

PUBLICATIONS

(A) Journal Articles (期刊論文)

- [1] Chih-Fan. Chen* and Jiunn-Lin Wu, 1997, "Analysis of Control Systems Involving Irrational Transfer Functions via Haar Wavelets", *Control and Computers*, Vol. 25, No 1, pp.5-11. (EI)
- [2] Te-Ming Tu*, Chin-Hsing Chen, Jiunn-Lin Wu and Chein-I Chang, 1998, "A Fast Two Stage Classification Method for High Dimensional Remote Data", *IEEE Trans. on Geoscience and Remote Sensing*, Vol.36, No.1, pp.182-191. (SCI IF=3.873, EI)
- [3] Jiunn-Lin Wu*, Chin-Hsing Chen and Chih-Fan Chen, 2001, "Numerical Inversion of Laplace Transfrom Using Haar Wavelet Operational Matrices", *IEEE Trans. on Circuits and Systems-Part I: Fundamental Theory and Applications*, Vol. 48, No. 1, pp.120-122. (SCI IF=2.043, EI)
- [4] Jiunn-Lin Wu*, Chin-Hsing Chen and Chih-Fan Chen, 2001, "Model Reduction via Haar Wavelets", *Control and Intelligent Systems*, Vol. 29, No 2, pp. 29-32. (EI)
- [5] Jiunn-Lin Wu* and Chin-Hsing Chen, 2004, "A New Operational Approach for Solving Fractional Calculus and Fractional Differential Equations Numerically", *IEICE Trans. on Fundamentals of Electronics, Communications and Computer Sciences*, Special Section on Discrete Mathematics and Its Applications, Vol. E87-A, No. 5, pp.1077-1082. (SCI IF=0.330, EI)
- [6] 王玉純*、吳俊霖、莊淳宇、章珍珍、宋鴻樟、柳中明, "台灣都會區心血管及呼吸道疾病死亡率與氣象因子之相關分析", *全球變遷通訊雜誌*, 46 期, 2005, pp. 14-20. (TSCI) (NSC94-EPA-Z-039-001)
- [7] Jiunn-Lin Wu* and Jie-Lun Jia, "An Improved Method for Constructing High Dynamic Range Photographs," *Journal of Engineering, National Chung Hsing University*, Vol. 17, No. 3, 2006, pp.189-197. [In Chinese] (NSC94-2213-E-005-004)
- [8] Jiunn-Lin Wu* and Shi-Jie Wu, "An Effective Hybrid Vector Filter for Color Image Noise Reduction", *Journal of Engineering, National Chung Hsing University*, Vol. 17, No. 3, 2006, pp. 177-188. [In Chinese] (NSC94-2515-S-005-002)
- [9] Jiunn-Lin Wu* and Je-Lun Jia, "A Robust Algorithm for Moving Objects Detection in Differently Exposed Image Sequences," *Journal of Computer Science and Application*, Vol. 2, No. 2, 2006, pp. 61-76. [In Chinese] (NSC 95-2221-E-005-064)
- [10] Jiunn-Lin Wu*, "An Automatic Enhancement Method for High Contrast Images via Bilateral Filtering", *Journal of Science and Engineering Technology*, Vol. 3, No.3, 2007, pp. 81-87. [In Chinese] (TSCI)
- [11] Jiunn-Lin Wu* and Meng-Han Hung, "An Efficient Method for Flash Photography Enhancement", *Journal of Internet Technology*, Vol.8, No.2, 2007, pp.171-178. [In Chinese] (An extended version for TANET2006 Best Paper Award) (EI)

