

李子才教授 (Zi-Cai Li, T. T. Li) (75 年 6 月畢業，82 年 8 月到校)

(A) 期刊論文

1. K. C. Chou, Z. K. Gu, and T. T. Li. *The quantitative relation between diffusion-controlled reaction rate and characteristic parameter in enzyme-substrate reaction systems, II. CHARGED SUBSTRATES.* SCIENTIA SINICA, 18:336–345, 1975. [SCI].
2. Zi-Cai Li and K. C. Chou. *The quantitative relation between diffusion-controlled reaction rate and characteristic parameters in enzyme-substrate reaction systems, I. neutral substrates.* SCIENTIA SINICA, 20:117–136, 1976. [SCI].
3. T. T. Li and K. C. Chou. *Studies in the combination rates of liquid phase fast reaction system.* SCIENTIA SINICA, 20:197–220, 1977. [SCI].
4. T. T. Li, L. J. Zhan, and H. L. Wang. *On difference methods of unsteady flow in branch channels.* APPLIED MATHEMATICAL SINICA, 1(1):1–17, 1977.
5. T. T. Li and L. J. Zhan. *Calculation of channel flow with small tributaries.* APPLIED MATHEMATICAL SINICA, 1(4):1–10, 1977.
6. T. T. Li and S. P. Jiang. *The concentration figure of substrate in enzyme-substrate reaction system.* SCIENCE BULLETIN, 23(4), 1978.
7. T. T. Li. *The calculation of combination reaction rates in enzyme-substrate reaction system.* SCIENCE BULLETIN, 24:324–328, 1979
8. T. T. Li and K. C. Chou. *The flow of substrate molecules in fast enzyme-catalysed reaction system.* CHEMICA SCRIPTA, 16:192–196, 1980. [SCI].
9. T. T. Li. *The calculation of temperature distribution in vaporizing-cooling-anodes.* Application of Computer, 1:130–135, 1980.
10. K. C. Chou, T. T. Li, and S. Foren. *The critical spherical shell in enzymatic fast reaction systems.* BIOPHYSICAL CHEMISTRY, 12:265–269, 1980. [SCI].
11. T. T. Li. *The conservative difference scheme of a sort of nonlinear heat conduction equation.* J. of Numer. Comp. and Computer Appl., 1:73–83, 1980.
12. T. T. Li. *The combined method between original energy method and finite element method for laplace's boundary value problems with singularities.* Math. Numer. Sinica, 2:319–328, 1980.
13. T. T. Li and G. P. Liang. *On the combined methods of the boundary value problems of elliptic equations.* Math. Numer. Sinica, 2:192–194, 1980.
14. T. T. Li, Z. W. Shi, G. Q. Zhou, and K. C. Chou. *A semianalytic method for computing the concentration distribution in enzyme-substrate fast reaction systems.* JOURNAL OF COMPUTATIONAL CHEMISTRY, 2:273–277, 1981. [SCI].
15. Zi-Cai Li and G. P. Liang. *On Ritz-Galerkin-F.E.M. combined method of solving the boundary value problem of elliptic equations.* SCIENTIA SINICA, 24:1497–1508, 1981. [SCI].
16. G. P. Zhou, T. T. Li, and K. C. Chou. *The flexibility during the juxtaposition of reaction groups and the upper limits of enzyme reactions.* BIOPHYSICAL CHEMISTRY, 14:277–281, 1981. [SCI].
17. C. Y. Tsao and Zi-Cai Li. *Energy element and its application in the dynamic calculation of continuous medium.* APPLIED MATHEMATICS AND MECHANICS, 2:581–587, 1981.
18. K. C. Chou, T. T. Li, and G. Q. Zhou. *A semi-analytical expression for the concentration distribution of substrate molecules in fast enzyme-catalysed reaction systems.* BIOCHEMICA ET BIOPHYSICA ACTA, 657:625–628, 1981. [SCI].
19. T. T. Li, Z. Y. Cao, and C. S. Yu. *Stress calculation of elasto-dynamics.* MECHANICAL SINICA, 1:625–628, 1981.
20. Zi-Cai Li and E. Dai. *Numerical methods for calculating pressure distribution in gas bearing.* COMPUTER METHODS IN MECHANICS AND ENGINEERING, 31:179–187, 1982. [SCI].
21. Zi-Cai Li. *On the reduced rate of convergence for a nonconforming combined method.* SIAM J. Numer. Anal., 20:86–93, 1983. [SCI].
22. Zi-Cai Li. *An approach for combining the Ritz-Galerkin and finite element methods.* J. App. Th., 39:132–152, 1983. [SCI].
23. Zi-Cai Li and G. P. Liang. *On the simplified hybrid-combined method.* Math. Comp., 41:13–25, 1983. [SCI].
24. Zi-Cai Li, L. C. Chan, and H. I. Wang. *Difference methods of flow in branch-channel.* JOURNAL OF HYDRAULIC DIVISIONS-ASCE, 109:424–446, 1983. [SCI].
