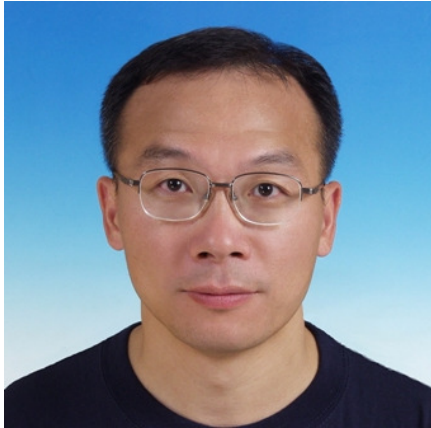


施因澤 (Shih, Jerry Yin-Tzer)



Jerry's contact Information:

Department of Applied Mathematics
National Chung Hsing University
250 Kuo-Kuang Rd,
Taichung 40227, Taiwan
地址：台中市國光路250號
國立中興大學應用數學系

Email : [yintzer_shih AT email.nchu.edu.tw](mailto:yintzer_shih@email.nchu.edu.tw)

Tel : (04) 22853459, 22873181 ext. 609

Fax : (04) 2287-3028

Skype: yintzer_shih

Msn: yintzer_shih AT msn.com

Office Hours: Mon, Tue, Wed 12:30-1:30 with Appointment.

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98學年度第一學期教授課程 (Teaching for the 2009 Fall Semester)

- 2009 Fall 98學年度第一學期:
 - 應數系：數值分析 I Numerical Method I. 3266 [部落格\(Blog\)](#) [期中考解答一](#) [解答二](#) [解答三](#)
 - 應數所：高等數值分析 I Advanced Numerical Method I. 6563

履歷 (C.V.)

學歷 (Education)

- 美國馬里蘭大學應用數學博士 Ph.D. D., University of Maryland at College Park
- 清華大學應用數學所碩士 M.S., National Tsing Hua University
- 中興大學應用數學系學士 B.S., National Chung Hsing University

學術專長暨研究領域 (Interests)

- 數值分析 Numerical Analysis
- 偏微分方程 Partial Differential Equations
- 醫學影像 Medical Imaging
- 科學計算 Scientific Computing

學術經歷 (Experience)

- 國立中興大學應用數學系 助理教授 2003/02 ~Present
- 中山醫學大學醫學影像技術學系 助理教授 2002/08 ~ 2003/01
- 美國國家航空氣象中心 資深軟體工程師 2000/05 ~ 2002/07
- 美國醫學光學影像公司 資深軟體工程師 1998/10 ~ 2000/04

最近研究計劃 (Funding Projects)



計劃名稱	期間	贊助單位	編號
雷射乳房攝影上拋物線逆向問題的數值解	2003.12.01 至 2004.07.31	國科會 NSC	NSC 92-2119-M-005-002
影像重建的快速數值演算法(1/2)	2004.0801 至 2005.07.31	國科會 NSC	NSC 93-2115-M-005-008
影像重建的快速數值演算法(2/2)	2005.0801 至 2006.07.31	國科會 NSC	NSC 94-2115-M-005-002
立波諾夫化簡與延續法處理反應－擴散問題	2005.0801 至 2006.07.31	國科會 NSC	NSC 95-2115-M-005-004
計算數學於影像處理的應用	2006.0801 至 2007.07.31	教育部 DE	RA96012A
偏微分方程式於影像處理的應用	2008.0801 至 2009.07.31	國科會 NSC	NSC 97-2115-M-005-002
使用立方次厄米特有限單法延續法解旋轉玻色-愛因斯坦凝聚	2009.0801 至 2010.07.31	國科會 NSC	NSC 98-2115-M-005-005

指導研究生(graduate students)

研究生(碩士班)

1. 芮嘉勇 (January 2007)
2. 莊家芸, 鄭俊勇, 朱家敏 (July 2008)
3. 蔡佩珊 (June 2009)
4. 張友友 (2010)
5. 焦郁華, 黃學偉, 林又榛, 林宏昇 (2011)

演講、訪問 (Lecture, Visiting)