- [12] Jiunn-Lin Wu*, “A Novel Numerical Method for Solving Fractional Calculus via Operational Matrices,” *Journal of Statistics and Computing*, Vol. 9, 2007, pp.23-43. [In Chinese] (NSC94-2213-E-005-026)
- [13] Chao-Hung Lai* and Jiunn-Lin Wu, “Temporal Texture Synthesis by Patch-Based Sampling and Morphing Interpolation”, *Computer Animation and Virtual Worlds*, Vol.18, Issue 4-5, 2007, pp.415-428. (SCI IF=0.455 COMPUTER SCIENCE, SOFTWARE ENGINEERING: 82/93=88%, EI)
- [14] Jiunn-Lin Wu* and Jie-Lun Jia, “A Study on Robust Watermarking Technique for High Dynamic Range Images”, *Journal of Computer Science and Application*, Vol.3, No.1, 2007, pp. 149-166. [In Chinese]
- [15] Jiunn-Lin Wu* and Yen-Liang Chen, “A Robust Feature-Based Registration Method for Differently Exposed Sequences”, *Journal of Computer Science and Application*, Vol. 3, No.1, 2007, pp. 127-148. [In Chinese]
- [16] Jiunn-Lin Wu*, and Min-Yao Lu, “Using Image Inpainting to Remove Dust Spots from Digital-SLR Images”, *Journal of Engineering, National Chung Hsing University*, Vol. 18, No.3, 2007, pp. 187-198. [In Chinese]
- [17] Jiunn-Lin Wu* and Yu-Ru Lin, “A Novel High Dynamic Range Image Encoding Scheme Based on Data Hiding,” *Journal of Computer Science and Application*, Vol. 3 No. 2, 2007, pp. 37-52. [In Chinese] (NSC96-2221-E-005-094)
- [18] Jiunn-Lin Wu* and Jen-Yi Tzeng, “A Study on Segmentation of Remotely Sensed Forest Images by Using The Improved Seeded Region Growing Algorithm,” *Journal of Photogrammetry and Remote Sensing*, Vol.12, No.4, December 2007, pp. 431-445. [In Chinese] (TSCI)
- [19] Jiunn-Lin Wu*, Wei-Dun Teng and Fong-You Wu, “A Two-Stage Algorithm for Hot Pixel Noise Reduction”, *Journal of Science and Engineering Technology*, Vol. 4, No. 2, 2008, pp. 19-29. [In Chinese] (TSCI)
- [20] Pei-Shih Chen*, Chien Kun Lin, Feng Ta Tsai, Chun-Yuh Yang, Chwan-Chuen King, Jiunn-Lin Wu, Yu-Chun Wang, Chien-Hung Lee, Yen-shung Liao, “Quantification of Airborne Influenza and Avian Influenza Virus in a Wet Poultry Market using a Filter/Real-time qPCR Method”, *Aerosol Science and Technology*, Vol. 43, Issue 4, April 2009, pp. 290-297. (SCI IF=2.739, ENGINEERING, CHEMICAL: 13/126 =10%) (NSC-95-EPA-Z-002-004 and NSC96-EPA-Z002-005)
- [21] Jiunn-Lin Wu*, “A Wavelet Operational Method for Solving Fractional Partial Differential Equations Numerically,” *Applied Mathematics and Computation*, Vol. 214, Issue 1, August 2009, pp. 31-40. (SCI IF=1.124, MATHEMATICS, APPLIED: 61/202=30%) (NSC94-2213-E-005-026)
- [22] Chao-Hung Lai and Jiunn-Lin Wu*, “Robust Image Watermarking Against Local Distortion Attacks Using Multiscale Block Matching Method”, *Journal of Visual*

Communication and Image Representation, Vol. 20, Issue 6, August 2009, pp. 377-388.
(SCI IF=1.326, COMPUTER SCIENCE, SOFTWARE ENGINEERING: 41/93=44%) (NSC 95-2221-E-005 -064)

