

# Marco Bertola

## List of Publications by Year in descending order

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citations

361413  
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all docs

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docs citations

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times ranked

439  
citing authors

#	ARTICLE	IF	CITATIONS
1	Universality for the Focusing Nonlinear Schrödinger Equation at the Gradient Catastrophe Point: Rational Breathers and Poles of the Tricritical Solution to Painlevé I. Communications on Pure and Applied Mathematics, 2013, 66, 678-752.	3.1	105
2	Universality of the Peregrine Soliton in the Focusing Dynamics of the Cubic Nonlinear Schrödinger Equation. Physical Review Letters, 2017, 119, 033901.	7.8	103
3	Duality, Biorthogonal Polynomials and Multi-Matrix Models. Communications in Mathematical Physics, 2002, 229, 73-120.	2.2	78
4	Differential Systems for Biorthogonal Polynomials Appearing in 2-Matrix Models and the Associated Riemann-Hilbert Problem. Communications in Mathematical Physics, 2003, 243, 193-240.	2.2	56
5	Semiclassical Orthogonal Polynomials, Matrix Models and Isomonodromic Tau Functions. Communications in Mathematical Physics, 2006, 263, 401-437.	2.2	47
6	Cauchy biorthogonal polynomials. Journal of Approximation Theory, 2010, 162, 832-867.	0.8	47
7	Cauchy-Laguerre Two-Matrix Model and the Meijer-G Random Point Field. Communications in Mathematical Physics, 2014, 326, 111-144.	2.2	47
8	The Cauchy Two-Matrix Model. Communications in Mathematical Physics, 2009, 287, 983-1014.	2.2	44
9	The Dependence on the Monodromy Data of the Isomonodromic Tau Function. Communications in Mathematical Physics, 2010, 294, 539-579.	2.2	41
10	The Transition between the Gap Probabilities from the Pearcey to the Airy Process—a Riemann-Hilbert Approach. International Mathematics Research Notices, 2012, 2012, 1519-1568.	1.0	39
11	Partition functions for matrix models and isomonodromic tau functions. Journal of Physics A, 2003, 36, 3067-3083.	1.6	36
12	Rogue waves in multiphase solutions of the focusing nonlinear Schrödinger equation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160340.	2.1	36
13	Correlation functions of the KdV hierarchy and applications to intersection numbers over $\mathbb{C}$ . $M \times \mathbb{C}^n$ Physica D: Nonlinear Phenomena, 2016, 327, 30-57.	2.8	36
14	Frobenius manifold structure on orbit space of Jacobi groups; Part I. Differential Geometry and Its Applications, 2000, 13, 19-41.	0.5	28
15	Boutroux curves with external field: equilibrium measures without a variational problem. Analysis and Mathematical Physics, 2011, 1, 167-211.	1.3	28
16	Commuting difference operators, spinor bundles and the asymptotics of orthogonal polynomials with respect to varying complex weights. Advances in Mathematics, 2009, 220, 154-218.	1.1	26
17	Free energy of the two-matrix model/dToda tau-function. Nuclear Physics B, 2003, 669, 435-461.	2.5	25
18	Universality Conjecture and Results for a Model of Several Coupled Positive-Definite Matrices. Communications in Mathematical Physics, 2015, 337, 1077-1141.	2.2	25

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19	Maximal amplitudes of finite-gap solutions for the focusing Nonlinear Schrödinger Equation. Communications in Mathematical Physics, 2017, 354, 525-547.	2.2	24
20	First Colonization of a Spectral Outpost in Random Matrix Theory. Constructive Approximation, 2009, 30, 225-263.	3.0	23
21	Strong Asymptotics of the Orthogonal Polynomials with Respect to a Measure Supported on the Plane. Communications on Pure and Applied Mathematics, 2015, 68, 112-172.	3.1	23
22	Zeros of Large Degree Vorobeyev-Yablonski Polynomials via a Hankel Determinant Identity. International Mathematics Research Notices, 2015, 2015, 9330-9399.	1.0	21
23	Bilinear semiclassical moment functionals and their integral representation. Journal of Approximation Theory, 2003, 121, 71-99.	0.8	18
24	Biorthogonal Laurent Polynomials, Toplitz Determinants, Minimal Toda Orbits and Isomonodromic Tau Functions. Constructive Approximation, 2007, 26, 383-430.	3.0	18
25	Riemann-Hilbert approach to multi-time processes: The Airy and the Pearcey cases. Physica D: Nonlinear Phenomena, 2012, 241, 2237-2245.	2.8	18
26	Biorthogonal polynomials for two-matrix models with semiclassical potentials. Journal of Approximation Theory, 2007, 144, 162-212.	0.8	17
27	On the location of poles for the Ablowitz-Segur family of solutions to the second Painlevé equation. Nonlinearity, 2012, 25, 1179-1185.	1.4	16
28	Symplectic geometry of the moduli space of projective structures in homological coordinates. Inventiones Mathematicae, 2017, 210, 759-814.	2.5	16
29	Mixed correlation functions of the two-matrix model. Journal of Physics A, 2003, 36, 7733-7750.	1.6	15
30	Title is missing!. International Mathematics Research Papers, 2005, 2005, 565.	0.3	15
31	Duality of Spectral Curves Arising in Two-Matrix Models. Theoretical and Mathematical Physics(Russian Federation), 2003, 134, 27-38.	0.9	14
32	Regularity of a vector potential problem and its spectral curve. Journal of Approximation Theory, 2009, 161, 353-370.	0.8	14
33	Noncommutative Painlevé Equations and Systems of Calogero Type. Communications in Mathematical Physics, 2018, 363, 503-530.	2.2	14
34	Fredholm Determinants and Pole-free Solutions to the Noncommutative Painlevé II Equation. Communications in Mathematical Physics, 2012, 309, 793-833.	2.2	13
35	Strong asymptotics for Cauchy biorthogonal polynomials with application to the Cauchy two-matrix model. Journal of Mathematical Physics, 2013, 54, .	1.1	13
36	The partition function of the extended $r$ -reduced Kadomtsev-Petviashvili hierarchy. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 195205.	2.1	12

