

## (A) Journal Papers

1. Ling-Yuan Hsu, Shi-Jinn Horng, Pingzhi Fan, Muhammad Khurram Khan, Yuh-Rau Wang, Ray-Shine Run, Jui-Lin Lai, Rong-Jian Chen, “MTPSO algorithm for solving planar graph coloring problem,” has been accepted on *Expert Systems With Applications*, 2011. (SCI)
2. Tsung-Lieh Lin, Shi-Jinn Horng, Kai-Hui Lee, Pei-Ling Chiu, Tzong-Wann Kao, Ray-Shine Run, Jui-Lin Lai, and Rong-Jian Chen, “A Visual Sharing Scheme for Multiple Secrets by Camouflaging Process,” *International Journal of Innovative Computing, Information and Control*, Vol.7, No.1, Jan. 2011. (SCIE)
3. Tsung-Lieh Lin, Shi-Jinn Horng, Kai-Hui Lee, Pei-Ling Chiu, Tzong-Wann Kao, Yuan-Hsin Chen, Ray-Shine Run, Jui-Lin Lai, and Rong-Jian Chen, “A novel visual secret sharing scheme for multiple secrets without pixel expansion,” *Expert Systems With Applications*, Vol. 38, Issue:1, pp. 306-313, Jan. 2011. (SCI)
4. Rong-Jian Chen, Jun-Jian Lin, Su-Min Hung, Jui-Lin Lai and Shi-Jinn Horng, “Architecture design of high-efficient and non-memory AES crypto-core for WPAN,” *Published online in Wiley InterScience (www.interscience.wiley.com)*. DOI: 10.1002/cpe.1619, pp.1–19, 2010. (SCI) 【NSC-97-2221-E-239-036-MY3】
5. Tsung-Lieh Lin, Shi-Jinn Horng, Kai-Hui Lee, Pei-Ling Chiu, Tzong-Wann Kao, Ray-Shine Run, Jui-Lin Lai, Rong-Jian Chen, “A visual sharing scheme for multiple secrets by camouflaging process,” *International Journal of Innovative Computing, Information and Control*, Vol. 6, No. 12, pp. 5749-5769, Dec. 2010. (SCI)
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7. Mingxing He, Shi-Jinn Horng, Pingzhi Fan, Ray-Shine Run, Rong-Jian Chen, Jui-Lin Lai, Muhammad Khurram Khan, and Kevin Octavius Sentosa, “Performance evaluation of score level fusion in multimodal biometric systems,” *Pattern Recognition*, Vol. 43, Issue:5, pp.1789–1800, May 2010. (SCI)
8. Ling-Yuan Hsu, Shi-Jinn Horng, Tzong-Wann Kao, Yuan-Hsin Chen, Ray-Shine Run, Rong-Jian Chen, Jui-Lin Lai, and I-Hong Kuo, “Temperature prediction and TAIFEX forecasting based on fuzzy relationships and MTPSO techniques,” *Expert Systems With Applications*, Vol. 37, Issue:4, pp. 2756–2770, April 2010. (SCI)
9. Tsung-Lieh Lin, Shi-Jinn Horng, Tzong-Wann Kao, Yuan-Hsin Chen, Ray-Shine Run, Rong-Jian Chen, Jui-Lin Lai, and I-Hong Kuo, “An efficient job-shop scheduling algorithm based on particle swarm optimization,” *Expert Systems With Applications*, Vol. 37, Issue:3, pp.2629–2636, March 2010. (SCI)
10. I-Hong Kuo, Shi-Jinn Horng, Yuan-Hsin Chen, Ray-Shine Run, Tzong-Wann Kao,