- [23] Jiunn-Lin Wu*, Fong-You Wu and Lung-Chun Lin, “An Improved Switching Median Filter for Impulse Noise Removal from Extremely Corrupted Images”, *Journal of Technology*, Vol. 24, No. 2, pp. 143-156, 2009. [In Chinese] (影像顯示科技論文獎-佳作) (NSC97-2221-E-005-081)
- [24] Yung-Kuan Chan*, Jiun-Shiang Wang, Meng Hsiun Tsai, Shu-Wei Guo, and Jiunn-Lin Wu, “Color-Texture Based Image Retrieval System Using Gaussian Markov Random Field Model”, *Mathematical Problems in Engineering*, Volume 2009, Article ID 410243, 17 pages, **(SCI IF=0.553, ENGINEERING, MULTIDISCIPLINARY: 48/79=61%)**
- [25] Wei-Chun Chou, Jiunn-Lin Wu, Yu-Chun Wang, Hsin Huang, Fung-Chang Sung, Chun-Yu Chuang*, “Modeling the impact of climate variability on diarrhea-associated diseases in Taiwan (1996-2007)”, *Science of the Total Environment*, 409(1), 2010, pp. :43-51. **(SCI IF=2.905, ENVIRONMENTAL SCIENCES: 31/180=17%)**
- [26] Jiunn-Lin Wu* and I-Ying Chou, “An Effective Content-Aware Image Inpainting Method,” Accepted by *Journal of Information Science and Engineering*, 2010. **(SCI IF=0.315, COMPUTER SCIENCE, INFORMATION SYSTEMS: 111/116=96%)**
- [27] Jiunn-Lin Wu* and Meng-Han Hung, “Fast MAP-Based Super Resolution Algorithm Using Multilevel Interpolation and Reconstruction,” Accepted by *Journal of the Chinese Institute of Engineers*, March 27, 2011. **(SCI IF=0.219, ENGINEERING, MULTIDISCIPLINARY: 62/79=78%)**

(B) Patents (專利)

- [1] Jiunn-Lin Wu* and Min-Yao Lu , “Using Image Inpainting to Remove Dust Spots from Digital-SLR Images (相機感光元件塵染造成影像缺陷的影像修復方法)”, 中華民國發明第 I336586 號，專利權期間: 2011/01/21 -- 2027/06/11.
- [2] Jiunn-Lin Wu* and Je-Lun Jia, “A Robust watermarking technique for High Dynamic Range Images (高動態範圍影像之強健浮水印的方法)”, 中華民國發明第 I342523 號，專利權期間: 2011/05/21 -- 2027/06/11.

(C) Conference Papers (研討會論文)

- [1] Chih-Fan Chen* and Jiunn-Lin Wu, 1995, February, “Numerical Inverse Laplace Transforms via Haar Wavelets for Irrational Transfer Function Evaluation”, Proceeding of the Fourteenth IASTED International Conference on Modeling, Identification, and Control, Austria. (EI)
- [2] Chin-fan Chen* and Jiunn-lin Wu, 1998, July, “A Wavelet Operational Method for Solving Partial Differential Equations”, Proceeding of the PIERS (Progress in

Electromagnetics Research Symposium) International Conference, Nantes, France.