25. Zi-Cai Li, Z. Y. Cao, and C. Y. Yu. *A new method of stress calculation in elastic kinetic problems.* COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING, 36:61–69, 1983. [SCI].
26. Zi-Cai Li. *A nonconforming combined method for solving Laplace's Boundary value problems with singularities.* Numer. Math., 49:475–497, 1986. [SCI].

27. Zi-Cai Li, R. Mathon, and P. Sermer. Boundary methods for solving elliptic problem with singularities and interfaces. *SIAM J. Numer. Anal.*, 24:487–498, 1987. [SCI].
28. Zi-Cai Li. Numerical methods for elliptic boundary value problems with singularities. *APPLIED MATHEMATICS NOTES*, 12(1 and 2):14–22, 1987.
29. T. D. Bui and Zi-Cai Li. Penalty combined method for computer-aided-design. *CAD*, 20:234–238, 1988. [SCI].
30. Zi-Cai Li and T. D. Bui. Generalized hybrid-combined methods for singularity problems of homogeneous elliptic equations. *Int. J. Numer. Methods Engrg.*, 26:785–803, 1988. [SCI].
31. Zi-Cai Li and T. D. Bui. A new kind of combinations of the Ritz-Galerkin and finite element methods. *COMPUTING*, 40:29–50, 1988. [SCI].
32. Zi-Cai Li and T. D. Bui. Six combinations of the Ritz-Galerkin and finite element methods for elliptic boundary value problems. *Numer. Meth. for PDE.*, 4:197–218, 1988.
33. Zi-Cai Li. A note on Kellogg's eigenfunctions of periodic Sturm-Liouville system. *APPLIED MATHEMATICS LETTERS*, 1:123–126, 1988.
34. Zi-Cai Li. A nonconforming combination for solving elliptic problems with interfaces. *J. Comp. Physics*, 80(2):288–313, 1989. [SCI].
35. Zi-Cai Li. A combined method for solving elliptic problems on unbounded domains. *COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING*, 73:191–208, 1989. [SCI].
36. Zi-Cai Li. An approach combining the Ritz-Galerkin and finite difference methods. *Numer. Meth. for PDE*, 5:279–295, 1989.
37. Zi-Cai Li. Discrete techniques for computer transformations of digital images and patterns. *PATTERN RECOGNITION*, 23(11):1249–1273, 1990. [SCI].
38. Zi-Cai Li and R. Mathon. Error and stability analysis of boundary methods for elliptic problems with interfaces. *Math. Comp.*, 54:41–61, 1990. [SCI].
39. Zi-Cai Li and R. Mathon. Boundary approximation methods for solving elliptic problems on unbounded domains. *J. Comp. Phys.*, 89(2):414–431, 1990. [SCI].
40. Zi-Cai Li and T. D. Bui. The simplified hybrid-combined methods for Laplace equation with singularities. *JOURNAL OF COMPUTATIONAL AND APPLIED MATHEMATICS*, 29:171–193, 1990.
41. Zi-Cai Li and T. D. Bui. Coupling strategy for matching different methods in solving singularity problems. *COMPUTING*, 45:311–319, 1990. [SCI].
42. Zi-Cai Li, T. D. Bui, C. Y. Suen, and Y. Y. Tang. Splitting-shooting methods for nonlinear transformations of digitized patterns. *IEEE Pattern Anal. Machine Intell*, 12(7):671–682, 1990. [SCI].
43. Zi-Cai Li, Y. Y. Tang, T. D. Bui, and C. Y. Suen. Shape transformation models and their applications in pattern recognition. *Int. J. Pattern Recognition and Artificial Intell*, 4(1):65–94, 1990.
44. Zi-Cai Li, Q. L. Gu, C. Y. Suen, and T. D. Bui. A comparative study of nonlinear shape models for digital processing and pattern recognition. *IEEE, TRANS. ON SYSTEM, MAN AND CYBERNETICS*, 20(4):858–871, 1990. [SCI].
45. Zi-Cai Li. On nonconforming combinations of various finite element methods for solving elliptic boundary value problems. *SIAM J. Numer. Anal.*, 28:446–475, 1991. [SCI].
46. Q. L. Gu, C. Y. Suen, T. D. Bui, and Zi-Cai Li. Font generation and shaper design of character by mathematical models. *COMPUTER PROCESSING OF CHINESE AND ORIENTAL LANGUAGES*, 5:347–360, 1991.
47. Zi-Cai Li. Penalty-combined approaches of the Ritz-Galerkin and finite methods for singularity problems of elliptic equations. *NUMERICAL METHODS FOR PDE*, 8:33–57, 1992.
48. Zi-Cai Li. Optimal convergence rates for combined methods of different finite element methods. *NUMERICAL METHODS FOR PDE*, 8:203–220, 1992.
