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(B)　研討會論文

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2.　C.-S. Chien, 1989, An efficient continuation algorithm for nonlinear eigenvalue problems, in: R.Gruber, J. Periaux and R.P. Shaw, Eds., Proc. 5th International Symposium on Numerical Methods in Engineering, Computational Mechanics Publications, Springer-Verlag, pp.215-220.

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(C)    研究報告與投稿之論文

1.    C.-S. Chien, N.-H. Lu, and M.-S. Yu, 1995, Parallel conjugate gradient methods for nonlinear eigenvalue problems, Technical Report of the NSC.
計畫編號：NSC 84-2121-M-005-005-MS
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4.    Z.-C. Li, H.-T. Huang, C.-S. Chien, and Y.-D. Yang, 2009 (    ), Superconvergence of High order FEMs using penalty techniques for eigenvalue problems with periodic boundary conditions, submitted to Computer Method Appl. Mech. & Engrg..
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5.    Z.-C. Li, S. C. Hu, H.-T. Huang, and C.-S. Chien, 2009 (    ), Spectral collocation methods for semilinear elliptic eigenvalue problems, submitted to J. Sci. Comput..
     計畫編號：NSC 98-2115-M-005-003-MY3


(D)  歷年指導過之碩博士畢業生，( ) 數字代表畢業年度。

    1. 碩士班畢業生
黃士修 (78)，王靜風 (79) (和春技術學院講師)，陳宗仁 (79) (數學教師)，簡碩伸 (80) (屏東普門中學教師)，林明珊 (80) (嘉義協同中學教師)，葉佐欽 (80) (明道中學教師)，李維昌 (81) (數學教師)，陳明哲 (82) (資訊業)，陳明信 (83)，盧南華 (83) (職業軍官)，翁振陵 (84) (金門就業)，龔信有 (85) (資通電腦系統部程式設計師)，沈志龍 (85) (北投國中教師)，郭昱汝 (86) (美國 Indiana University 助理教授)，陳美華 (86) (竹北高中教師)，鄭博文 (86) (台中教育大學數學教育助理教授)，曹惟勝 (87) (台積電資訊工程師)，廖益賢 (88)，戴佩芬 (88) (中興大學應數系助教)，周修聖 (88) (銀行業)，李一平 (89)，江俊瑩 (91) (中興大學應數系助教)，陳慧霜 (91) (中興大學應數系博士生)，李政軒 (92)，杜慧絹 (92)

(台南市國中教師)，古嚴博 (93) (空軍基地)，林雅菁 (93) (彰化縣竹塘國中)，葉政叡 (94) (台南科學中心志邦科技工程師)，林進一 (94) (服役)，尤力廣 (95)，蕭竣中 (95)，王信舜 (98)，白佶弘 (98)，林千資 (98)。

   2. 博士班畢業生
張勝麟 (91)，現職：南台科技大學通識中心教授。

鄭博文 (94)，曾任： 國立交通大學應數系助理教授，

                        現職： 國立台中教育大學數學教育系助理教授。

   3. 博士生
博四：陳慧霜，王允仕。

博三：陳素英。

(E) 最近三年之研究方向

   1. 利用雙重網格法與延續法求解半線性特徵值問題與反應－擴散系統，與 Schrödinger-Poisson 特徵值問題。
   2. 利用 Liapunov-Schmidt reduction 與延續法處理非線性的 Schrödinger 方程組，及一些反應擴散問題，諸如 Gierer-Meinhardt 與 Schnarkenberg system 等。
   3. 利用 spectral methods 與 pseudo-spectral methods 解 nonlinear Schrödinger equations, 探討 Bose-Einstein condensates (BEC) 與非線性光學之 Bloch waves 與 symmetry-breaking solutions. 使用之 basis functions 為 (i) Fourier sine functions, (ii) Legendre polynomials, (iii) Chebyshev polynomials.

(F) 目前合作研究對象：

(1)     張勝麟：南台科技大學通識中心

(2)     鄭博文：國立台中教育大學數學教育系

(3)     吳飆：中國科學院物理所

(4)　　　李瑞光：清華大學光電所

(5)　　　郭西川：彰化師範大學物理系

(6)　　　洪子倫：逢甲大學應數系

(7)　　　施因澤：中興大學應數系

(8)　　　李子才：中山大學應數系

(9)　　　黃宏財：義守大學應數系