OPTIMAL EVALUATIONS FOR THE
SÁNDOR–YANG MEAN BY POWER MEAN

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Abstract. In this paper, we present the best possible upper and lower bounds for the Sándor-Yang mean in terms of the power mean.

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REFERENCES

[1] H. ALZER AND S.-L. QIU, *Monotonicity theorems and inequalities for the complete elliptic integrals*, J. Comput. Appl. Math. **172**, (2) (2004), 289–312.

[2] R. W. BARNARD, K. PEARCE AND K. D. RICHARDS, *An inequality involving the generalized hypergeometric function and the arc length of an ellipse*, SIAM J. Math. Anal. **31**, (3) (2000), 693–699.

[3] P. S. BULLEN, D. S. MITRINOVIĆ AND P. M. VASIĆ, *Means and Their Inequalities*, D. Reidel Publishing Co., Dordrecht (1988).

[4] Y.-M. CHU AND B.-Y. LONG, *Bounds of the Neuman-Sándor mean using power and identric means*, Abstr. Appl. Anal. **2013**, Article ID 832591(2013), 6 pages.

[5] Y.-M. CHU, ZH.-H. YANG AND L.-M. WU, *Sharp power mean bounds for Sándor mean*, Abstr. Appl. Anal. **2015**, Article ID 172867(2015), 5 pages.

[6] I. COSTIN AND GH. TOADER, *Optimal evaluations of some Seiffert-type means by power means*, Appl. Math. Comput. **219**, (9) (2013), 4745–4754.

[7] P. A. HÄSTÖ, *Optimal inequalities between Seiffert's mean and power means*, Math. Inequal. Appl. **7**, (1) (2004), 47–53.

[8] T. P. LIN, *The power mean and the logarithmic mean*, Amer. Math. Monthly **81**, (1974), 879–883.

[9] M.-K. WANG, Y.-F. QIU AND Y.-M. CHU, *Sharp bounds for Seiffert means in terms of Lehmer mean*, J. Math. Inequal. **4**, (4) (2013), 581–586.

[10] A. WITKOWSKI, *Interpolations of Schwab-Borchardt mean*, Math. Inequal. Appl. **16**, 1 (2013), 193–206.

[11] ZH.-H. YANG, *Estimates for Neuman-Sándor mean by power means and their relative errors*, J. Math. Inequal. **7**, (4) (2013), 711–726.

[12] ZH.-H. YANG, *Three families of two-parameter means constructed by trigonometric functions*, J. Inequal. Appl. **2013**, Article 541 (2013), 27 pages.

[13] ZH.-H. YANG, Y.-M. CHU AND X.-J. TAO, *A double inequality for the trigamma function and its applications*, Abstr. Appl. Anal. **2014**, Article ID 702718 (2014), 9 pages.

[14] ZH.-H. YANG, Y.-L. JIANG, Y.-Q. SONG AND Y.-M. CHU, *Sharp inequalities for trigonometric functions*, Abstr. Appl. Anal. **2014**, Article ID 601839 (2014), 18 pages.

[15] ZH.-H. YANG, Y.-Q. SONG AND Y.-M. CHU, *Monotonicity of the Ratio of the power and second Seiffert means with applications*, Abstr. Appl. Anal. **2014**, Article ID 840130 (2014), 4 pages.

[16] ZH.-H. YANG, L.-M. WU AND Y.-M. CHU, *Optimal power mean bounds for Yang mean*, J. Inequal. Appl. **2014**, Article 401 (2014), 10 pages.

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