

## **Curriculum Vitae**

**Dr. De-Shuang Huang**

BEng, MEng, PhD, IAPR Fellow, SMIEEE, SMINNS, Professor, PhD Advisor

• **Contact Information:**

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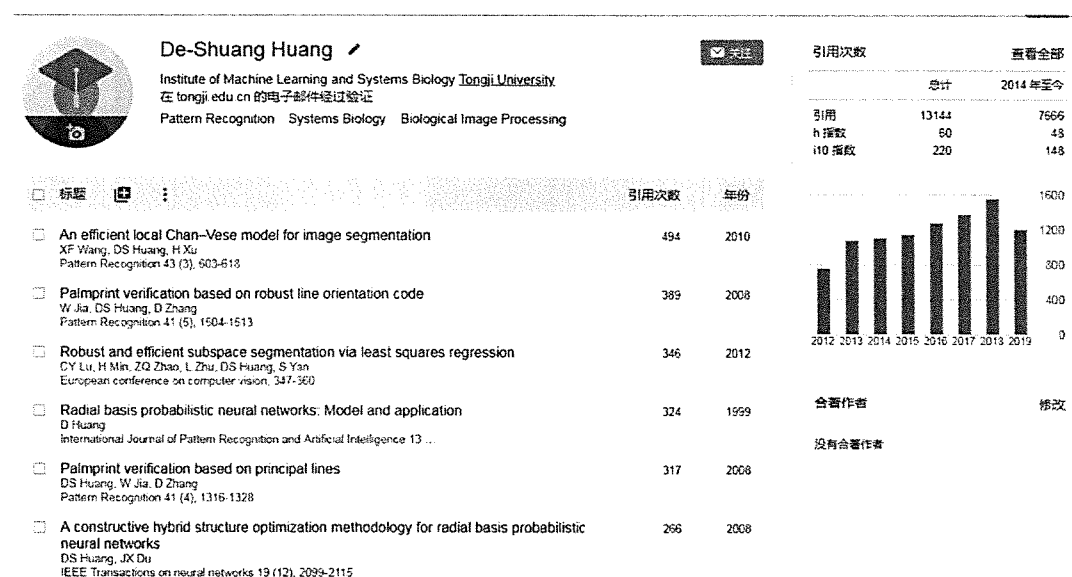
### **Brief Technical Profile**

De-Shuang Huang was born in Anhui Province, China. He received the B.Sc., M.Sc. and Ph.D. degrees all in electronic engineering from the Institute of Electronic Engineering, Hefei, China, National Defense University of Science and Technology, Changsha, China and Xidian University, Xian, China, in 1986, 1989 and 1993, respectively. During July 1993-July 1995, he was a postdoctor research fellow in Beijing Institute of Technology, Beijing, China. During July 1995-July 1997, He was a postdoctor research fellow and associate professor in National Key Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences, Beijing, China. From August 1997 to March 2000, he worked as associate professor in Beijing Institute of System Engineering, Beijing, China. In September, 2000, he entered into Hefei Institute of Intelligent Machines (IIM)/CAS as full professor & the Recipient of "Hundred Talents Program of CAS". From September 2000 to March 2001, he worked as Research Associate in Hong Kong Polytechnic University. From April 2002 to June 2003, he worked as Research Fellow in City University of Hong Kong. From August 21-September 21, 2003, he visited the George Washington University as visiting professor, Washington DC, USA. From October 23 to December 22, 2003, he worked as Research Fellow in Hong Kong Polytechnic University. From July 23 to December 22, 2004, he worked as University Fellow in Hong Kong Baptist University. From March 21, 2005 to March 20, 2006, he worked as Research Fellow in Chinese University of Hong Kong. From March 20, 2006 to July 20, 2006, he worked as visiting professor in Queen's University of Belfast, UK. From October 18, 2007, November 2, 2008, June 25, 2009 to November 18, 2007, December 2, 2008, July 25, 2009, he worked as visiting

professor in Inha University, Korea, respectively. Currently, From June 1, 2015 to June 1, 2018, he was the visiting professor of the Liverpool John-Moore University, UK. From September 2011 on, he worked as chaired professor in Tongji University. At present, he is the director of Institute of Machines Learning and Systems Biology, Director of International Cooperation United Laboratory of Cognition Internet, Professor (since March 2001) and PhD Advisor (since March 2001) in the University of Science and Technology of China (Hefei) and Tongji University.

De-Shuang Huang has published over 460 papers in international journals, international conferences proceedings, and book chapters. Particularly, he has published over 210 SCI indexed papers. Also, he published three monographs (in Chinese), one of which, entitled with "Systematic Theory of Neural Networks for Pattern Recognition", won the Second-Class Prize of the 8th Excellent High Technology Books of China in 1997.