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37	Hankel Determinant Approach to Generalized Vorobâ€™evâ€™Yablonski Polynomials and Their Roots. Constructive Approximation, 2016, 44, 417-453.	3.0	12
38	Spectra of Random Hermitian Matrices with a Small-Rank External Source: The Critical and Near-Critical Regimes. Journal of Statistical Physics, 2012, 146, 475-518.	1.2	11
39	Asymptotics of Orthogonal Polynomials with Complex Varying Quartic Weight: Global Structure, Critical Point Behavior and the First Painlevé Equation. Constructive Approximation, 2015, 41, 529-587.	3.0	11
40	Coherent state realizations of $su(n+1)$ on the torus. Journal of Mathematical Physics, 2002, 43, 3425-3444.	1.1	10
41	Second and third order observables of the two-matrix model. Journal of High Energy Physics, 2003, 2003, 062-062.	4.7	10
42	The PDEs of Biorthogonal Polynomials Arising in the Two-Matrix Model. Mathematical Physics Analysis and Geometry, 2006, 9, 23-52.	1.0	10
43	The partition function of the two-matrix model as an isomonodromic $\check{L}$ function. Journal of Mathematical Physics, 2009, 50, 013529.	1.1	10
44	Moment determinants as isomonodromic tau functions. Nonlinearity, 2009, 22, 29-50.	1.4	10
45	Cubic string boundary value problems and Cauchy biorthogonal polynomials. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 454006.	2.1	10
46	THE GAP PROBABILITIES OF THE TACNODE, PEARCEY AND AIRY POINT PROCESSES, THEIR MUTUAL RELATIONSHIP AND EVALUATION. Random Matrices: Theory and Application, 2013, 02, 1350003.	1.1	10
47	Singular Value Decomposition of a Finite Hilbert Transform Defined on Several Intervals and the Interior Problem of Tomography: The Riemannâ€™Hilbert Problem Approach. Communications on Pure and Applied Mathematics, 2016, 69, 407-477.	3.1	10
48	Darboux Transformations and Random Point Processes: Fig. 1.. International Mathematics Research Notices, 2015, 2015, 6211-6266.	1.0	9
49	The Kontsevichâ€™Penner Matrix Integral, Isomonodromic Tau Functions and Open Intersection Numbers. Annales Henri Poincare, 2019, 20, 393-443.	1.7	8
50	Massless Scalar Field in a Two-dimensional de Sitter Universe. Progress in Mathematics, 2007, , 27-38.	0.3	8
51	Brezinâ€™Grossâ€™Witten tau function and isomonodromic deformations. Communications in Number Theory and Physics, 2019, 13, 827-883.	1.0	8
52	Two-matrix model with semiclassical potentials and extended Whitham hierarchy. Journal of Physics A, 2006, 39, 8823-8855.	1.6	7
53	Rationally weighted Hurwitz numbers, Meijer G-functions and matrix integrals. Journal of Mathematical Physics, 2019, 60, 103504.	1.1	7
54	Laguerre polynomials and transitional asymptotics of the modified Kortewegâ€™de Vries equation for step-like initial data. Analysis and Mathematical Physics, 2019, 9, 1761-1818.	1.3	7