- [3] Chin-fan Chen* and Jiunn-Lin Wu, 1999, “Analysis of Infinite Dimensional Systems via Wavelets”, Proceeding of the PIERS (Progress in Electromagnetics Research Symposium) International Conference, Taipei, Taiwan.
- [4] Shue-Chia Wang* and Jiunn-Lin Wu, 2000, February, “An Application of Virtual Reality in the 3D city model construction via VRML”, Proceeding of the Conference on Computer Applications in Civil and Hydraulic Engineering, Taichung, Taiwan, pp. 1915-1921.
- [5] Jiunn-Lin Wu*, Chin-Hsing Chen and Chih-Fan Chen, 2000, March, “A Unified Derivation of Operational Matrices for Integration in Systems Analysis”, Proceeding of IEEE International Conference on Information Technology: Coding and Computing, Las Vegas, USA, pp. 436-442. (EI)
- [6] Chin-fan Chen and Jiunn-Lin Wu*, 2000, July, “A Wavelet Method for Solving Fractional Differential Equations”, Proceeding of the PIERS (Progress in Electromagnetics Research Symposium) International Conference, Boston, USA, pp. 593.
- [7] Jiunn-Lin Wu*, Chin-Hsing Chen and Chih-Fan Chen, 2001, February, “Model Reduction via Haar Wavelets”, Proceeding of the IASTED International Conference on Modeling, Identification, and Control, Innsbruck, Austria, pp.234-238. (EI)
- [8] Chia-Wen Chu, Tzu-Fu Chiu and Jiunn-Lin Wu*, 2003, July, “A Hybrid Case-Based Reasoning Approach for the Electrocardiogram Diagnosis”, Proceeding of the 7th World Multiconference on Systemics, Cybernetics and Informatics, Orlando, USA, Vol.5, pp.93-98.
- [9] Jiunn-Lin Wu* and Chin-Hsing Chen, 2003, July, “A Novel Numerical Method for Solving Partial Differential Equations via Operational Matrices”, Proceeding of the 7th World Multiconference on Systemics, Cybernetics and Informatics, Orlando, USA, Vol.5, pp.276-281.
- [10] Jiunn-Lin Wu* and Chin-Hsing Chen, 2003, November , “A New Operational Approach for Solving Fractional Calculus and Fractional Differential Equations Numerically”, *IASTED International Conference on Software Engineering and Applications (SEA 2003)*, Marina Del Bay , USA, pp.516-522. (EI)
- [11] Y.C. Wang*, C.Y. Chuang, J.L. Wu, C.C. Chang, C.M. Liu and F.C. Sung, 2005, July, “The Impact of Weather on Respiratory Mortality in Taiwan Metropolitans”, Conference on the Progress in Climate Change and Sustainable Development Research, Taipei.
- [12] Y.C. Wang*, C.Y. Chuang, J.L. Wu, C.C. Chang, C.M. Liu and F.C. Sung, 2005, July, “The Impact of Weather on Cardiovascular Mortality in Taiwan Metropolitans”, Conference on the Progress in Climate Change and Sustainable Development Research, Taipei.
- [13] Fong-Long Feng and Jiunn-Lin Wu*, 2005, September, “ForestGrid - A Powerful Tool

for Integrating, Displaying, Querying and Analyzing Theme Maps”, 森林生態系永續經營研討會, National Chung Hsing University, Taichung, Taiwan, p.III-14.

- [14] Jiunn-Lin Wu* and Fong-Long Feng, 2005, October, “Development and Application of Taiwan Biological Habitat Suitability Analysis Model”, 台灣地理資訊學會年會暨學術研討會, Taichung, Taiwan.
- [15] 王玉純*, 莊淳宇, 吳俊霖, 章珍珍, 柳中明, 宋鴻樟, 2005, November, “台灣都會區心血管及呼吸道疾病死亡率與氣象因子之相關分析”, Climate workshop in Taiwan, Taipei.
- [16] Chao-Hung Lai* and Jiunn-Lin Wu, “A Novel Algorithm for Synthesizing Directional Temporal Texture Animation”, Proceeding of the IASTED International Conference on advances in computer science and technology, ACST 2006, Puerto Vallarta, Mexico, pp. 180-185. (EI)
- [17] Jiunn-Lin Wu* and Chia-Yi Chuang, 2006, June, “An Efficient Method for Enhancing High-Contrast Digital Photos Automatically”, IAENG International Workshop on Imaging Engineering (IWIE'06), Hong Kong, pp. 502 – 506. (EI)
- [18] C.C. Chang, Y.C. Wang, J.L. Wu, C.M. Liu, F.C. Sung, Y.L. Huang, W.Y. Lin, C.Y. Chuang*, 2006, September, “The Impact of Climate Change on Gastrointestinal Diseases in Taiwan”, Conference of the 18th International Society for Environmental Epidemiology (ISEE), Paris, France.
- [19] Jiunn-Lin Wu* and Je-Lun Jia, 2006, June, “An Improved Method for Constructing High Dynamic Range Photographs”, 2006 Symposium on Digital Life Technologies-Building a Safe, Secured and Sound (3S) Living Environment, Tainan, Taiwan. (NSC94-2213-E-005-004)
- [20] Jiunn-Lin Wu* and Shi-Jie Wu, 2006, June, “A Hybrid Vector Filter for Color Image Noise Reduction”, The first conference on Intelligent Living Technology, Taichung, Taiwan. (NSC94-2515-S-005-002)
- [21] Jiunn-Lin Wu* and Chu-Hsuan Huang, 2006, June, “A Study of Clustering Algorithm Based on Central Symmetry”, The first conference on Intelligent Living Technology, Taichung, Taiwan.
- [22] Jiunn-Lin Wu*, Chun-Yu Chuang and Chun-Hsueh Li, 2006, June, “An Automatic Counting System for The Microscopic Images of The Human Skin Keratinocytes (HaCaT) Cells”, The first conference on Intelligent Living Technology, Taichung, Taiwan.
- [23] Jiunn-Lin Wu* and I-Chin Lee, 2006, October, “A Wavelet Operational Method for Solving Fractional Partial Differential Equations Numerically”, 2006 MATLAB & Simulink Tech Forum and Expo, Hsinchu, Taiwan. (NSC94-2213-E-005-026)
- [24] Jiunn-Lin Wu* and Meng-Han Hung, 2006, November, “An Efficient Method for Flash Photography Enhancement”, Proceedings of TANET2006, Hualien, Taiwan.
- [25] Jiunn-Lin Wu* and Je-Lung Jia, 2006, November, “A Robust Algorithm for Moving