49. Zi-Cai Li, C. Y. Suen, T. D. Bui, T. D. Tang, and Q. L. Gu. Splitting-integratin methods for nonlinear images by inverse transformations. *IEEE, Trans. Pattern Anal. Machine Intell*, 14:678–686, 1992. [SCI]
50. Zi-Cai Li, C. Y. Suen, T. D. Bui, and Q. L. Gu. Harmonic models of shape transformations in digital images and patterns. *CVGIP GRAPHICAL MODELS AND IMAGE PROCESSING*, 54:198–209, 1992. [SCI].
51. Zi-Cai Li and T. D. Bui. Penalty-combined methods and their applications in solving elliptic problems with singularities. *COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING*, 97:291–316, 1992. [SCI].
52. Zi-Cai Li and T. D. Bui. Coupling techniques in boundary-combined methods for solving elliptic problems with singularities. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 10:75–85, 1992.
53. Zi-Cai Li. The schwarz alternating method for singularity problems. *SIAM J. Sci. Computing*, 15:1064–1082, 1994. [SCI, NSYSU].
54. Zi-Cai Li, C. Y. Suen, and J. Guo. Hierarchical models for analysis and recognition of handwritten characters. *ANNALS OF MATHEMATICS AND ARTIFICIAL INTELLIGENCE, SPECIAL ISSUE*, 10:149–174, 1994. [NSYSU].

55. C. Y. Suen, J. Guo, and Zi-Cai Li. Analysis and recognition of handprinted characters by parts. *IEEE Trans. ON SYS. MAN AND CYBERN*, 24:614–630, 1994. [SCI, NSYSU].
56. Zi-Cai Li. Advanced splitting-integration methods with high convergence rates for restoring images and patterns. *J. of Scientific Computing*, 9(2):149–172, 1994. [NSYSU].
57. Zi-Cai Li, C. Y. Suen, and J. Guo. A regional decomposition method for recognizing handprinted characters. *IEEE TRANS. ON SYS. MAN AND CYBERN*, 25(6):998–1010, 1995. [SCI, NSYSU].
58. Zi-Cai Li. Splitting-integrating method for inverse transformation of n dimensional digital images and patterns. *NUMERICAL ALGORITHMS*, 9:181–198, 1995. [NSYSU].
59. Zi-Cai Li. Combinations of the Ritz-Galerkin and finite difference methods. *Int. J. Numer. Methods Engrg.*, 39:1839–1857, 1996. [SCI, NSYSU].
60. Zi-Cai Li. Splitting-integrating methods for image transformations T and $T - IT$. *COMPUTER AND MATHEMATICS WITH APPLICATION*, 32:39–60, 1996. [SCI, NSYSU].
61. Zi-Cai Li. Paralled penalty combinations for singularity problems. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 18:119–130, 1996. [SCIE, NSYSU].
62. Zi-Cai Li. Analysis of discrete techniques for image transformation. *NUMERICAL ALGORITHMS*, 13(3-4):225–263, 1996. [SCIE, NSYSU].
63. Zi-Cai Li. Boundary approximation methods for the helmholtz equation with degeneracy. *ZEITSCHRIFT FUR ANGEWANDTE MATHEMATIK UND MECHANIK*, 76:453–454, 1996. [SCIE, NSYSU].
64. Zi-Cai Li, T. T. Lu, D. J. Guan, and C. B. Yang. Boundary approximation methods for solving eigenvalue problems with interfaces. *ZEITSCHRIFT FUR ANGEWANDTE MATHEMATIK UND MECHANIK*, 76:455–456, 1996. [SCIE, NSYSU].
65. Zi-Cai Li. Penalty combinations of the Ritz-Galerkin and finite difference methods for singularity problems. *J. of Comp. and Appl. Math.*, 81:1–17, 1997. [SCIE, NSYSU].
66. Zi-Cai Li. New discrete techniques for 3D image transformation. *COMPUTERS & MATHEMATICS WITH APPLICATIONS*, 36(4):77–109, 1998. [SCI, NSYSU].
67. Zi-Cai Li and Z. D. Bai. Probabilistic analysis on the splitting-shooting method for image transformations. *J. of Computational and Applied Mathematics*, 94(2):69–121, 1998. [SCIE, NSYSU].
68. Zi-Cai Li. Discrete technique for 3-D digit images and patterns under transformation. *IEEE TRANS. ON SYS. MAN. AND CYBERNETICS*, 28(6):883–894, 1998. [SCI, NSYSU].
69. Zi-Cai Li. Boundary penalty finite element methods for blending surfaces, I. Basic theory. *JOURNAL OF COMPUTATIONAL MATHEMATICS*, 16(5):457–480, 1998. [SCIE, NSYSU].
70. T. D. Bui, Zi-Cai Li, and H. V. Nguyen. Numerical simulation of liquid redistribution in permeable media involving hysteresis. *MATHEMATICAL AND COMPUTER MODELLING*, 28(12):81–103, 1998. [SCIE, NSYSU].
71. Zi-Cai Li. Lagrange multipliers and other coupling techniques for combined methods for elliptic equations. *Inter. J. Information*, 1(2):5–21, 1998. [NSYSU].