#	ARTICLE	IF	CITATIONS
55	Spectra of Random Hermitian Matrices with a Small-Rank External Source: The Supercritical and Subcritical Regimes. <i>Journal of Statistical Physics</i> , 2013, 153, 654-697.	1.2	6
56	A degeneration of two-phase solutions of the focusing nonlinear Schrödinger equation via Riemann-Hilbert problems. <i>Journal of Mathematical Physics</i> , 2015, 56, 061507.	1.1	6
57	Simple Lie Algebras and Topological ODEs. <i>International Mathematics Research Notices</i> , 2016, , rrw285.	1.0	6
58	The Kontsevich Matrix Integral: Convergence to the Painlevé Hierarchy and Stokes Phenomenon. <i>Communications in Mathematical Physics</i> , 2017, 352, 585-619.	2.2	6
59	Universality in the Profile of the Semiclassical Limit Solutions to the Focusing Nonlinear Schrodinger Equation at the First Breaking Curve. <i>International Mathematics Research Notices</i> , 0, , .	1.0	5
60	First Colonization of a Hard-Edge in Random Matrix Theory. <i>Constructive Approximation</i> , 2010, 31, 231-257.	3.0	5
61	Meromorphic differentials with imaginary periods on degenerating hyperelliptic curves. <i>Analysis and Mathematical Physics</i> , 2015, 5, 1-22.	1.3	5
62	Padé approximants on Riemann surfaces and KP tau functions. <i>Analysis and Mathematical Physics</i> , 2021, 11, 1.	1.3	5
63	Tau-Functions and Monodromy Symplectomorphisms. <i>Communications in Mathematical Physics</i> , 2021, 388, 245-290.	2.2	5
64	Nonlinear steepest descent approach to orthogonality on elliptic curves. <i>Journal of Approximation Theory</i> , 2022, 276, 105717.	0.8	5
65	Generating weighted Hurwitz numbers. <i>Journal of Mathematical Physics</i> , 2020, 61, 013506.	1.1	4
66	Inversion formulae for the $\cosh$ -weighted Hilbert transform. <i>Proceedings of the American Mathematical Society</i> , 2013, 141, 2703-2718.	0.8	3
67	On Sobolev instability of the interior problem of tomography. <i>Journal of Mathematical Analysis and Applications</i> , 2016, 438, 962-990.	1.0	3
68	Hodge and Prym Tau Functions, Strebel Differentials and Combinatorial Model of $\mathcal{M}_{g,n}$ . <i>Communications in Mathematical Physics</i> , 2020, 378, 1279-1341.	2.2	3
69	Universality of the matrix Airy and Bessel functions at spectral edges of unitary ensembles. <i>Random Matrices: Theory and Application</i> , 2017, 06, 1750010.	1.1	2
70	Discriminant Circle Bundles over Local Models of Strebel Graphs and Boutroux Curves. <i>Theoretical and Mathematical Physics (Russian Federation)</i> , 2018, 197, 1535-1571.	0.9	2
71	Spaces of Abelian Differentials and Hitchin's Spectral Covers. <i>International Mathematics Research Notices</i> , 2021, 2021, 11246-11269.	1.0	2
72	Diagonalization of the finite Hilbert transform on two adjacent intervals: the Riemann-Hilbert approach. <i>Analysis and Mathematical Physics</i> , 2020, 10, 27.	1.3	2

#	ARTICLE	IF	CITATIONS
73	Matrix models for stationary Gromov-Witten invariants of the Riemann sphere. <i>Nonlinearity</i> , 2021, 34, 1168-1196.	1.4	2
74	WKB expansion for a Yang-Yang generating function and the Bergman tau function. <i>Theoretical and Mathematical Physics (Russian Federation)</i> , 2021, 206, 258-295.	0.9	2
75	On the tau function of the hypergeometric equation. <i>Physica D: Nonlinear Phenomena</i> , 2022, , 133381.	2.8	2
76	Effective Inverse Spectral Problem for Rational Lax Matrices and Applications. <i>International Mathematics Research Notices</i> , 2007, 2007, .	1.0	1
77	Topological expansion for the Cauchy two-matrix model. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 335201.	2.1	1
78	Mesoscopic colonization of a spectral band. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 415204.	2.1	1
79	Stokes Manifolds and Cluster Algebras. <i>Communications in Mathematical Physics</i> , 0, , .	2.2	1
80	Abelianization of Matrix Orthogonal Polynomials. <i>International Mathematics Research Notices</i> , 2023, 2023, 8544-8595.	1.0	1
81	Random matrices and integrable systems: introduction and overview. <i>Journal of Physics A</i> , 2006, 39, .	1.6	0
82	Harish-Chandra Integrals as Nilpotent Integrals. <i>International Mathematics Research Notices</i> , 0, , .	1.0	0
83	Universal peregrine soliton structure in optical fibre soliton compression. , 2017, , .		0
84	Inversion formula and range conditions for a linear system related with the multi-interval finite Hilbert transform in $L^2$ . <i>Mathematische Nachrichten</i> , 2021, 294, 1523-1546.	0.8	0