

Publications of 2004:

Monographs and printed lecture notes :

1. 王烈衡, 许学军, 有限元方法的数学基础, 科学出版社, 2004.

Papers published in research journals :

1. Hengbin An and Zhongzhi Bai(白中治), Broyden method for nonlinear equation in several variables, *Mathematica Numerica Sinica*, 26:4 (2004), 385-400. (In Chinese)
2. O. Axelsson, Zhongzhi Bai (白中治) and Shouxia Qiu, A class of nested iteration schemes for linear systems with a coefficient matrix with a dominant positive definite symmetric part, *Numerical Algorithms*, 35:2-4(2004), 351-372. (SCI/EI)
3. Zhongzhi Bai(白中治) and Jianyu Pan, On the convergence of waveform relaxation methods for linear initial value problems, *Journal of Computational Mathematics*, 22:5(2004), 681-698. (SCI/EI)
4. Zhongzhi Bai(白中治), G.H. Golub and Jianyu Pan, Preconditioned Hermitian and skew-Hermitian splitting methods for non-Hermitian positive semidefinite linear systems, *Numerische Mathematik*, 98:1(2004), 1-32. (SCI/EI)
5. Zhongzhi Bai(白中治) and Li Wang, Skew-Hermitian triangular splitting iteration methods for non-Hermitian positive definite linear systems of strong skew-Hermitian parts, *BIT Numerical Mathematics*, 44:2(2004), 363-386. (SCI/EI)
6. Zhongzhi Bai(白中治), Guiqing Li and Linzhang Lu, Combinative preconditioners of modified incomplete Cholesky factorization and Sherman-Morrison-Woodbury update for self-adjoint elliptic Dirichlet-periodic boundary value problems, *Journal of Computational Mathematics*, 22:6(2004), 833-856. (SCI/EI)
7. Zhongzhi Bai(白中治), Construction and analysis of structured preconditioners for block two-by-two matrices, *Journal of Shanghai University (English Edition)*, 8:4(2004), 397-405.
8. G. Bao and Aihui Zhou(周爱辉), Analysis of finite dimensional approximations to a class of partial differential equations, *Mathematical Methods in the Applied Sciences*, 27 (2004), 2055-2066. SCI
9. Li-Qun Cao (曹礼群) and Jun-Zhi Cui, Asymptotic expansions and numerical algorithms of eigenvalues and eigenfunctions of the Dirichlet problem for second order elliptic equations in perforated domains, *Numer. Math.* (2004), 96:525-581, SCI
10. Li-Qun Cao (曹礼群), Asymptotic expansion and convergence theorem of control and observation on the boundary for second order elliptic equation with highly oscillatory coefficients, *Mathematical Models & Methods in Applied Sciences* (2004), 14(3): 417-437, SCI

11. 曹礼群, 罗剑兰, 复相介质及界面结构温度场的多尺度计算, 工程热物理学报(2004), 25 (6): 926-928, EI
12. Zhiming Chen (陈志明) and Jianhua Yuan, On finite element methods for inhomogeneous dielectric waveguides, J. Comput. Math. 22 (2004), 188-199. SCI
13. Zhiming Chen (陈志明) and Guanghua Ji, Adaptive computation for convection dominated diffusion problems, Science in China (Series A) Mathematics, 47 (2004) Supp. 22-31. SCI
14. Zhiming Chen (陈志明) and Feng Jia, An adaptive finite element algorithm with reliable and efficient error control for linear parabolic problems, Math. Comp. 73 (2004), 1167-1193. SCI
15. J.R. Chen and J.Z. Cui (崔俊芝), "Two-scale finite element method for non-self-adjoint elliptic problems with rapidly oscillatory coefficients", Applied Mathematic and Computation, 150 (2004), 585-601. SCI.
16. 程强, 张林波, 王斌, 模式伴随化的基本规则及其代价分析, 中国科学 E, 34 (6), 601-618. SCI
17. Q.K. Du and D.H. Yu (余德浩), Schwarz alternating method based on natural boundary reduction for time-dependent problems on unbounded domains, Comm. Numer. Meth. Engrg, 20 (2004), 363--378. SCI, EI
18. Qiang Du (杜强) and W. Zhu, Stability analysis and applications of the exponential time differencing schemes, J. Computational Math. 22, pp200-209, 2004. SCI
19. Qiang Du (杜强) and D. Wang, Boundary recovery for three dimensional conforming Delaunay triangulation, Comp. Meth. Appl. Mech. Engr, 193, pp.2547-2563, 2004. EI
20. W. E and P. B. Ming (明平兵), Analysis of Multiscale problem, Journal of Computational Mathematics, 22:1(2004), 210-219. SCI
21. Yongping Feng and Junzhi Cui (崔俊芝), "Multi-Scale FE computation for the structure of composite materials with small periodic configuration under condition of thermo-elasticity", ACTA MECHANICAL SINICA, Vol.20, No.1, February 2004, 54-63. SCI
22. Fu Dexun, Ma Yanwen, Zhang Linbo(张林波) and Tian baolin, Numerical simulation of Richtmyer-Meshkov instability, Science in China A, 47 Supp., 234-244.SCI
23. 何文明, 崔俊芝, "一类特殊的椭圆型问题的高效蒙特卡罗算法", 系统科学与数学, Vol.24, No.2, 2004,4, 210-217. He Wenming, Cui Junzhi, "A high efficient Monte-Carlo method for a special kind of elliptic problem", J. Sys. Sci. & Math. Scis., Vol.24, No.2, 2004,4, 210-217.
24. 何文明, 崔俊芝, "针对字符串等复杂数据的一种新的高效分档混合排序算法", 小型微型计算机系统, Vol.25, No.4, 2004, 698-701. He Wen-ming, CUI Junzhi, "New high efficient sorting algorithm by grading to character string data", MINI-MICRO SYSTEMS, Vol.25, No.4, 2004, 698-701. EI.
25. Jialin Hong(洪佳林) and Ying Liu, Multisymplecticity of the central box scheme for a class of Hamiltonian PDEs and an application to quasi-periodically solitary waves, Math. Comp. Model., 39 (2004) 1035- 1047 SCI
26. Xing-Biao Hu (胡星标), Jun-Xiao Zhao and Hon-Wah Tam, Pfaffianization of the two-