- Objects Detection in Differently Exposed Image Sequences”, Proceedings of TANET2006, Hualien, Taiwan. (NSC 95-2221-E-005 -064)
- [26] Jiunn-Lin Wu* and Shih-Chun Fan-Chiang, 2006, November, “An Efficient Segmentation Method for Remote Sensing Images Using Self-Organization Map”, Proceedings of TANET2006, Hualien, Taiwan.
- [27] Jiunn-Lin Wu* and Min-Yao Lu, 2007, “Using Image Inpainting to Remove Dust Spots from Digital-SLR Images”, Proceedings of 2007 International Conference on Advanced Information Technologies, Taichung, Taiwan, April 28.
- [28] Jiunn-Lin Wu* and Shih-Shu Chu, 2007, “An Effective Reversible Data Hiding Technique for High Dynamic Range Images”, Proceedings of The Second Conference on Digital Contents Management and Applications, Tainan, Taiwan, June 1-2.
- [29] Jiunn-Lin Wu* and Yen-Liang Chen, 2007, “A Robust Feature-Based Image Registration for Differently Exposed Sequences”, Proceedings of The second conference on Intelligent Living Technology, Taichung, Taiwan, June.
- [31] Jiunn-Lin Wu* and Jen-Yi Tzeng, 2007, “Improved Seeded Growing Segmentation Method for Color Images”, Proceedings of South Taiwan Conference on Information Technologies and Applications, Pingtung, Taiwan.
- [32] Jiunn-Lin Wu*, Wei-Dun Teng and Fong-You Wu, 2007, “A Novel Two-Stage Algorithm for Hot Pixel Noise Reduction”, 2007 Workshop on Consumer Electronics and Signal Processing, Taichung, Taiwan, November 2.
- [33] Wei-Dun Teng and Jiunn-Lin Wu*, 2008, “Image Registration of Multiple Differently Exposed Images by Using Genetic Algorithm”, The 19th International Conference on Information Management 2008 (ICIM 2008), Nantou, May 16~17.
- [34] Jiunn-Lin Wu* and Shu-Ming Lin, 2008, “A novel stroke extraction method for Chinese characters using modified tensor voting algorithm”, 2008 Workshop on Consumer Electronics, Taipei, December 5, 2008, pp. 369-375.
- [35] Jiunn-Lin Wu* and Fong-You Wu, 2008, “An Effective Impulse Noise Detector Using Convolution-Kernel Filters”, Proceedings of the conference on Ubiquitous Home 2008, Tainan, November 20, pp. 183-189.
- [36] Jiunn-Lin Wu* and Yuh-Ru Lin, 2008, “High Capacity Reversible Data Hiding Scheme Using Edge Prediction Error”, Proceedings of the conference on Ubiquitous Home 2008, Tainan, November 20, pp. 176-182.
- [37] Jiunn-Lin Wu* and Ping-Chi Chao, 2008, “Digital Image Watermarking Robust Against Geometric Distortions Using SIFT Features”, 2008 International Conference on Digital Content, Chungli, Taiwan, December 26, pp. 678-686. **(Best Paper Award)**
- [38] I-Jing Li and Jiunn-Lin Wu*, 2009, “A Fast Classification Strategy for the Nearest Neighbor Algorithm of Local Probability Centers”, The 22th IPPR conference on computer vision, graphics and image processing (CVGIP), Nantou, Taiwan, August 2009.

