

Chan, Y. L.; Shen, L. H.; Wu, C. T.; Young, D. L.

Interpolation techniques for scattered data by local radial basis function differential quadrature method. (English) [Zbl 1359.65299](#)

Int. J. Comput. Methods 10, No. 2, Article ID 1341011, 18 p. (2013).

MSC:

65N99 Numerical methods for partial differential equations, boundary value problems Cited in 3 Documents

65D05 Numerical interpolation

41A05 Interpolation in approximation theory

Keywords:

interpolation; meshless numerical method; local differential quadrature; radial basis functions (RBFs); 3D; Poisson equation; advection diffusion equation

Full Text: [DOI](#)

References:

- [1] R. E. Bellman and J. Casti, J. Math. Anal. Appl. 33, 135 (1971). [genRefLink\(128, 'rf1', 'A1979HR59800002'\)](#);
- [2] R. E. Bellman, B. G. Kashef and J. Casti, J. Comput. Phys. 10, 40 (1972), DOI: 10.1016/0021-9991(72)90089-7. [genRefLink\(16, 'rf2', '10.1016%252F0021-9991%252872%252990089-7'\)](#); [genRefLink\(128, 'rf2', 'A1972N179900003'\)](#); [doi:10.1016/0021-9991\(72\)90089-7](#)
- [3] R. Franke, Math. Comput. 38, 181 (1982). [genRefLink\(128, 'rf3', 'A1982NE30900014'\)](#);
- [4] R. L. Hardy, J. Geophys. Res. 76(8), 905 (1971).
- [5] E. J. Kansa, Comput. Math. Appl. 19(9), 127 (1990), DOI: 10.1016/0898-1221(90)90270-T. [genRefLink\(16, 'rf5', '10.1016%252F0898-1221%252890%252990270-T'\)](#); [genRefLink\(128, 'rf5', 'A1990CU94900011'\)](#); [doi:10.1016/0898-1221\(90\)90270-T](#)
- [6] E. J. Kansa and Y. C. Hon, Comput. Math. Appl. 39(8), 127 (2000), DOI: 10.1016/S0898-1221(00)00071-7. [doi:10.1016/S0898-1221\(00\)00071-7](#)
- [7] H. Ma and Q. H. Qin, Commun. Numer. Meth. Eng. 24(7), 573 (2008), DOI: 10.1002/cnm.978. [genRefLink\(16, 'rf7', '10.1002%252Fcm.978'\)](#); [genRefLink\(128, 'rf7', '000258086600003'\)](#); [doi:10.1002/cnm.978](#)
- [8] Shen, L. H. [2008]. "Local differential quadrature method for irregular domain problems and its application in fluid mechanics and heat transfer," PhD dissertation, National Taiwan Univ., Taipei, Taiwan .
- [9] L. H. Shen, Numer. Heat Tranf. B-Fundam. 55, 116 (2009), DOI: 10.1080/10407790802605430. [genRefLink\(16, 'rf9', '10.1080%252F10407790802605430'\)](#); [genRefLink\(128, 'rf9', '000262297500002'\)](#); [doi:10.1080/10407790802605430](#)
- [10] L. H. Shen, K. H. Tseng and D. L. Young, J. Mech. 29(1), 67 (2013), DOI: 10.1017/jmech.2012.121. [genRefLink\(16, 'rf10', '10.1017%252Fjmech.2012.121'\)](#); [genRefLink\(128, 'rf10', '000314199100008'\)](#); [doi:10.1017/jmech.2012.121](#)
- [11] Q. Shen, Eng. Anal. Bound. Elem. 34(3), 213 (2010), DOI: 10.1016/j.enganabound.2009.10.004. [genRefLink\(16, 'rf11', '10.1016%252Fj.enganabound.2009.10.004'\)](#); [genRefLink\(128, 'rf11', '000274449200004'\)](#); [doi:10.1016/j.enganabound.2009.10.004](#)
- [12] C. Shu, H. Ding and K. S. Yeo, Comput. Meth. Appl. Mech. Eng. 192(8), 941 (2003), DOI: 10.1016/S0045-7825(02)00618-7. [genRefLink\(16, 'rf12', '10.1016%252FS0045-7825%252802%252900618-7'\)](#); [genRefLink\(128, 'rf12', '000181007700010'\)](#); [doi:10.1016/S0045-7825\(02\)00618-7](#)
- [13] C. Shu, Comput. Meth. Appl. Mech. Eng. 194, 2001 (2005), DOI: 10.1016/j.cma.2004.07.008. [genRefLink\(16, 'rf13', '10.1016%252Fj.cma.2004.07.008'\)](#); [genRefLink\(128, 'rf13', '000228114700004'\)](#); [doi:10.1016/j.cma.2004.07.008](#)
- [14] J. A. Sun and Z. Y. Zhu, Comput. Meth. Appl. Mech. Eng. 188(3), 495 (2000), DOI: 10.1016/S0045-7825(99)00191-7. [genRefLink\(16, 'rf14', '10.1016%252FS0045-7825%252899%252900191-7'\)](#); [genRefLink\(128, 'rf14', '000088661700030'\)](#); [doi:10.1016/S0045-7825\(99\)00191-7](#)
- [15] C. H. Tsai , L. H. Shen and D. L. Young , The local differential quadrature method for two dimensional flows in stream function formulation , The 31st National Conf. Mech. (2007) .
- [16] C. H. Tsai, D. L. Young and C. Hsiang, Eng. Anal. Bound. Elem. 35(11), 1190 (2011), DOI: 10.1016/j.enganabound.2011.05.008. [genRefLink\(16, 'rf16', '10.1016%252Fj.enganabound.2011.05.008'\)](#); [genRefLink\(128, 'rf16', '000293613300004'\)](#); [doi:10.1016/j.enganabound.2011.05.008](#)
- [17] Tseng, K. H. [2010]. "Evaluation of multi-order derivatives and data interpolation by meshless local differential quadrature, Master Thesis, National Taiwan Univ., Taipei, Taiwan .
- [18] Y. L. Wu and C. Shu, Comput. Mech. 29, 477 (2002), DOI: 10.1007/s00466-002-0357-4. [genRefLink\(16, 'rf18', '10.1007%252FS00466-002-0357-4'\)](#)

- 002-0357-4'); genRefLink(128, 'rf18', '000180017800004'); · doi:10.1007/s00466-002-0357-4
- [19] D. L. Young, C. P. Sun and L. H. Shen, *Comput. Model. Eng. Sci.* 46(2), 129 (2009). genRefLink(128, 'rf19', '000270418400002');
- [20] Z. Zong and K. Y. Lam, *Comput. Mech.* 29(5), 382 (2002), DOI: 10.1007/s00466-002-0349-4. genRefLink(16, 'rf20', '10.1007%252Fs00466-002-0349-4'); genRefLink(128, 'rf20', '000179330100010'); · doi:10.1007/s00466-002-0349-4

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.