dimensional Toda lattice. *J. Math. Anal. Appl.*, 96 (2004),no.1 256-261. SCI

27. Q.Y. Hu, Z.C. Shi and D.H. Yu (余德浩), Efficient solvers for saddle-point problems arising from domain decompositions with Lagrange multipliers, *SIAM J. Numer. Anal.*, 42:3(2004), 905--933. SCI

28. Chun-Xia Li, Xing-Biao Hu (胡星标) and Jun-Xiao Zhao, Gramm-type Pfaffian solutions to three differential-difference coupled systems, *Inverse Problems*, 20(2004),1293-1306. SCI

29. Chun-Xia Li and Xing-Biao Hu (胡星标), Pfaffianization of the semi-discrete Toda equation, *Phys. Lett., A* 329(2004), 193-198. SCI

30. Y.Y. Li and J.Z. Cui (崔俊芝), "Two-scale analysis method for predicting heat transfer performance of composite materials with random grain distribution", *Science in China Ser. A Mathematics*, 2004, Vol.47 Supp. 101-110. SCI.

31. 李友爱, 崔俊芝, "复合材料热传导问题的多尺度分析方法", '应用力学进展' - 祝贺郑哲敏先生八十华诞, 洪友士主编, 科学出版社, 北京, 2004, PP132-139.

32. Xian-Min Qian, Sen-Yue Lou and Xing-Biao Hu (胡星标), Variable separation approach for a differential-difference system: special Toda equation. *J. Phys. A*, **37** (2004), [no.6](#), 2401-2411. SCI

33. Xian-Min Qian, Sen-Yue Lou and Xing-Biao Hu (胡星标), Variable separation approach for a differential-difference asymmetric Nizhnik-Novikov-Veselov equation, *Zeitschrift für Naturforschung*, 59A(2004),645-658. SCI

34. Zhongci Shi (石钟慈) and Jun Hu, On the convergence of Weissman-Taylor element for R-M plate, *Inter. J. Numer. Anal. Modeling*, 1, 65-73,2004

35. Zhong-Ci Shi, Xuejun Xu(许学军), and H. Man, Cascadic multigrid for finite volume element methods for elliptic problems, *J. Comput. Math.*, (22)2004, 905-920.SCI

36. Yajuan Sun (孙雅娟) and Mengzhao Qin, A multisymplectic scheme for RLW equation, *Journal of Computational Mathematics*, 22:4(2004), 611-621. SCI

37. R. Talal, Xuejun Xu(许学军), and R.H. Hoppe, On an additive Schwarz Preconditioner for the Crouzeix-Raviart Mortar Finite Element, *Lecture Notes in Computational Science and Engineering*, (40)2004,335-345. SCI

38. Lieheng Wang(王烈衡) and He Qi, A locking-free scheme of nonconforming rectangular finite element for the planar elasticity, *JCM Vol. 22, No. 5*, pp 641-650, 2004. SCI

39. Z.P. Wu and D.H. Yu (余德浩), The coupling of natural boundary element and finite element for semilinear boundary value problems, *Math. Numer. Sinica*, 26:2 (2004), 237--246.