72. Zi-Cai Li, C. S. Chang, and T. D. Bui. Exact numerical methods and their applications to blending curves. In D. Trigante, editor, *RECENT TREADS IN NUMERICAL ANALYSIS*, pages 193–212. Nova Science Publishes, Inc., Huntington, New York, 2000. [NSYSU].
73. Zi-Cai Li and N. N. Yan. Global superconvergence for blending surfaces by boundary penalty plus hybrid FEMs. In X. S. Gao and D. Wang, editors, *Computer Mathematics*, volume 8 of *Lecture Notes on Computing*, pages 192–201. World Scientific, Singapore, 2000. [NSYSU].
74. D. J. Guan, Zi-Cai Li, Y. L. Chen, and J. H. Chuang. Wire-frame method for blending surface design. *Proc. Nat. Sci. Counc. ROC(A)*, 23(1):20–30, 1999. [NSYSU].
75. Zi-Cai Li and S. Wong. The finite volume method and application in combinations. *J. Computational and Applied Mathematics*, 106(1):21–53, 1999. [SCIE, NSYSU].
76. Zi-Cai Li. Advanced combinations of splitting-shooting-intergrating methods for digital image transformation. *J. Computational and Applied Mathematics*, 107:147–177, 1999. [SCIE, NSYSU].
77. Zi-Cai Li, Q. Lin, and N. N. Yan. Global superconvergence in combinations of Ritz-Galerkin and FEM for singularit problems. *J. Computational and Applied Mathematics*, 106:325–344, 1999. [SCIE, NSYSU].
78. Zi-Cai Li. Boundary penalty finite element methods for blending surfaces, II Biharmonic Equations. *J. Computational and Applied Mathematics*, 110:155–176, 1999. [SCIE, NSYSU].
79. Zi-Cai Li and C. S. Chang. Boundary penalty finite element methods for bleding surfaces, III. Superconvergence and stability and examples. *J. Computational and Applied Mathematics*, 110:241–270, 1999. [SCIE, NSYSU].
80. Zi-Cai Li. Combined different methods for elliptic boundary value problems, Part I Elliptic problems and different methods. *Inter. J. Information*, 1(2):5–21, 1999. [NSYSU].
81. Zi-Cai Li. Combined different methods for elliptic boundary value problems, Part II Different methods and combined methods. *Inter. J. Information*, 3(1):7–41, 2000. [NSYSU].

82. Zi-Cai Li. Blending curves for landing problems by numerical differential equations, I. Mathematical modelling. *MATHEMATICAL AND COMPUTER MODELLING*, 31(2-3):161–177, 2000. [SCIE, NSYSU].
83. Zi-Cai Li and H. T. Huang. Blending curves for landing problems by numerical differential equations, II. Numerical methods. *Inter. J. Computers & Mathematics with Application*, 39:165–187, 2000. [SCI, NSYSU].
84. Zi-Cai Li and C. Y. Suen. The partition-combination method for recognition of handwritten characters. *PATTERN RECOGNITION LETTERS*, 21:701–720, 2000. [SCIE, NSYSU].
85. Zi-Cai Li and C. Y. Suen. Crucial combinations of recognition of handwritten letters. *PATTERN RECOGNITION LETTERS*, 21:873–898, 2000. [SCIE, NSYSU].
86. Zi-Cai Li and C. Y. Suen. Crucial combinations of parts for handwritten Alphanumeric characters. *MATHEMATICAL AND COMPUTER MODELLING*, 31:193–229, 2000. [SCIE, NSYSU].
87. Zi-Cai Li and T. T. Lu. Singularities and treatments of elliptic boundary value problems. *MATHEMATICAL AND COMPUTER MODELLING*, 31(8-9):97–145, 2000. [SCIE, NSYSU].
88. Zi-Cai Li. Global superconvergence of simplified combinations for elliptic equations with singularities, I. BASIC THEORY. *COMPUTING*, 65:27–44, 2000. [SCI, NSYSU].
89. Zi-Cai Li. High convergence rates of digital image transformation by numerical integration using spline functions. *Inter. J. Computers & Mathematics with Application*, 41:229–255, 2001. [SCI, NSYSU].
90. Zi-Cai Li and C. Y. Suen. Superconvergence of coupling techniques in combined methods for elliptic equations with singularities. *Inter. J. Computers & Mathematics with Application*, 41:379–398, 2001. [SCI, NSYSU].
91. Zi-Cai Li and N. N. Yan. Global superconvergence for blending surfaces by boundary penalty plus hybrid FEMs for biharmonic equations. *APPLIED NUMERICAL MATHEMATICS*, 39:61–85, 2001. [SCI, NSYSU].
92. Zi-Cai Li and N. N. Yan. New error estimates of bi-cubic Hermite finite element method for biharmonic equations. *J. Computational and Applied Mathematics*, 142(2):251–285, 2002. [SCIE, NSYSU].