1. International conference on Numerical Methods in Imaging Science and Information Processing, 15-19 December 2003, National University of Singapore, "The numerical algorithm for an inverse problem in optical mammography".
2. 中山醫學大學附屬醫院醫學影像部, The numerical algorithm for image reconstruction in optical mammography, 12/29/2003.
3. 國立交通大學應用數學系, Numerical solution of an inverse problem in Optical Mammography, 03/16/2004.
4. 國立中山大學應用數學系, A novel numerical computation algorithm for solving a parabolic inverse problem using in detecting the breast cancer, 04/01/2004.
5. Visiting the Department of Mathematics and Statistics, University of North Carolina, Charlotte, NC. 07/05/04 - 07/14/04.
6. Visiting the Department of Mathematics, University of Kansas, Lawrence, KS 11/26/04 - 12/06/04.
7. International Conference on Inverse Problems in Engineering: Theory and Practice, July 11-15, 2005, Cambridge, UK.
8. Visiting the Department of Mathematics, Southern Methodist University, Dallas, TX, 11/11/05 – 11/20/05
9. Visiting the Department of Applied Mathematics and Statistics, State University of New York- Stony Brook, Long Island, NY, 2/2/06 – 2/8/06
10. Invited speaker, NCTS International Workshop on Scientific Computing June 26-30, 2006, National Taiwan University, Taipei, Taiwan
11. Invited speaker, 2007 Computational Mathematics Conference高雄中山大學, 2007/06/22~06/23
12. Invited speaker, 2007 Taiwan-Japan Joint Workshop on Numerical Analysis and Scientific Computing,

11/30~12/2, 2007.

13. Participant for SAMSI Program on Random Media, Imaging Problems Workshop, January 31 - February 1, 2008
14. Invited speaker, Providence University, 3/20, 2008
15. Invited speaker, NTCS and National Taiwan University, 6/17, 2008
16. Invited speaker, Taiwan-Japan Joint Workshop on Inverse Problem, Academic Sinica, Nov. 28-Dec. 1, 2008
17. Invited speaker and Section Chair, The Workshop on Computational Mathematics and Mechanics, Tung-Hai University, Taichung, April 17-20, 2009
18. Visited University of South Carolina, July-August, 2009

著作 (Publications)

1. Y. Shih and H.C. Elman*, "Modified Streamline Diffusion Schemes for Convection-Diffusion Problems", *Computer Methods in Applied Mechanics and Engineering*, Vol. 174, 137-151, 1999. (2008 Impact factor 2.129, ISI rank 9/76 in Math, Interdis Appl.).
2. Y. Shih and H.C. Elman*, "Iterative Methods for Stabilized Discrete Convection-Diffusion Problems", *IMA, Numerical Analysis*, Vol 20, No 3, 333-385, 2000. (2008 Impact factor 1.405, ISI rank 23/175 in Applied. Math)
3. Y. Shih* "The Numerical Algorithm for An Inverse Problem in Optical Mammography", the Numerical Methods in Imaging Science and Information Processing 15-19 December 2003, National University of Singapore. NSC 92-2914-I-040-012-A1 travel grant
4. Y.T. Shih* and T.R. Lucas "A New Implementation of the Elliptic Systems Method in Time Dependent Diffusion Tomography Applied to back Reflected and Transmitted Data", *Proceedings of the 5th International Conference on Inverse Problems in Engineering: Theory and Practice*, Cambridge, UK, 11-15th July 2005
5. Y.T. Shih* and T.R. Lucas "A new implementation of the elliptic systems method in time dependent diffusion tomography with back reflected and transmitted boundary data", *Applied Mathematics and Computation*. Vol. 188, 64-74, 2007 (2008 Impact factor 0.961, ISI rank 61/175 in Applied Math)
6. Y.T. Shih*, C. Rei and H. Wang "A novel PDE based image restoration: convection-diffusion equation for image denoising" *Journal of Computational and Applied Mathematics*, 231 (2009), pp. 771-779 (2008 Impact factor 1.048, ISI rank 49/175 in Applied Math).
7. C.S. Chien and Y. Shih*, "A cubic Hermite finite element and continuation methods for numerical solution of the von Kármán equations", *Applied Mathematics and Computation.*, Vol. 209, 356-368, 2009 (2008 Impact factor 0.961, ISI rank 61/175 in Applied Math).
8. Y.T. Shih*, C.S. Chien and C.Y. Chung, "An Adaptive Parameterized Block-Based Singular Value Decomposition for Image Denoising and Compression.", submitted to *Journal of Computational and Applied Mathematics*, May, 2009.
9. Y.T. Shih*, R.B. Kellogg and P.S. Tsai, "A Tailored Finite Point Method for Convection-Diffusion-Reaction Problems", submitted to *Journal of Scientific Computing*, August, 2009.
10. Y.T. Shih* and J.Y. Cheng, "An exponential fitting finite element scheme for convection-diffusion problems", submitted to *Applied Mathematics and Computation*.
11. Po-Wen Hsieh, Yintzer Shih and Suh-Yuh Yang*, A tailored finite point method for steady MHD duct flow problems with boundary layers, submitted to *Computer Methods in Applied and Engineering*.