

# Sergei Tabachnikov

## List of Publications by Year in descending order

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99  
papers

1,571  
citations

394421

19  
h-index

377865

34  
g-index

105  
all docs

105  
docs citations

105  
times ranked

416  
citing authors

#	ARTICLE	IF	CITATIONS
1	Chapter 13 Rational billiards and flat structures. Handbook of Dynamical Systems, 2002, 1, 1015-1089.	0.6	150
2	Invariants of Legendrian and transverse knots in the standard contact space. Topology, 1997, 36, 1025-1053.	0.3	92
3	The Pentagon Map: A Discrete Integrable System. Communications in Mathematical Physics, 2010, 299, 409-446.	2.2	76
4	Title is missing!. International Mathematics Research Notices, 2003, 2003, 1853.	1.0	57
5	Pseudo-Riemannian geodesics and billiards. Advances in Mathematics, 2009, 221, 1364-1396.	1.1	56
6	More on Paperfolding. American Mathematical Monthly, 1999, 106, 27-35.	0.3	42
7	The Poncelet Grid and Billiards in Ellipses. American Mathematical Monthly, 2007, 114, 895-908.	0.3	36
8	Billiards in Finsler and Minkowski geometries. Journal of Geometry and Physics, 2002, 40, 277-301.	1.4	35
9	Topology of cyclic configuration spaces and periodic trajectories of multi-dimensional billiards. Topology, 2002, 41, 553-589.	0.3	32
10	Liouville's "Arnold integrability of the pentagram map on closed polygons. Duke Mathematical Journal, 2013, 162, .	1.5	32
11	Dual Billiards. Mathematical Intelligencer, 2005, 27, 18-25.	0.2	27
12	Tractrices, Bicycle Tire Tracks, Hatchet Planimeters, and a 100-year-old Conjecture. American Mathematical Monthly, 2013, 120, 199.	0.3	27
13	2-frieze patterns and the cluster structure of the space of polygons. Annales De L'Institut Fourier, 2012, 62, 937-987.	0.6	26
14	Tire track geometry: Variations on a theme. Israel Journal of Mathematics, 2006, 151, 1-28.	0.8	25
15	More on Paperfolding. American Mathematical Monthly, 1999, 106, 27.	0.3	24
16	Linear difference equations, frieze patterns, and the combinatorial Gale transform. Forum of Mathematics, Sigma, 2014, 2, .	0.7	22
17	Estimates for the Bennequin number of Legendrian links from state models for knot polynomials. Mathematical Research Letters, 1997, 4, 143-156.	0.5	21
18	Totally skew embeddings of manifolds. Mathematische Zeitschrift, 2008, 258, 499-512.	0.9	20

#	ARTICLE	IF	CITATIONS
19	Osculating Curves: Around the Tait-Kneser Theorem. <i>Mathematical Intelligencer</i> , 2013, 35, 61-66.	0.2	20
20	Integrable cluster dynamics of directed networks and pentagram maps. <i>Advances in Mathematics</i> , 2016, 300, 390-450.	1.1	20
21	Ivory's theorem revisited. <i>Journal of Integrable Systems</i> , 2017, 2, .	0.4	20
22	Dan Reznik's identities and more. <i>European Journal of Mathematics</i> , 2022, 8, 1341-1354.	0.5	19
23	Open problems, questions and challenges in finite- dimensional integrable systems. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20170430.	3.4	18
24	On Bicycle Tire Tracks Geometry, Hatchet Planimeter, Menzin's Conjecture, and Oscillation of Unicycle Tracks. <i>Experimental Mathematics</i> , 2009, 18, 173-186.	0.7	17
25	Elementary Surprises in Projective Geometry. <i>Mathematical Intelligencer</i> , 2010, 32, 31-34.	0.2	17
26	Billiards in ellipses revisited. <i>European Journal of Mathematics</i> , 2022, 8, 1313-1327.	0.5	17
27	Centers of Mass of Poncelet Polygons, 200 Years After. <i>Mathematical Intelligencer</i> , 2016, 38, 29-34.	0.2	16
28	Tire Tracks and Integrable Curve Evolution. <i>International Mathematics Research Notices</i> , 2020, 2020, 2698-2768.	1.0	16
29	Dragon Curves Revisited. <i>Mathematical Intelligencer</i> , 2014, 36, 13-17.	0.2	15
30	On algebraically integrable outer billiards. <i>Pacific Journal of Mathematics</i> , 2008, 235, 89-92.	0.5	15
31	Introducing projective billiards. <i>Ergodic Theory and Dynamical Systems</i> , 1997, 17, 957-976.	0.6	13
32	Asymptotic dynamics of the dual billiard transformation. <i>Journal of Statistical Physics</i> , 1996, 83, 27-37.	1.2	12
33	Dual billiards in the hyperbolic plane*. <i>Nonlinearity</i> , 2002, 15, 1051-1072.	1.4	12
34	Commuting dual billiard maps. <i>Geometriae Dedicata</i> , 1994, 53, 57-68.	0.3	11
35	On fibrations with flat fibres. <i>Bulletin of the London Mathematical Society</i> , 2013, 45, 625-632.	0.8	11
36	Higher pentagram maps, weighted directed networks, and cluster dynamics. <i>Electronic Research Announcements in Mathematical Sciences</i> , 2012, 19, 1-17.	0.6	11