- Rong-Jian Chen, Jui-Lin Lai, and Tsung-Lieh Lin, "Forecasting TAIEX based on fuzzy time series and particle swarm optimization," *Expert Systems With Applications*, Vol. 37, Issue:2, pp.1494–1502, March 2010. (SCI)
11. Yuan-Hsin Chen, Shi-Jinn Horng, Ray-Shine Run, Jui-Lin Lai, Rong-Jian Chen, Wei-Chih Chen, Yi Pan, and Terano Takao, "A Novel Anti-collision Algorithm in RFID Systems for Identifying Passive Tags," *IEEE Transactions on Industrial Informatics*, Vol. 6, No. 1, pp.105-121, Feb. 2010. (SCI)
  12. Rong-Jian Chen, Jui-Lin Lai, and Shi-Jinn Horng, "Novel Stream Cipher Using SCAN and Variable Ordered Recursive CA Substitutions and Its DSP+FPGA Implementation," *Journal of Networks (JNW, ISSN 1796-2056) Special Issue on Recent Advances in Network and Parallel Computing*, Vol. 5, No. 1, pp.75-87, January 2010.(EI)
  13. Rong-Jian Chen and Jui-Lin Lai, "Image Security System using Recursive Cellular Automata Substitution," *Pattern Recognition*, Vo. 40, No. 5, pp. 1621-1631, May 2007. (SCI) 【NSC-93-2215-E-239-001】
  14. Jui-Lin Lai, Chung-Yu Wu, "Architectural Design and Analysis of Learnable Self-feedback Ratio-memory Cellular Nonlinear Network (SRMCNN) for Nanoelectronics Systems," *IEEE Transaction on Very Large Scale Integration Systems*. Vol. 12, No. 11, pp.1182-1191, Nov. 2004. 【NSC-90-2215-E-009-113】 (SCI)
  15. Jui-Lin Lai, Rong-Jian Chen, and Wen-Cheng Yen, "Design of Cellular Neural Network and their VLSI Implementation," *Journal of Lien-Ho*, vol. 23, pp.183-198, July 2003. (publication in Chinese)
  16. Cheng-Fang Tai, Rong-Jian Chen and Jui-Lin Lai, "How Technological and Vocational Education in 21<sup>st</sup> Century Can Prosper?," *IEEE Circuits and Devices magazine*, pp.15-16, 51, March 2003.
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  19. Jui-Lin Lai, Y.-S. Chen, Han-chen chen, and Cheng-Fang Tai, "The Accuracies of GPS Positioning Applied by Dynamic Learning Neural Network and Optimal Planning for its Path," *Journal of Lien-Ho*, vol. 15, pp.345-363, Nov. 1997. (publication in Chinese)
  20. Rong-Jian Chen and Jui-Lin Lai, "The Development of an MPEG-2 De-compressed card," *Special Issue for Communication Topic program in Ministry of Education*, pp.135-149, 1997. (publication in Chinese)
  21. Jui-Lin Lai, Y.-S. Chen, and Cheng-Fang Tai, "Applications of Computerized Global Satellite Position System," *Journal of Lien-Ho*, vol. 13, pp.51-68, Dec. 1995. (publication

in Chinese)

22. Jui-Lin Lai, "Design of Digital DC Servo-Motor Control System," *Journal of Lien-Ho*, vol. 3, pp.129-152, May 1987.( publication in Chinese)