93. Zi-Cai Li and T. T. Lu. Global superconvergence of finite element methods for biharmonic equations and blending surfaces. *Inter. J. Computers & Mathematics with Application*, 44(3-4):413–437, 2002. [SCI, NSYSU].
94. S. Wang and Zi-Cai Li. An analysis of a conforming exponentially fitted triangular finite element method for singularly perturbed convection diffusion equation. *J. Computational and Applied Mathematics*, 143(2):291–310, 2002. [SCIE, NSYSU].
95. Zi-Cai Li and H. T. Huang. Global superconvergence of simplified hybrid combinations of the Ritz-Galerkin and FEMs for elliptic equations with singularities II. Lagrange elements and Adini's elements. *APPLIED NUMERICAL MATHEMATICS*, 43(3):253–273, 2002. [SCI, NSYSU].
96. Zi-Cai Li, H. J. Li, C. Y. Suen, H. Q. Wang, and S. Y. Liao. Recognition of handwritten characters by parts with multiple orientations. *MATHEMATICAL AND COMPUTER MODELLING*, 35(3-4):441–479, 2002. [SCIE, NSYSU].
97. Zi-Cai Li, T. Yamamoto, and Q. Fang. Superconvergence of solution derivatives for the Shortley-Weller difference approximation of Poisson's equation, part I. Smoothness problems. *J. Computational and Applied Mathematics*, 151(2):307–333, 2003. [SCIE, NSYSU].
98. H. T. Huang and Zi-Cai Li. Global superconvergence of Adini's elements coupled with the Trefftz method for singular problems. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 27(3):227–240, 2003. [SCIE, NSYSU].
99. Zi-Cai Li, H. Y. Hu, Q. Fang, and T. Yamamoto. Superconvergence of solution derivatives for the Shortley-Weller difference approximation of Poisson's equation, part II. Singularity problems. *Numer. Funct. Anal. and Optimiz.*, 24(3-4):195–221, 2003. [SCIE, NSYSU].
100. S. Wang and Zi-Cai Li. A non-conforming combination of finite element and volume method for singularly perturbed convection diffusion equation. *MATHEMATICS OF COMPUTATION*, 244:1689–1709, 2003. [SCI, NSYSU].
101. H.T. Huang, Zi-Cai Li, and A. Zhu. Global superconvergence of biquadratic lagrange elements for Poisson's equation. *Computer Mathematics, LECTURE NOTES ON COMPUTING, PAGES 189– 203*, 2003. [NSYSU].
102. Zi-Cai Li, H. Wang, and S. Liao. Numerical algorithms for image geometric transformation and applications. *IEEE Trans.on Sys. MAN AND CYBERN B-CYBERNETICS*, 34(1):132–149, 2004. [SCI, NSYSU].
103. Zi-Cai Li, T. T. Lu, and H. Y. Hu. The collocation Trefftz method for Biharmonic equations with crack singularities. *ENGINNERING ANALYSIS WITH BOUNDARY ELEMENTS*, 28:79–96, 2004. [SCIE, NSYSU].
104. Zi-Cai Li, H. Y. Hu, C. H. Hsu, and S. Wang. Particular solutions of singularly partial differential equations with constant coefficients in rectangular domains, Part I. Convergence analysis. *J. Computational and Applied Mathematics*, 166:181–208, 2004. [SCIE, NSYSU].

105. H.T. Huang, Zi-Cai Li, and N. Yan. New error estimates of Adini's elements for Poisson's equation. *APPLIED NUMERICAL MATHEMATICS*, 50(1):49–74, 2004. [SCI, NSYSU].
106. T. T. Lu, H. Y. Hu, and Zi-Cai Li. Highly accurate solutions of Motz's and the cracked beam problems. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 28(11):1387–1403, 2004. [SCIE, NSYSU].
107. H. T. Huang and Zi-Cai Li. Blending curves for landing problems by numerical differential equations, III. Separation techniques. *MATHEMATICAL AND COMPUTER MODELLING*, 40(11-12):1351–1374, 2004. [SCIE, NSYSU].
108. H. Y. Hu and Zi-Cai Li. Verification of reduced convergence rates. *Computing*, 74(1):67–73, 2005. [SCI, NSYSU].
109. Zi-Cai Li, T. T. Lu, H. Y. Hu, and A. H. D. Cheng. Particular solutions of laplace's equations on polygons and new models involving mild singularities. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 29(1):59–75, 2005. [SCIE, NSYSU].
110. T. T. Lu and Zi-Cai Li. The cracked-beam problem solved by the boundary approximation method. *APPLIED MATHEMATICS LETTERS*, 18(1):11–16, 2005. [SCI, NSYSU].
111. Zi-Cai Li. Algorithms for curve image under geometric trnasformations. *Inter. J. Information*, 8:845–862, 2005. [NSYSU].
112. Zi-Cai Li, C. S. Huang, and R. C. D. Chen. Interior boundary conditions in the schwarz alternating method for the Trefftz method. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 29(5):477–493, 2005. [SCIE, NSYSU].
