

Cristinel Mortici Publications List

1 10 relevant publications

1. **C. Mortici**, *Product Approximations via asymptotic integration*, American Mathematical Monthly, 117 (2010), no. 5, 434-441.
2. **C. Mortici**, *On Ramanujan's large argument formula for the gamma function*, Ramanujan Journal, 26 (2011), no. 2, 185-192.
3. **C. Mortici**, *Error estimates of Ramanujan-type series*, Ramanujan Journal, (2012), 27 (2012), no. 2, 169-179.
4. **C. Mortici**, *Monotonicity properties of the volume of the unit ball in $\mathbb{R}^n$* , Optimization Letters, 4 (2010), no. 3, 457-464.
5. **C. Mortici**, *Accurate estimates of the gamma function involving the psi function*, Numerical Functional Analysis and Optimization, 32 (2011), no. 4, 469-476.
6. **C. Mortici**, *Sharp bounds of the Landau constants*, Mathematics of Computation, 80 (2011), 1011-1018.
7. **C. Mortici**, *Ramanujan formula for the generalized Stirling approximation*, Applied Mathematics and Computation, 217 (2010), no. 6, 2579-2585.
8. **C. Mortici**, *Completely monotone functions and the Wallis ratio*, Applied Mathematics Letters, 25 (2011), no. 4, 717-722.
9. **C. Mortici**, *A class of integral approximations for the factorial function*, Computers and Mathematics with Applications, 59 (2010), no. 6, 2053-2058.
10. **C. Mortici**, *Accurate approximations of the Mathieu series*, Mathematics and Computer Modelling, 53 (2011), no. 5-6, 909-914.

2 PhD Thesis

1. Title: Topological and Variational Methods for Partial Differential Equations
Place: Simion Stoilov Institute of Mathematics Bucharest
Supervisor: Prof. Silviu Sburlan
Comittee: Prof. George Dincă, Prof. Toader Moroza, Prof. Constantin Vărsan

3 Books and Monographs

1. R. Miculescu, C. Mortici, *Funcții Lipschitz*, Ed. Academiei, București, 2004 (Spiru Haret Prize of the Romanian Academy).
2. I. Colojoară, R. Miculescu, C. Mortici, *Probleme de Analiza Matematica*, Art Publ. House, Bucharest, 2002.
3. C. Mortici, *Analiză Matematică. Culegere de Probleme*, Plus Publ. House, Bucharest, 2001.
4. C. Mortici, *Lecții de Analiză Matematică*, Ex Ponto Publ. House, Constanța, 2000.
5. S. Sburlan, L. Barbu, C. Mortici, *Ecuatii Diferențiale, Integrale și Sisteme Dinamice*, Ex Ponto Publ. House, Constanța, 2000.
6. C. Mortici, *Bazele Matematicii*, Minus Publ. House, Târgoviște, 2008.
7. C. Mortici, *Functional Methods in Modern Analysis*, Mathematical Monographs Series, West University Timișoara, 1999.

4 Cristinel Mortici ISI papers

1. C. Mortici, *Ramanujan's estimate for the gamma function via monotonicity arguments*, Ramanujan J., 25 (2011), no. 2, 149-154.
2. C. Mortici, *Estimating the Somos' quadratic recurrence constant*, J. Number Theory, 130 (2010), no. 12, 2650-2657.
3. C. Mortici, *Sharp inequalities and complete monotonicity for the Wallis ratio*, Bull. Belgian Math. Soc. Simon Stevin, 17 (2010), 929-936.
4. C. Mortici, *Sharp inequalities related to Gosper's formula*, C. R. Math. Sci. Paris, 348 (2010), no. 3-4, 137-140.
5. C. Mortici, *An ultimate extremely accurate formula for approximation of the factorial function*, Arch. Math. (Basel), 93 (2009), no. 1, 37-45.
6. C. Mortici, *Very accurate estimates of the polygamma functions*, Asymptotic Anal., 68 (2010), no. 3, 125-134.
7. C. Mortici, S. Sburlan, *A coincidence degree for bifurcation problems*, Nonlin. Anal. Theor., 53 (2003), no. 5, 715-721.
8. C. Mortici, *On Gospers formula for the gamma function*, J. Math. Inequal., 5 (2011), no. 4, 611-614.
9. C. Mortici, *Improved asymptotic formulas for the gamma function*, Comput. Math. Appl., 61 (2011), no. 11, 3364-3369.

