

## 鄧君豪資料

### 一、基本資料

中文姓名：	鄧君豪	英文姓名：	Chun-Hao Teng		
傳真號碼：	(03)5724679	性別：	M	出生日期：	1970.02.14
郵遞區號：	300	聯絡地址：	National Chiao Tung University Center of Mathematical Modeling and Scientific Computing		
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### 二、主要學歷

學校名稱	國別	主修學門系所	學位	起訖年月
Brown University	USA	Applied Mathematics	Ph. D.	1996.09 - 2001.05
Brown University	USA	Applied Mathematics	M.S.	1996.09 - 1998.05
Clarkson University	USA	Mechanical Engineering	M.S.	1993.09 - 1996.06
台北工專	Taiwan(R.O.C)	Mechanical Engineering	專科	1985.09 - 1990.06

### 三、現職及專長相關之經歷

服務機關	服務部門/系所	職稱	起訖年月
National Chiao Tung University	Department of Applied Mathematics Center of Mathematical Modeling and Scientific Computing	Postdoc	2009.08
<b>經歷：</b>			
National Cheng Kung University	Department of Mathematics	Assistant Professor	2003.08 - 2009.07
National Taiwan University	Graduate Institute of Photonics and Optoelectronics	Postdoc	2001.06 - 2003.07
Brown University, Providence RI 02912, USA	Division of Applied Mathematics	Research Assistant	1997.06 - 2001.06
Calrkson University, Potsdam NY 13696, USA	Department of Mechanical Engineering	Research Assistant	1994.08 - 1996.03

#### 四、專長

1. Scientific Computing Numerical Analysis	2. Computational Electromagnetics	3. Computational Mechanics (Solid and Fluid)	4. Instability of Fluid Motions, Optics
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#### 五、論文著述：

##### (A) 期刊論文

1. (SCI) Sung R. J., Wu Y. H., Lai N. H. J., Teng C. H., Luo C. H., Tien H. C., Lo C. P., Wu S. N.,  $\beta$ -Adrenergic modulation of arrhythmogenesis and identification of targeted sites of antiarrhythmic therapy in Timothy(LQT8) syndrome: a theoretical study, *Am J Physiol Heart Circ Physiol*, 298, pp. H33-H44, (2010), IF: 3.643.
2. (SCI) Lin B. Y., Hsu H. C., Teng C. H., Chang H. C., Wang J. K., Wang Y. L., Unraveling Near-Field Origin of Electromagnetic Waves Scattered from Silver Nanorod Arrays Using Pseudo-Spectral Time-Domain Calculation, *Optics Express*, 17, pp. 14211-14228, (2009), IF: 3.8.
3. (SCI) Teng C. H., Lin B. Y., H. C. Chang H. C., Hsu H. C., Lin C. N., Feng K. A., A Legendre Pseudospectral Penalty Scheme for Solving Time-Domain Maxwell's Equations, *J. Sci. Comput.*, 36, pp. 351-390, (2008), IF: 1.281.
4. (SCI) Chiang P. J., Wu C. L., Teng C. H., Yang C. S., Chang H. C., Full-Vectorial Optical Waveguide Mode Solvers Using Multidomain Pseudospectral Frequency-Domain (PSFD) Formulations, *IEEE Journal of Quantum Electronics*, 44, pp. 56-66, (2008), IF: 2.262
5. (SCI) Feng K. A., Teng C. H., Chen M. H., A Pseudospectral Penalty Scheme for 2D Isotropic Elastic Wave Computations, *J. Sci. Comput.*, 33, pp. 313-348, (2007), IF: 1.281.
6. Chang H. C., Chiang P. J., Yang C. S., Wu C. L., Teng C. H., Full-Vectorial Optical Waveguide Eigenmode Solvers Based on Multidomain Pseudospectral Methods, *International Journal of Microwave and Optical Technology*, 1, pp. 628-632, (2006).
7. (SCI) Min M. S., Teng C. H., The Instability of the Yee scheme for the "Magic Time Step", *J. Comput. Phys.*, 166, pp. 418-424, (2001).
8. (SCI) Hesthaven J. S., Teng C. H., Stable Spectral Methods on Tetrahedral Elements, *SIAM J. Sci. Comp*, 21, pp. 2352-2380, (2000).

9. (SCI) Teng C. H., Lin S. P., Chen J. N., Absolute and Convective Instability of a Viscous liquid curtain in viscous gas, *J. Fluid Mech.* 332, pp. 105-120, (1997).