## **(B) Conference Papers**

1. Kuo-Hung Liao, Hung-Hsi Chang, and Jui-Lin Lai, "Design a portable electrochemical Analyzer," in Proc. 2010 *Biomedical Engineering Symposium on Biosignal, Biosensor, Bioelectronics, and Bioengineering*, Hsinchu, NCTU, Taiwan, October, 2010. **【NSC-99-2221-E-239-032】**
2. Rong-Jian Chen, Yu-Cheng Peng, Jun-Jian Lin, Jui-Lin Lai, and Shi-Jinn Horng, "Novel Multi-bit Bitwise Adaptive Embedding Algorithms with Minimum Error for Data Hiding," in Proc. 2010 *Fourth International Conference on Network and System Security, NSS2010*, Australia, Sep.6-8, 2010, pp. 306-311. (EI) **【NSC-97-2221-E-239-036-MY3】**
3. Jui-Lin Lai, Han-ning Wu, Hung-Hsi Chang, Kuo-Hung Liao, Rong-Jian Chen, and Shi-Jinn Horng, "An OP-based Potantioostat used in Electrochemical Bio-detection Systems," In Proc. *SICE 2010*, August 18-21, 2010, Taipei, Taiwan, pp. 75-79. (EI) **【NSC-99-2221-E-239-032】**
4. Jui-Lin Lai, Ting-You Lin, Cheng-Fang Tai, Yi-Te Lai, and Rong-Jian Chen, "Design a Low-Noise Operational Amplifier with Constant-gm," in Proc. *SICE 2010*, August 18-21, 2010, Taipei, Taiwan, pp. 322-326. (EI) **【NSC-99-2221-E-239-032】**
5. Rong-Jian Chen, Su-Min Hung, Yu-Cheng Peng, Jui-LinLai, and Shi-Jinn Horng. "Novel Multi-bit and Bitwise Minimum Error Replacement Technique for Watermarking and Data Hiding," in Proc. *SICE 2010*, August 18-21, 2010, Taipei, Taiwan, pp. 1224-1229. (EI) **【NSC-97-2221-E-239-036-MY3】**
6. Shi-Jinn Horng, Yuan-Hsin Chen, Ray-Shine Run, Rong-Jian Chen, Jui-Lin Lai, and Sentosal, K.O., "An Improved Score Level Fusion in Multimodal Biometric Systems," in Proc. *2009 International Conference on Parallel and Distributed Computing, Applications and Technologies*, 8-11 Dec. 2009, pp.239 – 246. (EI) **【NSC-97-2221-E-239-036-MY3】**
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8. Rong-Jian Chen and Jui-Lin Lai, " Novel Stream Cipher Using 2-D Hybrid CA and Variable Ordered Recursive CA Substitutions," In Proc. 2008 *IFIP International Conference on Network and Parallel Computing, NPC 2008*, Shanghai, China, Oct. 18-21, 2008, pp. 74-81. (EI) **【NSC-97-2221-E-239-036-MY3】**