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37	On configuration spaces of plane polygons, sub-Riemannian geometry and periodic orbits of outer billiards. <i>Journal of Modern Dynamics</i> , 2007, 1, 155-173.	0.5	11
38	A proof of Culter's theorem on the existence of periodic orbits in polygonal outer billiards. <i>Geometriae Dedicata</i> , 2007, 129, 83-87.	0.3	10
39	Billiard transformations of parallel flows: A periscope theorem. <i>Journal of Geometry and Physics</i> , 2017, 115, 157-166.	1.4	10
40	On the bicycle transformation and the filament equation: Results and conjectures. <i>Journal of Geometry and Physics</i> , 2017, 115, 116-123.	1.4	10
41	Geometry of Lagrangian and Legendrian 2-web. <i>Differential Geometry and Its Applications</i> , 1993, 3, 265-284.	0.5	9
42	Periodic trajectories in 3-dimensional convex billiards. <i>Manuscripta Mathematica</i> , 2002, 108, 431-437.	0.6	9
43	Circumcenter of Mass and Generalized Euler Line. <i>Discrete and Computational Geometry</i> , 2014, 51, 815-836.	0.6	9
44	Hopf Fibrations and Hurwitz-Radon Numbers. <i>Mathematical Intelligencer</i> , 2016, 38, 11-18.	0.2	9
45	Wire billiards, the first steps. <i>Advances in Mathematics</i> , 2020, 368, 107154.	1.1	9
46	Self-dual polygons and self-dual curves. <i>Functional Analysis and Other Mathematics</i> , 2009, 2, 203-220.	0.3	8
47	Fagnano Orbits of Polygonal Dual Billiards. <i>Geometriae Dedicata</i> , 1999, 77, 279-286.	0.3	7
48	Going in Circles: Variations on the Money-Coutts Theorem. <i>Geometriae Dedicata</i> , 2000, 80, 201-209.	0.3	7
49	Introducing symplectic billiards. <i>Advances in Mathematics</i> , 2018, 333, 822-867.	1.1	7
50	Non-existence of $n$ -dimensional $T$ -embedded discs in $\mathbb{R}^{2n}$ . <i>Commentarii Mathematici Helvetici</i> , 2006, 81, 877-882.	0.7	7
51	A Four Vertex Theorem for Polygons. <i>American Mathematical Monthly</i> , 2000, 107, 830-833.	0.3	6
52	Dual Numbers, Weighted Quivers, and Extended Somos and Gale-Robinson Sequences. <i>Algebras and Representation Theory</i> , 2018, 21, 1119-1132.	0.7	6
53	On three-periodic trajectories of multi-dimensional dual billiards. <i>Algebraic and Geometric Topology</i> , 2003, 3, 993-1004.	0.4	6
54	The Pentagon Integrals on Inscribed Polygons. <i>Electronic Journal of Combinatorics</i> , 2011, 18, .	0.4	6

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55	Cross-ratio Dynamics on Ideal Polygons. <i>International Mathematics Research Notices</i> , 2022, 2022, 6770-6853.	1.0	6
56	The (Un)equal Tangents Problem. <i>American Mathematical Monthly</i> , 2012, 119, 398.	0.3	5
57	On curves and polygons with the equiangular chord property. <i>Pacific Journal of Mathematics</i> , 2015, 274, 305-324.	0.5	5
58	Remarks on the Circumcenter of Mass. <i>Arnold Mathematical Journal</i> , 2015, 1, 101-112.	0.4	5
59	Iterating Evolutes and Involutives. <i>Discrete and Computational Geometry</i> , 2017, 58, 80-143.	0.6	5
60	Variations on the Tait-Kneser Theorem. <i>Mathematical Intelligencer</i> , 2021, 43, 8-14.	0.2	5
61	Quasiperiodic motion for the pentagram map. <i>Electronic Research Announcements in Mathematical Sciences</i> , 2009, 16, 1-8.	0.6	5
62	Hyperbolic Carathéodory conjecture. <i>Proceedings of the Steklov Institute of Mathematics</i> , 2007, 258, 178-193.	0.3	4
63	Chases and Escapes. <i>The Mathematics of Pursuit and Evasion</i> by Paul J. Nahin. <i>Mathematical Intelligencer</i> , 2009, 31, 78-79.	0.2	4
64	TOPOLOGICAL ASPECTS OF THE DVORETZKY THEOREM. <i>Journal of Topology and Analysis</i> , 2010, 02, 453-467.	0.5	4
65	Variations on R. Schwarz's Inequality for the Schwarzian Derivative. <i>Discrete and Computational Geometry</i> , 2011, 46, 724-742.	0.6	4
66	Introducing supersymmetric frieze patterns and linear difference operators. <i>Mathematische Zeitschrift</i> , 2015, 281, 1061-1087.	0.9	4
67	On Centro-Affine Curves and Bäcklund Transformations of the KdV Equation. <i>Arnold Mathematical Journal</i> , 2018, 4, 445-458.	0.4	4
68	Coxeter's frieze patterns and discretization of the Virasoro orbit. <i>Journal of Geometry and Physics</i> , 2015, 87, 373-381.	1.4	3
69	A Four Vertex Theorem for Polygons. <i>American Mathematical Monthly</i> , 2000, 107, 830.	0.3	3
70	Title is missing!. <i>International Mathematics Research Notices</i> , 1996, 1996, 705.	1.0	2
71	A Baker's Dozen of Problems. <i>Arnold Mathematical Journal</i> , 2015, 1, 59-67.	0.4	2
72	Polynomials as Polygons. <i>Mathematical Intelligencer</i> , 2017, 39, 41-43.	0.2	2