113. H. Y. Hu, Zi-Cai Li, and A. H.-D. Cheng. Radial basis collocation methods for elliptic boundary value problems. *COMPUTERS & MATHEMATICS WITH APPLICATIONS*, 50(1-2):289–320, 2005. [SCI, NSYSU].
114. Zi-Cai Li, Y. L. Chan, G. G. Georgiou, and X. Xenopoulos. Special boundary approximation methods for laplace equation problems with boundary singularities - applications to the motz problem. *COMPUTERS & MATHEMATICS WITH APPLICATIONS*, 51(1):115–142, 2006. [SCI, NSYSU].
115. H. T. Huang, Zi-Cai Li, and A. Zhou. New error estimates of biquadratic lagrange elements for Poisson's equation. *APPLIED NUMERICAL MATHEMATICS*, 56(5):712–744, 2006. [SCI, NSYSU].
116. H. Y. Hu and Zi-Cai Li. Collocation methods for Poisson's equation. *COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING*, 195(33-35):4139–4160, 2006. [SCI, NSYSU].
117. H. T. Huang and Zi-Cai Li. Effective condition number and superconvergence of the Trefftz method coupled with high order FEM for singularity problems. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 30(4):270–283, 2006. [SCI, NSYSU].
118. Zi-Cai Li, T. T. Lu, H. S. Tsai, and A. H. D. Cheng. The Trefftz method for solving eigenvalue problems. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 30(4):292–308, 2006. [SCI, NSYSU].
119. H. Y. Hu and Zi-Cai Li. Combinations of collocation and finite element methods for Poisson's equation. *INTER. J. COMPUTERS & MATHEMATICS WITH APPLICATION*, 51(12):1831–1853, 2006. [SCI, NSYSU].
120. C. S. Huang, S. Wang, C. S. Chen, and Zi-Cai Li. A radial basis collocation method for HamiltonJacobi-Bellman equations. *AUTOMATICA*, 42:2201–2207, 2006. [SCI, NSYSU].
121. Zi-Cai Li, C. S. Chien, and H. T. Huang. Effective condition number for finite difference method. *J. Computational and Applied Mathematics*, 198(1):208–235, 2007. [SCI, NSYSU].
122. Zi-Cai Li. Error analysis of the Trefftz method for solving Laplace's eigenvalue problems. *J. Computational and Applied Mathematics*, 200(1):231–254, 2007. [SCI, NSYSU].
123. Zi-Cai Li, T. T. Lu, H. T. Huang, and A. H. D. Cheng. Trefftz, collocaton and other boundary methods – a comparison. *NUMERICAL METHODS FOR PDES*, 23(1):93–144, 2007. [SCIE, NSYSU].
124. Zi-Cai Li, H. T. Huang, J. Huang, and L. Ling. Stability analysis for the penalty plus hybrid and the direct Trefftz methods for singularity problems. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 31(2):163–175, 2007. [SCI, NSYSU].
125. Zi-Cai Li, H. T. Huang, and J. Huang. Stability analysis and superconvergence for penalty Trefftz method coupled with FEM for singularity problems. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 31:631–645, 2007. [SCI, NSYSU].
126. Zi-Cai Li. The Trefftz method for the Helmholtz equation with degeneracy. *APPLIED NUMER. MATH.*, 58:131–159, 2008. [SCI, NSYSU].
127. C. S. Chien, H. T. Huang, B. W. Jeng, and Zi-Cai Li. Two-grid discretization schemes for nonlinear Schroedinger equations. *J. Computational and Applied Mathematics*, 214:549–571, 2008. [SCI, NSYSU].
128. C. S. Chien, B. W. Jeng, and Zi-Cai Li. A time-independent approach for computing wave functions of the Schrodinger-Poisson system. *Numerical Linear Algebra with Applications*, 15:55–82, 2008. [SCI, NSYSU].
129. Zi-Cai Li, Heng-Shuing Tsai, Song Wang, and John J. H. Miller. Accurate and approximate analytic solutions of singularly perturbed differential equations with two-dimensional boundary layers. *COMPUTERS & MATHEMATICS WITH APPLICATIONS*, 55:2602–2622, 2008. [SCI, NSYSU].

130. Zi-Cai Li, H. T. Huang, and J. Huang. Superconvergence and stability for boundary penalty techniques of finite difference methods. *Numer. Methods for PDEs*, 24:972–990, 2008. [SCI, NSYSU].
131. H. T. Huang, Zi-Cai Li, and Q. Lin. New expansions of numerical eigenvalues by finite elements. *J. Computational and Applied Mathematics*, 217(1):9–27, 2008. [SCI, NSYSU].
132. Q. Lin, H. T. Huang, and Zi-Cai Li. New expansions of numerical eigenvalues for $\delta u = \lambda \rho u$ by nonconforming elements. *MATHEMATICS OF COMPUTATION*, 77(264):2061–2084, 2008. [SCI, NSYSU].