- [39] Jiunn-Lin Wu* and Ho-Yu Chen, “High ISO Noise Reduction Using Simplified Bilateral Filtering”, 2009 Workshop on Consumer Electronics, Taichung, November 6 , 2009.
- [40] Jiunn-Lin Wu* and Lung-Chun Lin, “Face Recognition Using Subpattern Based DCT Method”, 2009 Workshop on Consumer Electronics, Taichung, November 6, 2009. (**Best Paper Award**)
- [41] Meng-Hsiun Tsai, Shu-Wei Guo, Jiunn-Lin Wu, and Yung-Kuan Chan*, “Automatic Band Segmentation and Detection of 1-D-Gel Images with Different Exposures, The 14th Conference on Artificial Intelligence and Applications, Oct. 30-31, 2009. (**Excellent Paper Award**)
- [42] Chao-Hung Lai and Jiunn-Lin Wu*, “Ocean Surface Rendering Using Temporal Texture Synthesis Technique”, Proceeding of National Computer Symposium (NCS 2009), Workshop on Image Processing, Computer Graphics and Multimedia Technologies, Taipei, Nov. 27-28, 2009, pp.1-9.
- [43] Jiunn-Lin Wu* and Meng-Han Hung, “Fast MAP-Based Super Resolution Algorithm Using Multilevel Interpolation and Reconstruction”, Proceeding of National Computer Symposium (NCS 2009), Workshop on Image Processing, Computer Graphics and Multimedia Technologies, Taipei, Nov. 27-28, 2009, pp. 429-439.
- [44] Jinuu-Lin Wu and I-Jing Li, “A SOM-Based Dimensionality Reduction Method for KNN Classifier,” Proceedings of International Conference on System Science and Engineering (ICSSE), pp. 173-178, Taipei, Taiwan, 2010.
- [45] Jinuu-Lin Wu and I-Jing Li, “A Detailed Comparison on SOM-Based Dimensionality Reduction Methods for Nearest Neighbor Classifiers,” Proceedings of IPPR Conference on Computer Vision, Graphics and Image Processing (CVGIP), pp. 560-567, Kaohsiung, Taiwan, August 2010.
- [46] Jinuu-Lin Wu and Ho-Yu Chen, “A Fast Bilateral-Filter Based Method for Gaussian Noise Removal,” Proceedings of IPPR Conference on Computer Vision, Graphics and Image Processing (CVGIP), pp. 69-76, Kaohsiung, Taiwan, August 2010.
- [47] Jinuu-Lin Wu and Jen-Chu Wang, “A New Single Image Super Resolution Using Gradient Operators and Machine Learning,” Proceedings of IPPR Conference on Computer Vision, Graphics and Image Processing (CVGIP), pp. 449-456, Kaohsiung, Taiwan, August 2010.

(D) Book Chapters (專書)

- [1] Book chapter: Partial Differential Equations Theory, Analysis and Applications (ISBN: 978-1-61122-858-8, Editors: Christopher L. Jang ©2011 Nova Science Publishers, Inc.) Chapter 6: Numerical Solution of Fractional Partial Differential Equations.