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73	Descartes Circle Theorem, Steiner Porism, and Spherical Designs. American Mathematical Monthly, 2020, 127, 238-248.	0.3	2
74	Two Variations on the Periscope Theorem. Regular and Chaotic Dynamics, 2020, 25, 11-17.	0.8	2
75	Four equivalent properties of integrable billiards. Israel Journal of Mathematics, 2021, 241, 693-719.	0.8	2
76	Projective Configuration Theorems: Old Wine into New Wineskins. , 2019, , 401-434.		2
77	Fun Problems in Geometry and Beyond. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 0, , .	0.5	2
78	MASS program at penn state. Mathematical Intelligencer, 2002, 24, 50-56.	0.2	1
79	Arnold's Problem. Mathematical Intelligencer, 2007, 29, 49-52.	0.2	1
80	Existence and nonexistence of skew branes. Journal of Fixed Point Theory and Applications, 2010, 7, 419-431.	1.1	1
81	Discrete spherical means of directional derivatives and Veronese maps. Journal of Geometry and Physics, 2012, 62, 124-136.	1.4	1
82	The Ice Cube Proof. Mathematical Intelligencer, 2014, 36, 1-3.	0.2	1
83	Skewers. Arnold Mathematical Journal, 2016, 2, 171-193.	0.4	1
84	Configuration Spaces of Plane Polygons and a sub-Riemannian Approach to the Equitangent Problem. Journal of Dynamical and Control Systems, 2016, 22, 227-250.	0.8	1
85	Kasner Meets Poncelet. Mathematical Intelligencer, 2019, 41, 56-59.	0.2	1
86	Remarks on Joachimsthal Integral and Poritsky Property. Arnold Mathematical Journal, 2021, 7, 483-491.	0.4	1
87	Iterating Evolutes of Spatial Polygons and of Spatial Curves. Moscow Mathematical Journal, 2016, 16, 667-689.	0.4	1
88	Tribute to Vladimir Arnold. Notices of the American Mathematical Society, 2012, 59, 378.	0.2	1
89	Contact complete integrability. Regular and Chaotic Dynamics, 2010, 15, 504.	0.8	1
90	Open Problems on Billiards and Geometric Optics. Arnold Mathematical Journal, 0, , 1.	0.4	1

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91	Converse Sturmâ€“Hurwitzâ€“Kellogg theorem and related results. Journal of Fixed Point Theory and Applications, 2008, 3, 121-130.	1.1	0
92	The Six Circles Theorem Revisited. American Mathematical Monthly, 2016, 123, 689.	0.3	0
93	On Lagrangian tangent sweeps and Lagrangian outer billiards. Geometriae Dedicata, 2016, 182, 203-213.	0.3	0
94	Vladimir Igorevich Arnold. 12 June 1937â€“3 June 2010. Biographical Memoirs of Fellows of the Royal Society, 2018, 64, 7-26.	0.1	0
95	A Four-Vertex Theorem for Frieze Patterns?. Mathematical Intelligencer, 2018, 40, 14-18.	0.2	0
96	Polar Bear or Penguin? Musings on Earth Cartography and Chebyshev Nets. Mathematical Intelligencer, 2021, 43, 20-24.	0.2	0
97	Remarks on Rigidity Properties of Conics. Regular and Chaotic Dynamics, 2022, 27, 18-23.	0.8	0
98	Loewnerâ€™s â€œForgottenâ€•Theorem. Mathematical Intelligencer, 2022, 44, 7-11.	0.2	0
99	Symplectically convex and symplectically star-shaped curves: a variational problem. Journal of Fixed Point Theory and Applications, 2022, 24, 1.	1.1	0