133. Zi-Cai Li. Effective condition number of the Hermite finite element methods for biharmonic equations. *Applied Numer. Math.*, 58(9):1291–1308, 2008. [SCI, NSYSU].
134. S. L. Chang, C. S. Chien, and Zi-Cai Li. A finite difference continuation method for computing energy levels of Bose-Einstein condensates. *COMPUTER PHYSICS COMMUNICATIONS*, 179(49):208–226, 2008. [SCI, NSYSU].
135. C. S. Chien, H. T. Huang, B. W. Jeng, and Zi-Cai Li. Superconvergence of FEMs and numerical continuation for parameter-dependent problems with folds. *INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS*, 18(5):1321–1336, 2008. [SCI, NSYSU].
136. Zi-Cai Li and H. T. Huang. Effective condition number for numerical partial differential equations. *NUMERICAL LINEAR ALGEBRA WITH APPLICATIONS*, 15(7):575–594, 2008. [SCI, NSYSU].
137. Zi-Cai Li and Qing Fang, Song Wang, and Hsin-Yun Hu. Superconvergence of solution derivatives of the shortley-weller difference approximation to elliptic equations with singularities involving the mixed type of boundary conditions. *NUMERICAL FUNCTIONAL ANALYSIS AND OPTIMIZATION*, 29:161–196, 2008. [SCI, NSYSU].
138. Zi-Cai Li and H. T. Huang. Effective condition number for simplified hybrid Trefftz methods. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 32(9):757–769, 2008. [SCI, NSYSU].
139. Zi-Cai Li. Combinations of method of fundamental solutions for Laplace's equation with singularities. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 32(10):856–869, 2008. [SCI, NSYSU].
140. Zi-Cai Li and H. T. Huang. Study on effective condition number for collocation methods. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 32(10):839–848, 2008. [SCI, NSYSU].
141. J. Huang, Zi-Cai Li, T. Lu, and R. Zhu. Splitting extrapolations for solving boundary integral equations of mixed boundary conditions on polygons by mechanical quadrature methods. *TAIWANESE JOURNAL OF MATHEMATICS*, 12(9):2341–2361, 2008. [SCI, NSYSU].
142. T. Yamamoto, S. Oishi, M. Z. Nashed, Zi-Cai Li, and Q. Fang. Discretization principles for linear two-point boundary value problems, III. *NUMERICAL FUNCTIONAL ANALYSIS AND OPTIMIZATION*, 29(9–10):1180–1200, 2008. [SCI, NSYSU].
143. Zi-Cai Li, H. Y. Hu, S. Wang, and Q. Fang. Superconvergence of solution derivatives of the shortley-weller difference approximation to Poisson's equation with singularity problems on polygonal domains. *Applied Numer. Math.*, 58:689–704, 2008. [SCI, NSYSU].
144. H.-T. Huang, Zi-Cai Li, and A.H.-D. Cheng. Coupling techniques in Trefftz methods. *COMPUTER ASSISTED MECHANICS AND ENGINEERING SCIENCES*, 15:183–213, 2008. [NSYSU].
145. Zi-Cai Li, T. T. Lu, and Y. M. Wei. Effective condition number of Trefftz methods for biharmonic equations with crack singularities. *NUMERICAL LINEAR ALGEBRA WITH APPLICATIONS*, 16(2):145–171, 2009. [SCI, NSYSU].
146. Q. Lin and H. T. Huang and Zi-Cai Li. New expansions of numerical eigenvalues by Wilson's elements. *J. Computational and Applied Mathematics*, 225:213–226, 2009. [SCI, NSYSU].
147. T. T. Lu, C. M. Chang, and H. T. Huang and Zi-Cai Li. Stability analysis of Trefftz methods for the stick-slip problem. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 33:474–484, 2009. [SCI, NSYSU].
148. H. T. Huang, S. L. Chang, C. S. Chien, and Zi-Cai Li. Superconvergence of high order FEMs for eigenvalue problems with periodic boundary conditions. *COMPUTER METHODS IN APPLIED MECHANICS AND ENGINEERING*, 198(30–32):2246–2259, 2009. [SCI, NSYSU].
149. Zi-Cai Li. Method of fundamental solutions for annular shaped domains. *J. Computational and Applied Mathematics*, 228(1):355–372, 2009. [SCI, NSYSU].
150. Zi-Cai Li and H. T. Huang. Effective condition number for finite element method using local refinements. *APPLIED NUMER. MATH.*, 59:1779–1795, 2009. [SCI, NSYSU].
151. J. Huang, T. Lu, and Zi-Cai Li. Mechanical quadrature methods and their splitting extrapolations for boundary integral equations of first kind on open arcs. *Applied Numer. Math.*, 59(12):2908–2922, 2009. [SCI, NSYSU].
152. Zi-Cai Li, Q. Fang, H. T. Huang, and Y. Wei. On solution uniqueness of elliptic boundary value problems. *J. Computational and Applied Mathematics*, 233(2):293–307, 2009. [SCI, NSYSU].
