, 2021, 89, 452-452.	0.7	0
161	A falling rod on wheels. Physics Education, 2021, 56, 055024.	0.5	0
162	Coefficients of restitution for a collision. Physics Education, 2021, 56, 065017.	0.5	0

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163	Collision of a ball with a wood block. Physics Education, 2021, 56, 065021.	0.5	0
164	Energy loss in cue-ball collisions. European Journal of Physics, 2021, 42, 065003.	0.6	0
165	Experimental study of the gear effect. European Journal of Physics, 2021, 42, 065013.	0.6	0
166	Experiments with colliding rods. European Journal of Physics, 2021, 42, 065009.	0.6	0
167	A wall of death experiment. Physics Education, 2021, 56, 023006.	0.5	0
168	An inclined beam at rest on a ball or cylinder. Physics Education, 2020, 55, 055014.	0.5	0
169	A two-dimensional version of Newtonâ€™s cradle. Physics Education, 2020, 55, 063001.	0.5	0
170	Collision of two coins on a horizontal surface. Physics Education, 2022, 57, 015009.	0.5	0
171	A simple experiment to model speed bumps and humps. European Journal of Physics, 2020, 41, 065010.	0.6	0
172	An experiment with two bottle tops. Physics Education, 2022, 57, 013002.	0.5	0
173	Four different ways that toast can fall off a table. European Journal of Physics, 0, , .	0.6	0
174	Falling faster than g, exponentially. Physics Education, 2022, 57, 035001.	0.5	0
175	Reply to Comment on â€˜An electrostatics paradoxâ€™. Physics Education, 2022, 57, 038002.	0.5	0
176	Actual vs textbook transformers. Physics Education, 2022, 57, 023003.	0.5	0
177	A Faradayâ€™s law paradox. Physics Education, 2022, 57, 013003.	0.5	0
178	Curious behaviour of spinning coffee cups and other spinning objects. Physics Education, 2022, 57, 015022.	0.5	0
179	Motion of a plucked string or spring. Physics Education, 2022, 57, 043005.	0.5	0
180	Precession of a ball rolling in a circular path. Physics Education, 2022, 57, 045036.	0.5	0

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181	A single collision between three objects cannot be described using only two conservation equations. Physics Education, 2022, 57, 055004.	0.5	0
182	Trajectory of an object sliding across an incline. Physics Education, 2022, 57, 055013.	0.5	0
183	Bouncing up and down an incline. Physics Education, 2022, 57, 055021.	0.5	0