10. C. Mortici, *Refinements of Gurland's formula for π* , Comp. Math. Appl., 62 (2011), no. 6, 2616-2620.
11. C. Mortici, *On some Euler-Mascheroni type sequences*, Comp. Math. Appl., 60 (2010), no. 7, 2009-2014.
12. C. Mortici, *The asymptotic series of the generalized Stirling formula*, Comp. Math. Appl., 60 (2010), no. 3, 786-791.
13. C. Mortici, *On new sequences converging towards the Euler-Mascheroni constant*, Comp. Math. Appl., 59 (2010), no. 8, 2610-2614.
14. C. Mortici, *A class of integral approximations for the factorial function*, Comp. Math. Appl., 59 (2010), no. 6, 2053-2058.
15. C. Mortici, *The quotient of gamma functions by the psi function*, Comput. Appl. Math., 30 (2011), no.3, 627-638.
16. C. Mortici, *Fast convergences toward Euler-Mascheroni constant*, Comput. Appl. Math., 29 (2010), no. 3, 479-491.
17. C. Mortici, C.-P. Chen, *New sequence converging towards the Euler-Mascheroni constant*, Comp. Math. Appl., (2011),
<http://dx.doi.org/10.1016/j.camwa.2011.03.099>.
18. C. Mortici, *The quotient of gamma functions by the psi function*, Comp. Appl. Math., 30 (2011), no. 3, 627-638.
19. C. Mortici, *Asymptotic expansions of the generalized Stirling approximation*, Math. Comp. Modelling, 52 (2010), no. 9-10, 1867-1868.
20. C. Mortici, *Estimating gamma function in terms of digamma function*, Math. Comp. Modelling, 52 (2010), no. 5-6, 942-946.
21. C. Mortici, *New approximation formulas for evaluating the ratio of gamma functions*, Math. Comp. Modelling, 52 (2010), no. 1-2, 425-433.
22. C. Mortici, *The proof of Muqattash-Yahdi conjecture*, Math. Comp. Modelling, 51 (2010), no. 9-10, 1154-1159.
23. C. Mortici, *New approximations of the gamma function in terms of the digamma function*, Appl. Math. Lett., 23 (2010), no. 1, 97-100.
24. C. Mortici, *A substantial improvement of the Stirling formula*, Appl. Math. Lett., 24 (2011), no. 8, 1351-1354.
25. C. Mortici, *On the monotonicity and convexity of the remainder of the Stirling formula*, Appl. Math. Lett., 24 (2011), no. 6, 869-871.
26. C. Mortici, *Estimating the digamma and trigamma functions by completely monotonicity arguments*, Appl. Math. Comp., 217 (2010), no. 8, 4081-4085.