40. Z.P. Wu. T. Kang and D.H. Yu (余德浩), On the coupled NBEM and FEM for a class of nonlinear exterior Dirichlet problem in R^2 , *Science in China, Series A, Mathematics*, 47, Supp., Apr. 2004, 181--189. SCI, EI

41. Aiguo Xiao & Yifa Tang (唐贻发), Runge-Kutta-Nyström Methods, *Computers Math. Applic.*, 47(4/5)(2004), 569-582. SCI

42. Guoliang Xu (徐国良), Discrete Laplace-Beltrami operators and their convergence, *Computer*

Aided Geometric Design, 21(2004), 767--784. SCI

43. Guoliang Xu (徐国良), Surface Fairing and Featuring by Mean Curvature Motions, Journal of Computational and Applied Mathematics, Vol 163/1(2004), pp 295-309 .SCI

44. Y. Xu and Aihui Zhou(周爱辉), Fast Boolean approximation methods for solving Integral equations in high dimensions, Journal of Integral Equations and Applications, 16(2004), 83-110 . SCI

45.D.H. Yu (余德浩), Natural boundary integral method and its new development, J. Comput. Math., 22:2(2004), 309--318. SCI, EI

46. D.H. Yu (余德浩) and L.H. Zhao, Natural boundary integral method and related numerical methods, Engrg. Anal. with BE, 28:8(2004), 937--944. SCI, EI

47.D.H. Yu (余德浩), Natural boundary integral equations and related computational methods, J. of Yanshan Univer., 28:2(2004), 111-113.

48. Li Yuan (袁礼), Numerical study of multiple periodic flow states in spherical Couette flow, Science in China Ser. A -Mathematics, 47, Supp. (2004), 81-91. SCI

49. Y. Yuan(袁亚湘), Z.H. Wang and Z.W. Wen , A subspace trust region method for large scale unconstrained optimization, Numerical Linear Algebra and Optimization (Science Press, Beijing/NewYork, 2004) pp. 265-274.

50. Zhang Linbo(张林波),Chen Shiyi,Li Xinliang etc, The Teracluster LSSC--II - Its Designing Principles and Applications in Large Scale Numerical Simulations, Science in China A, 47 Supp., 53-68. SCI

51.张文生, 宋海斌, 崔兴福, 双平方根算子波场外推叠前偏移速度分析, 石油物探, 2004, 43 (4): 313 - 318。国内核心刊物

52.Jun-Xiao Zhao, Chun-Xia Li and Xing-Biao Hu (胡星标), Pfaffianization of the differential-difference KP equation. J. Phys. Soc. Japan, **73** (2004), no.5, 1159-1163. SCI

53. Aihui Zhou(周爱辉), An analysis for finite dimensional approximations for the ground state solution of Bose-Einstein condensates, Nonlinearity, 17(2004), 541-550. SCI

Papers published in proceedings of symposia and conferences :

1. Qing Pan, Guoliang Xu (徐国良), Fast Evaluation of the Improved Loop's Subdivision Surfaces (with Pan Qing), Proceedings of Geometric Modelling and Processing (GMP2004), 205—214 (EI, 国际会议论文)

2. Guoliang Xu (徐国良), The Convergent Discrete Laplace-Beltrami Operator over Triangular Surfaces, Proceedings of Geometric Modelling and Processing (GMP2004), 195--204. (EI, 国际会议论文)

3. Li Yuan (袁礼), Numerical simulation of spiral and wavy vortex flows in spherical gaps, in: Recent Advances in Fluid Mechanics, Proceedings of the fourth International Conference on Fluid Mechanics, Dalian China, July 20-23, 2004, pp.88. (ISTP).

4. Li Yuan (袁礼), Ping He and Lei Zhang, Multicomponent compressible flow simulation using the ghost fluid method, The Sixth World Congress on Computational Mechanics in Conjunction with the Second Asian-Pacific Congress on Computational Mechanics, Beijing, China, Sept.5-10, 2004. pp.163 (ISTP).

5. Huanxi Zhao , Guoliang Xu (徐国良), Surface fairing using diffusion and Gaussian curvature flow , The Proceedings of International Symposium on Computing and Information (ISC&I 2004), vol. 2, 1092—1096 (EI, 国际会议论文).

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