153. Zi-Cai Li, Q. Fang, and S. Wang. Superconvergence of solution derivatives for the ShortleyWeller difference approximation for parabolic problems. *Numer. Funct. Anal. and Optimiz.*, 30(11–12):1360–1380, 2009. [SCI, NSYSU].

154. Zi-Cai Li, C. S. Chien, H. T. Huang, , and B. W. Jeng. Superconvergence of bi- k -Lagrange elements for eigenvalue problems. *Computer Physics Communications*, 180(11):2268–2282, 2009. [SCI, NSYSU].
155. Zi-Cai Li, H. J. Young, H. T. Huang, Y. P. Liu, and A. H. D. Cheng. Comparisons of fundamental solutions and particular solutions for Trefftz methods. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 34(3):248–258, 2010. [SCI, NSYSU].
156. Zi-Cai Li, P. C. Chu, L. J. Young, and M. G. Lee. Models of corner and crack singularity of linear elastostatics and their numerical solutions. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 34(6):533–548, 2010. [SCI, NSYSU].
157. M. G. Lee, L. J. Young, Zi-Cai Li, and P. C. Chu. Combined Trefftz methods of particular and fundamental solutions for corner and crack singularity of linear elastostatics. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 34(7):632–654, 2010. [SCI, NSYSU].
158. Zi-Cai Li, J. Huang, and H. T. Huang. Stability analysis of method of fundamental solutions for mixed boundary value problems of laplace's equation. *COMPUTING*, 89(1-2):1–29, 2010. [SCI, NSYSU].
159. Zi-Cai Li, H. T. Huang, J. T. Chen, and Y. Wei. Effective condition number and its applications. *COMPUTING*, 89(1-2):87–112, 2010. [SCI, NSYSU].
160. J. Huang, Zi-Cai Li, I. L. Chen, and Alexander H.D. Cheng. Advanced quadrature methods and splitting extrapolation algorithms for first kind boundary integral equations of Laplace's equation with discontinuity solutions. *ENGINEERING ANALYSIS WITH BOUNDARY ELEMENTS*, 34:1003–1006, 2010. [SCI, NSYSU].
161. Zi-Cai Li, T.T. Lu, H. T. Hunag, and A. H. D. Cheng. Error analysis of Trefftz methods for Laplace's equations and its applications. *CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES*, 52(1):39–81, 2009. [SCI, NSYSU].
162. Zi-Cai Li, J. Y. Chiang, and C. Y. Suen. Face transformation with harmonic models by finite volume method with Delaunay triangulation. Accepted by IEEE Trans. on Sys. MAN AND CYBERN PART B-CYBERNETICS, 2010. [SCI, NSYSU].
163. J. Huang, G. Zeng, X. He, and Zi-Cai Li. Splitting extrapolation algorithm for first kind boundary integral equations with singularities by mechanical quadrature methods. ACCEPTED BY ADVANCES IN COMPUTATIONAL MATHEMATICS, 2010. [SCI, NSYSU].
164. Zi-Cai Li, H. T. Huang, and Y. Wei. ill-conditioning of the truncation singular value decomposition and the Tikhonov regularization and their application to numerical partial differential equations. revised version for Numerical Linear Algebra with Applications. [SCI, NSYSU].
165. Zi-Cai Li. Error analysis for hybrid Trefftz methods coupling traction conditions in linear elastostatics, a comparison. revised version for Numerical Methods for PDE, 2010. [SCI, NSYSU].

(B) 專書及其他著作

1. Zi-Cai Li, T. D. Bui, Y. Y. Tang, and C. Y. Suen. *Computer Transformation of Digital Images and Patterns* (258 pages). World Scientific, Singapore, 1989.
2. Zi-Cai Li. *Numerical Methods for Elliptic Problems with Singularities: Boundary Methods and Nonconforming Combinations* (258 pages). World Scientific, Singapore, 1990.
3. Zi-Cai Li. *Combined Methods for Elliptic Problems with Singularities, Interfaces and Infinities* (476 pages). Kluwer Academic Publishers, 1998. [NSYSU].
4. Zi-Cai Li, T. T. Lu, H. Y. Hu, and A. H. D. Cheng. *Trefftz and Collocation Methods* (432 pages). WIT press, Southampton, Boston, January 2008. [NSYSU].
5. Zi-Cai Li. The fundamental solutions for Laplace's equation with mixed boundary condition. In C. S. Chen, A. Karageorghis, and Y. S. Smyrlis, editors, *The Method of Fundamental Solutions - A Meshless Method*, chapter 2, pages 29–49. Dynamic Publishers, Inc., USA., 2009. [NSYSU].
6. Zi-Cai Li, H. T. Huang, and N. Yan. *Global Superconvergence of Finite Elements for Elliptic Equations and its Applications* (about 300 pages). Accepted by Science Press, Beijing. and plan to published in 2011. [NSYSU].