27. C. Mortici, *New improvements of the Stirling formula*, Appl. Math. Comp., 217 (2010), no. 2, 699-704.
28. C. Mortici, *Best estimates of the generalized Stirling formula*, Appl. Math. Comp., 215 (2010), no. 11, 4044-4048.
29. C. Mortici, *Improved convergence towards generalized Euler-Mascheroni constant*, Appl. Math. Comp., 215 (2010), no. 9, 3443-3448.
30. C. Mortici, *Some completely monotonic functions relating to the gamma function*, Int. Transf. Spec. Fct., (2011), DOI: 10.1080/10652469.2011.597751.
31. C. Mortici, *The best rational remainders in the Stirling formula*, Int. Transf. Spec. Fct. 23 (2012), no. 1, 13-19.
32. C. Mortici, *Refinements of some bounds related to the constant e* , Miskolc Math. Notes, 12 (2011), no. 1, 105-111.
33. C. Mortici, *New sharp inequalities for approximating the factorial function and the digamma function*, Miskolc Math. Notes, 11 (2010), no. 1, 79-86.
34. C. Mortici, *Estimating the Apery's constant*, J. Comput. Anal. Appl., 14 (2012), no.1, 278-282.
35. C. Mortici, *Approximations Related to Gamma Function*, J. Comput. Anal. Appl., 14 (2012), no.3, 569-573.
36. C. Mortici, *Existence and uniqueness results for nonlinear Cauchy problems of the second order*, J. Comput. Anal. Appl., 11 (2009), no. 2, 229-233.
37. C. Mortici, *A new Stirling series as continued fraction*, Numer. Algor., 56 (2011), no. 1, 17-26.
38. C. Mortici, *The natural approach of Wilker-Cusa-Huygens inequalities*, Math. Inequal. Appl., 14 (2011), no. 3, 535-541.
39. C. Mortici, *A new method for establishing and proving new bounds for the Wallis ratio*, Math. Inequal. Appl., 13 (2010), no. 4, 803-815.
40. C. Mortici, *New sharp bounds for gamma and digamma functions*, An. Șt. Univ. A. I. Cuza Iasi, Ser. Mat., 57 (2011), no. 1, 57-60.
41. C. Mortici, *A new refinement of the Radon inequality*, Math. Comm., 16 (2011), no. 2, 319-324.
42. C. Mortici, *On the Stirling expansion into negative powers of a triangular numbers*, Math. Comm., 15 (2010), no. 2, 359-364.

43. C. Mortici, *Optimizing the rate of convergence in some new classes of sequences convergent to Euler's constant*, Anal. Appl. (Singap.), 8 (2010), no. 1, 99-107.
44. C. Mortici, *A quicker convergence toward the gamma constant with the logarithm term involving the constant e* , Carpathian J. Math., 26 (2010), no. 1, 86-91.
45. C. Mortici, *Complete monotonic functions associated with gamma function and applications*, Carpathian J. Math., 25 (2009), no. 2, 186-191.
46. C. Mortici, E. Lungu, *A new type of approximating sequence for the solution of the Cauchy problem consisting of piecewise linear functions*, Carpathian J. Math., 24 (2008), no. 2, 83-90.
47. C. Mortici, D. Mihai, *Nonsmooth perturbations in stochastic differential equations for the Brownian motion process*, Carpathian J. Math., 24 (2008), no. 1, 72-75.
48. C. Mortici, *An extension of the Szasz-Mirakjan operators*, An. St. Univ. Ovidius Constanta, Ser. Mat., 17 (2009), no. 1, 137-144.
49. C. Mortici, *Arithmetic mean of values and value at mean of arguments for convex functions*, ANZIAM J., 50 (2008), no. 1, 137-141.
50. C. Mortici, *The distance between fixed points of some pairs of maps in Banach spaces and applications to differential systems*, Czechoslovak Math. J., 56 (2006), no. 2, 689-695.
51. C. Mortici, *Approximation methods for solving the Cauchy problem*, Czechoslovak Math. J., 55 (2005), no. 3, 709-718.

5 Cristinel Mortici papers in journals indexed by Zentralblatt für Mathematik and (or) Mathematical Reviews

1. C. Mortici, *A Power Series Approach to Some Inequalities*, Amer. Math. Monthly, 119 (2012), no. 2, 147-151.
2. C. Mortici, *Remarks on complementary sequences*, Fibonacci Quart., 48 (2010), no. 4, 343-347.
3. C. Mortici, *On the Stirling series of gamma function*, Thai J. Math., 9 (2011), no. 1, 147-153.
4. C. Mortici, *A new representation formula for the factorial function*, Thai J. Math., 2 (2010), no. 2, 35-40.