9. Yan-Ting Chen, Zhen-Xuan Guan, and Jui-Lin Lai, "Design of Type-II Fuzzy Cellular Neural Network in Current-Mode CMOS Circuit," In Proc. 2008 19<sup>th</sup> VLSI /CAD Symposium, Kenting, Taiwan, Aug. 2008. 【NSC-95-2221-E-239-044】
10. Jui-Lin Lai, Hong-Si Chang, Ting-You Lin, Cheng-Fang Tai, and Rong-Jian Chen, "Electrochemical Enzyme-electrode Biosensor for Glucose Detection," in Proc. 2008 IEEE International Conference on Communications, Circuits and Systems, ICCAS 2008, Xiamen, China, May 25-27, 2008. (EI) 【NSC-96-2221-E-239-030】
11. Jui-Lin Lai, Zhen-Xuan Guan, Yan-Ting Chen, Cheng-Fang Tai, and Rong-Jian Chen, "Implementation of Fuzzy Cellular Neural Network with Image Sensor in CMOS Technology," in Proc. 2008 IEEE International Conference on Communications, Circuits and Systems, ICCAS 2008, Xiamen, China, May 25-27, 2008. (EI) 【NSC-95-2221-E-239-044】
12. Jui-Lin Lai, Yuan-Hung Lo, Yan-Ting Chen, and Rong-Jian Chen, "Design a Multiplicative Type-II Fuzzy Cellular Neural Network with CMOS Image Sensor," In Proc. 2007 18<sup>th</sup> VLSI /CAD Symposium, Hualien, Taiwan, Aug. 2007. 【NSC-95-2221-E-239-044】
13. Rong-Jian Chen, Wen-Kai Lu, and Jui-Lin Lai, "Architecture Design and VLSI Implementation of the Re-configurable 2-D CAT/ICAT Chip for the Applications of Image Compression," in Proc. 2007 IEEE International Symposium on Consumer Electronic, ISCE 2007, June 2007. (EI)
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16. Jian-Yun Lai, Yan-Ting Chen, Te-Heng Wang, Hong-Si Jhang, and Jui-Lin Lai, "Biosensor Integrated with Transducer to Detect the Glucose," in Proc. 2007 IEEE International Symposium on Circuits and Systems, ISCAS 2007, New Orleans, May 27-30, 2007, pp.2015-2018. (EI) 【NSC-95-2221-E-239-044】
17. Jui-Lin Lai, Yuan-Hung Lo, Yao-Lien Wang, and Rong-Jian Chen, "Architectural Implement of Multiplicative type-II Fuzzy Cellular Neural Network (FCNN) for Image Processing Applications," in Proc. 2006 14<sup>th</sup> National Conference on Fuzzy Theory and It's Applications, Kaohsiung, Taiwan, Dec. 14-15, 2006, pp. 【NSC-95-2221-E-239-044】
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- ISNST-2006*, Tainan, Taiwan, Nov. 8-10, 2006, pp. **【NSC-94-2215-E-239-004】**
19. Cheng-Fang Tai, Jui-Lin Lai, and Rong-Jian Chen “Using the Bulk-Driven Technology Operate in Sunthreshold Region to Design a Low Voltage and Low Current Operational Amplifier,” in Proc. *2006 IEEE International Symposium on Consumer Electronic, ISCE 2006*, Russia, 28 June- 1 July, 2006, pp.562-566. (EI)
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  21. Rong-Jian Chen, Yuan-Hsin Chen, and Jui-Lin Lai “Image Encryption Decryption System Using 2-D Cellular Automata,” in Proc. *2006 IEEE International Symposium on Consumer Electronic, ISCE 2006*, Russia, 28 June- 1 July, 2006, pp.651-656. (EI) **【NSC-93-2215-E-239-001】**
  22. Rong-Jian Chen, Jui-Lin Lai, and Yi-Te Lai “Architecture Design and VLSI Hardware Implementation of Image Encryption/Decryption System Using Re-configurable 2-D Von-Neumann Cellular Automata,” in Proc. *2006 IEEE International Symposium on Circuits and Systems, ISCAS 2006*, Greece, May , 2006, pp.153-156. (EI) **【NSC-93-2215-E-239-001】**
  23. Rong-Jian Chen and Jui-Lin Lai, “Data Encryption Using Non-uniform 2-D Von Neumann Cellular,” in Proc. *The 9th IEEE International workshop on CNN and their application, CNNA 2005*, Hsinchu, Taiwan, May 28-30, 2005, pp.77-80. (EI) **【NSC-93-2215-E-239-001】**
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29. Bin Sheu; Chung-Yu Wu; Chin-Teng Lin; Bin-Da Liu; Liao, M.; Tai, B.; Jui-Lin Lai; Rong-Jiang Chen; "Strategies for high-tech academia uprising in 21 century," in Proc. *IEEE Asia-Pacific Conference on Circuits and Systems, APCCAS 2004*, Tainan, Taiwan, Dec. 2004, Vol. 1, pp. xv - xv. (EI)
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33. Rong-Jian Chen, Jui-Lin Lai and Yi-Ta Lai, "Design of the Universal 2-D Cellular Automata Bases Generator and Its VLSI Implementation," in Proc. *The 7<sup>th</sup> World Multi-Conference on Systemic, Cybernetics and Informatics*, Orlando, Florida, USA, July, 2003, pp.165-168 **【NSC-91-2215-E-239-003】**
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### **Text Books**

1. Rong-Jian Chen, Jui-Lin Lai and Jin-In Guo, *Electric Circuits*, Tsanghai Book Company, LTd. (Publication in Chinese)
2. Jui-Lin Lai, Jin-In Guo, and Rong-Jian Chen, *Microprocessors and Basic Microcomputer Systems Design*, Tsanghai Book Company, LTd. (Publication in Chinese)
3. Jui-Lin Lai and Rong-Jian Chen, *Contemporary Linear Systems—Using MATLAB 4.0*, Tsanghai Book Company, LTd. (Publication in Chinese)