(B) 研討會論文

1. Bang-Yan Lin, Chun-Hao Teng, Hung-Chun Chang, Analysis of Optical Properties of 2D Ordered Plasmonic Nanoparticle Systems Using a 3D Pseudospectral Time-Domain Scheme, International Symposium on Antennas and Propagation, 2008.
2. B. Y. Lin, C. H. Teng, H. C. Chang, "Near-field and Far-field Behavior of a Metallic Nanoscale Sphere at Optical Frequencies Based on the Classical Drude Model", EMTS 2007-International URSI Commission B-Electromagnetic Theory Symposium, 2007
3. B. Y. Lin, C. H. Teng, H. C. Chang, "A Novel Beam Propagation Method for Solving Band Diagrams of Photonic Crystals", in OSA 2006 Integrated Photonics Research and Applications (IPRA'06) Technical Digest (CD ROM), paper IWB6 (3 pages), Uncasville, Connecticut, Apr. 2006
4. H. C. Chang, P. J. Chiang, C. S. Yang, C. L. Wu and C. H. Teng, "Full-vectorial Optical Waveguide Eigenmode Solvers Based on Multidomain Pseudospectral Methods", in Proc. of the 10th International Symposium on Microwave and Optical Technology (ISMOT-2005) (CD-ROM), paper C-05 (invited), Fukuoka, Japan, Aug. 2005
5. P. J. Chiang, C. S. Yang, C. L. Wu, C. H. Teng, and H. C. Chang, "Application of Pseudospectral Methods to Optical Waveguide Mode Solvers", in OSA 2005 Integrated Photonics Research and Applications (IPRA'05) Technical Digest (CD-ROM), paper IMG4, San Diego, California, Apr. 2005
6. M. F. Chen, C. H. Teng and H. C. Chang, "Simulation of Microcavity Optical Resonators Using the Finite-Difference Time-Domain Method", in Proceedings of Optics and Photonics Taiwan'03 (OPT'03), Vol. II, pp. 200-202, Taipei, Taiwan, R.O.C., Dec. 2003
7. C. H. Teng, Hung-Chun Chang, "Pseudospectral methods for computational electromagnetics: The characteristic variables representation of boundary conditions for electromagnetic waves". Progress In Electromagnetics Research Symposium, 2003 (PIERS 2003)
8. A. Ditkowski, J. H. Hesthaven and C. H. Teng, "Modeling dielectric interfaces in the FDTD methods: A comparative study", Progress In Electromagnetics Research Symposium, 2000 (PIERS 2000)
9. J. N. Chen, S. P. Lin and C. H. Teng, "Instability of a liquid jet emanating into a viscous region", The 49<sup>th</sup> Annual Meeting of The American Physical Society's, 1996

(C) 專書論文

1. Ph. D. Thesis: Numerical Methods for Wave Problems in Complex Geometries, supervised under Prof. David Gottlieb and Prof. Jan Hesthaven, Brown University, 2001
2. M. S. Thesis: Absolute and Convective Instability of a Viscous Liquid Curtain in Viscous gas, supervised under Prof. S. P. Lin, Clarkson University, 1996

(D) 技術報告

C. H. Teng, A. Ditkowski and J. S. Hesthaven, Modeling dielectric interfaces in the

## 六、近年執行之研究計畫及教學計畫

### (一)、研究計畫

計畫名稱	計畫內擔任的工作	起訖年月	補助或委託機構	執行情形	經費總額
彈力波之高階精確差分計算格式(97-2115-M-006-004-)	主持人	2008/8/1 至 2009/7/31	行政院國家科學委員會	已結案	506,000
奈米粒子加強式光譜學與顯微術的原理及應用 (3/3)(96-2120-M-001-002-)	共同主持人	2007/8/1 至 2009/7/31	行政院國家科學委員會	已結案	11,000,000
細胞生理模擬的信賴度研究和心臟細胞模型的更新 (96-2628-B-006-001-MY3)	共同主持人	2007/8/1 至 2010/7/31	行政院國家科學委員會	執行中	4,335,000
奈米粒子加強式光譜學與顯微術的原理及應用 (2/3)(95-2120-M-001-003-)	共同主持人	2006/8/1 至 2008/1/31	行政院國家科學委員會	已結案	11,000,000
奈米粒子加強式光譜學與顯微術的原理及應用 (1/3)(94-2120-M-001-013-)	共同主持人	2005/10/1 至 2007/7/31	行政院國家科學委員會	已結案	11,260,000
以幾何投影方式尋求在三角形元素中適合高階內插多項式的節點 (93-2115-M-006-010-)	主持人	2004/8/1 至 2005/7/31	行政院國家科學委員會	已結案	487,400
頻域麥克士威爾方程之譜方法數值解法 (92-2119-M-006-018-)	主持人	2003/11/1 至 2004/7/31	行政院國家科學委員會	已結案	339,100

### (二)、教學計畫

計畫名稱	計畫內擔任的工作	起訖年月	補助或委託機構	執行情形	經費總額
98年度大學跨學門科學人才培育銜接計畫。(計畫名稱：科學計算之理論和應用)	主持人	2008/2/1 至 2008/12/31	行政院教育部	已結案	264,000

## 七、獎勵事蹟

2005 國立成功大學理學院 94 學年度教學優良教師

2008 國立成功大學理學院 97 年度「發展國際一流大學及頂尖研究中心計畫」研究及產學成果獎勵之研究傑出獎