5. C. Mortici, *New inequalities for some special functions via the CBS inequality*, Tamkang J. Math., 42 (2010), no. 1, 53-57.
6. C. Mortici, *On the gamma function approximation by Burnside*, Appl. Math. E-Notes, 11 (2011), 274-277.
7. C. Mortici, *On some accurate estimates of π* , Bull. Math. Anal. Appl., 2 (2010), no. 4, 137-139.
8. C. Mortici, *On the solvability of the Cauchy problem*, Nieuw Arch. Wisk., 1 (1999), 21-23.
9. C. Mortici, *On the unique solvability of semilinear problems with strongly monotone nonlinearity*, Libertas Math. 18 (1998), 53-57.
10. C. Mortici, *On an inequality of Keckic and Vasic*, Autom. Comp. Appl. Math., 18 (2009), no. 1, 163-169.
11. C. Mortici, *A construction of an orthogonal basis in some Sobolev space*, Intern. J. Pure Appl. Math., 50 (2009), no. 2, 227-232.
12. C. Mortici, A. Vernescu, *The asymptotic analysis of the sequences*, Intern. J. Pure Appl. Math., 50 (2009), no. 2, 275-282.
13. C. Mortici, A. Vernescu, *Some new facts in discrete asymptotic analysis*, Math. Balkanica, 21 (2007), no. 3-4, 301-308.
14. C. Mortici, *Semilinear equations with strongly monotone nonlinearities*, Matematiche (Catania), LII (1997), 387-39.
15. C. Mortici, *New sharp double inequalities for bounding the gamma and digamma function*, An. Univ. Vest Timisoara, Ser. Mat.-Inform. vol. XLIX, 2 (2011), 67-72.
16. C. Mortici, *Approximating intervals for some bifurcation points via Leray-Schauder theory*, An. Univ. Vest Timisoara, Ser. Mat.-Inform. 45 (2007), no. 2, 75-82.
17. C. Mortici, *On the solvability of boundary value problems in Sobolev spaces*, An. Univ. Vest Timisoara Ser. Mat.-Inform., 40 (2002), no. 1, 63-69.
18. C. Mortici, *Variational methods for perturbed Laplace problem*, An. Univ. Vest Timisoara Ser. Mat.-Inform., 37 (1999), no. 2, 105-111.
19. C. Mortici, *Some connections of monotonicity with Weierstrass extreme value theorem*, Intern. J. Math. Education Sci. Techn., 42 (2011), no. 3, 396-399.
20. C. Mortici, *A converse of a result about the floor function by Hermite*, Intern. J. Math. Education Sci. Techn., 43 (2012), no. 1, 114-118.

21. C. Mortici, *On arithmetic functions means*, Intern. J. Math. Education Sci. Techn., 42 (2011), no. 2, 229-235.
22. C. Mortici, *A converse of the mean value theorem made easy*, Intern. J. Math. Education Sci. Techn., 42 (2011), no. 1, 89-91.
23. C. Mortici, *New forms of Stolz-Cesaro lemma*, Intern. J. Math. Education Sci. Techn., 42 (2011), no. 5, 692-696.
24. C. Mortici, *A method for high precision calculations of some special functions*, Ann. Oradea Univ.- Math. Fasc., 18 (2011), 49-55.
25. C. Mortici, C.-P. Chen, *Estimates for $e^x - (1 + x/t)^t$ and applications*, J. Sci. Arts, 11 (2011), no. 1, 13-14.
26. C. Mortici, C.-P. Chen, *On a convergence by DeTemple*, J. Sci. Arts, 10 (2010), no. 2, 271-272.
27. C. Mortici, *New bounds for a convergence by DeTemple*, J. Sci. Arts, 10 (2010), no. 2, 239-242.
28. C. Mortici, *On a conjecture by Bencze*, J. Sci. Arts, 11 (2011), no. 1, 41-44.
29. C. Mortici, *A direct proof of the connection of two convergence tests*, Facta Univ., Ser. Mat. Inf., 25 (2010), 7-10.
30. C. Mortici, *Sharp bounds for gamma and digamma function arising from Burnside's formula*, Rev. Anal. Num. Theor. Approx., 39 (2010), no. 1, 69-72.
31. C. Mortici, *Accurate bounds for a convergence to the gamma constant*, Sci. Stud. Res. Ser. Math. Inf. Bacau, 20 (2010), no. 2, 49-54.
32. C. Mortici, *Improved estimators for big factorials*, Sci. Stud. Res. Ser. Math. Inf. Bacau, 20 (2010), no. 1, 163-170.
33. C. Mortici, *The speed of convergence of the Riemann sums with applications to Gamma function*, Sci. Stud. Res. Ser. Math. Inf. Bacau, 19 (2009), no.1, 131-138.
34. C. Mortici, *A numerical construction of an orthogonal basis in the Sobolev space $H_0^1(D)$* , Sci. Stud. Res. Ser. Math. Inf. Bacau, 18 (2008), 133-140.
35. C. Mortici, *Some improvements of the Stirling formula*, Bul. Univ. Transilvania Brasov, Ser. Mat-Inf., 52 (2010), no. 3, 1-8.
36. C. Mortici, *Some ideas to improve certain approximation formulae of the factorial*, Bul. Univ. Transilvania Brasov, Ser. Mat-Inf., 52 (2010), no. 3, 47-52.

37. C. Mortici, *Turan-type inequalities for the gamma and polygamma functions*, Acta Univ. Apulensis Math. Inf., 23 (2010), 117-121.
38. C. Mortici, *A study of the stationary reactive flow of a fluid confined in n -dimensional domains with holes using the fixed point theory*, Acta Univ. Apulensis Math. Inf., 16 (2008), 165-169.
39. C. Mortici, *A sharp inequality involving the Psi function*, Acta Univ. Apulensis Math. Inf., 21 (2010), 41-45.
40. C. Mortici, *A refinement of Chen-Qi inequality on the harmonic sum*, Bull. PG Univ. Ploiesti , LXII (2010), no. 1, 109-112.
41. C. Mortici, *New gamma function approximations*, Trans. Math. Physics, 55 (69) (2010), no. 1, 56-60.
42. C. Mortici, *An application of the topological degree theory to nonlinear mechanical systems on free movements*, Trans. Math. Physics, 53 (67) (2008), Fasc. 1, 23-28.
43. C. Mortici, *A simple proof of Gautschi-Kershaw inequality*, Creative Math. Inf., 19 (2010), no. 2, 169-171.
44. C. Mortici, A. Vernescu, *A new characterization of the golden number*, Gen. Math., 18 (2010), no. 1, 89-98.
45. C. Mortici, A. Vernescu, *New results in discrete asymptotic analysis*, Gen. Math., 16 (2008), no. 4, 179-188.
46. C. Mortici, *Some results on integrals computation and applications to log-sine and loggamma integrals*, Creative Math. Inf., 19 (2010), no. 2, 172-177.
47. C. Mortici, *On the generalized Stirling formula*, Creative Math. Inf., 19 (2010), no. 1, 53-56.
48. C. Mortici, D. Branzei, *Some separation results by inversion*, Creative Math. Inf., 17 (2008), 142-146.
49. C. Mortici, *Anticommutativity in the ring of square matrices with complex entries*, Creative Math. Inf., 17 (2008), 25-32.
50. C. Mortici, *Lax-Milgram theorem with application to the perturbed Laplace problem with Dirichlet conditions*, Creative Math. Inf., 9 (1999-2000), 91-96.
51. C. Mortici, *A method to compute the speed of convergence based on the inverse derivation theorem*, Creative Math. Inf., 8 (1998-1999), 103-108.
52. C. Mortici, *A lower bound for a quotient of roots of factorials*, Bul. Acad. Șt. Rep. Moldova Mat., 3 (61) (2009), 64-69.

53. C. Mortici, *Folding a square to identify two adjacent sides*, Forum Geom., 9 (2009), 99-107.
54. C. Mortici, *A double inequality involving gamma via the multiplication formula of Gauss*, J. Adv. Math. Studies, 2 (2009), no. 2, 57-62.
55. C. Mortici, *A method which generates sharp estimations for big factorials*, J. Adv. Math. Studies, 1 (2008), no. 1-2, 71-74.
56. C. Mortici, *On the eigenvalues of the Laplacian*, J. Adv. Math. Studies, 2 (2009), no. 1, 35-40.
57. C. Mortici, *A new formula for computing the casting solidification constant*, Recent, Brasov, 9 (2008), no. 1, 55-58.
58. C. Mortici, *A topological technique for reducing the dimension of a class of nonlinear equations*, An. Univ. Bucur. Mat., LVI (2007), 53-58.
59. C. Mortici, *Nonexistence of nontrivial periodic solutions for semilinear equations*, Studia Univ. Babes-Bolyai Math., 2 (2006), 63-69.
60. C. Mortici, I. Oancea, *A nonsmooth extension for the Bernstein-Stancu operators and an application*, Studia Univ. Babes-Bolyai Math., 2 (2006), 69-83.
61. C. Mortici, *Orthogonal basis in Sobolev space $H^{0,1}(a,b)$* , Studia Univ. Babes-Bolyai Math., 2 (2004), 89-95.
62. C. Mortici, *Semilinear equations in Hilbert spaces with quasi-positive nonlinearity*, Studia Univ. Babes-Bolyai Math., 4 (2001), 89-94.
63. C. Mortici, *A new simple proof for an inequality of Cebyshev type*, An. St. Univ. Ovidius Constanta, Ser. Mat., 13 (2005), no. 2, 39-44.
64. C. Mortici, *A basic decomposition result related to the notion of rank of a matrix and applications*, An. St. Univ. Ovidius Constanta Ser. Mat. 11 (1) (2003), 125-132.
65. C. Mortici, *A topological method for elliptic problems with Green type nonlinearity*, Supl. An. St. Univ. Ovidius Constanta Ser. Mat. (2003), 211-214.
66. C. Mortici, *Topological methods for semilinear problems with maximal monotone nonlinearity*, An. St. Univ. Ovidius Constanta Ser. Mat. 7 (1999), 55-60.
67. C. Mortici, *Bifurcations for monotone type operators*, An. St. Univ. Ovidius Constanta Ser. Mat. 6 (1998), no. 2, 125-132.
68. C. Mortici, *Coincidence degree for monotone type operators and applications to bifurcation problems*, An. St. Univ. Ovidius Constanta, Ser. Mat., 6 (1998), 95-102.

69. C. Mortici, *Topological degree methods for nonlinear equations defined by Green functions*, Romanian J. Physics, 48 (2003), no. 4, 501-505.
70. C. Mortici, *An application of degree theory to the problem of forced oscillations of a pendulum*, Mathematica (Cluj), 45(68) (2003), no. 2, 143-146.
71. C. Mortici, *Operators of monotone type and periodic solutions for some semilinear problems*, Math. Reports (Bucuresti), 4 (54) (2002), no. 1, 109-121.
72. C. Mortici, *A contractive method for the problem of the forced oscillations of a pendulum*, Math. Reports (Bucuresti), 4 (54) (2002), no. 2, 219-223.
73. C. Mortici, *An application of the degree theory to bifurcation problems with bounded perturbation*, Mathematical Reports (Bucuresti), 4 (54) (2002), no. 3, 257-264.
74. C. Mortici, *Convergence order for implicit sequences*, Delta (Poland), 2 (2001), 4-6.
75. C. Mortici, *On a properness method for free vibrations problem*, Carpathian J. Math., 17 (2001), no. 1-2, 71-76.
76. C. Mortici, *A topological degree for A^* -proper mappings acting from a Banach space into its dual*, Carpathian J. Math. 15 (1999), no. 1-2, 139-144.
77. C. Mortici, *A contractive method for the proof of Picard theorem*, Carpathian J. Math., 14 (1998), no. 2, 179-184.
78. C. Mortici, *The invariance to homotopy of the topological degree in spaces with semi-inner product*, Carpathian J. Math., 13 (1997), no. 1-2, 94-98.
79. C. Mortici, *The continuation method for linear equations in Hilbert spaces*, An. Univ. Craiova Ser. Mat. Inf., 28 (2001), 38-42.
80. C. Mortici, *On the behaviour of the bifurcations set for nonlinear equations involving operators of monotone type*, An. Univ. Craiova Ser. Mat. Inf., 27 (2000), 27-37.
81. C. Mortici, *Linear and nonlinear perturbations for Dirichlet problem*, An. Univ. Craiova Ser. Mat. Inf., 26 (1999), 51-58.

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