Up to June 25, 2019



## ■ Invited Plenary or Tutorial Talks for International Conferences

1. De-Shuang Huang, "Modeling and analysis of high-throughput transcription factors binding data," The 2017 2nd Russian-Pacific Conference on Computer Technology and Applications (RPC 2017), September 25-29, 2017, (**Invited Plenary Speech**) (<http://www.rpc2017.dvo.ru/>).
2. De-Shuang Huang, "Supervised manifold learning based feature extraction methods and applications," The 2015 Nanning Workshop on Intelligent Computing Frontier (WICF 2015), October 28-30, 2015, Nanning, Guangxi Zhuang Autonomous Region, China (**Invited Plenary Speech**) (<http://ic-ic.org/wicf2015/Keynote%20Speakers.htm>).
3. De-Shuang Huang, "Collaborative prediction of epigenomic datasets," the 2015 Shanghai Mini-Workshop on Computational Intelligence and Bioinformatics (WCIB 2015), October 26-27, 2015, Shanghai, China (**Invited Plenary Speech**) (<http://ic-ic.org/wcib2015/Keynote%20Speakers.htm>).

4. De-Shuang Huang, "Manifold learning based feature extraction methods and applications," The 2015 Human-Machine Interaction on Summer School, Bari, Italy, Sep 15-18, 2015(**Invited Plenary Speech**).
5. De-Shuang Huang, "Prediction, De-noising and Modeling of PPI Networks Based on Machine Learning Techniques," The 2015 Human-Machine Interaction on Summer School, Bari, Italy, Sep 15-18, 2015(**Invited Plenary Speech**).
6. De-Shuang Huang, "Modeling PPI Networks Based on Machine Learning Techniques," The 2015 International Workshop and Summer School on "Biological Big Bytes", Nanning, China, Sep 6-11, 2015(**Invited Plenary Speech**) (<http://www.cls.zju.edu.cn/binfo/C3/2015/programme.html>).
7. De-Shuang Huang, "Modeling Biological Systems Based on Machine Learning Techniques," The 2013 the Developments in e-Systems Engineering conference, Abu Dhabi, United Arab Emirates, Dec 16-18, 2013(**Invited Plenary Speech**) (<http://dese.org.uk/keynote-speeches/>) .
8. De-Shuang Huang, "Protein Prediction Based Machine Learning Techniques," The 2013 International Joint Conference on Neural Networks (IJCNN2013), Dallas, TX, USA, August 4-9, 2013 (**Tutorial**)( <http://www.ijcnn2013.org/tutorials.php#content>).
9. De-Shuang Huang, "Protein Prediction by Intelligent Computing Techniques," 2012 4<sup>th</sup> International Conference on Communication Software and Networks (ICCSN 2012), Zhengzhou, China, June 2-3, 2012 (**Invited Plenary Speech**)( <http://www.iccsn.org/keynote.htm>).
10. De-Shuang Huang, "Locally Linear Discriminant Embedding and Its Application on Gene Expression Data," 2011 International Conference on Computer and Network Engineering, Zhengzhou, China, June 17-19, 2011 (**Invited Plenary Speech**).
11. De-Shuang Huang , "Manifold Learning Based Feature Extraction Methods and Applications," The 9th Mexican International Conference on Artificial Intelligence (MICAI 2010), Pachuca, Hidalgo, Mexico, November 8-13, 2010 (**Invited Plenary Speech**) ([http://www.uaeh.edu.mx/MICAI/index\\_archivos/keynotes.html](http://www.uaeh.edu.mx/MICAI/index_archivos/keynotes.html)).
12. De-Shuang Huang, "Density-Based Clustering Using Level Set Method," The Second International KES Symposium on Agent and Multi-Agent Systems-Technologies and Applications (KES-AMSTA), Incheon Korea, March 27-28, 2008 (**Invited Plenary Speech**) ([http://amsta-08.kesinternational.org/invited\\_speakers.php](http://amsta-08.kesinternational.org/invited_speakers.php)).
13. De-Shuang Huang, "Protein Contact Map Prediction Using Evolutionary Optimization Technique," The Second International Conference on Bio-Inspired Computing: Theory and Applications (BIC-TA 2007), Zhenzhou, China, Sept. 15-18, 2007 (**Invited Plenary Speech**).

#### ■ Society Services:

1. Fellow, International Association for Pattern Recognition (IAPR) (2014-)
2. Member, Pre-College Activities Subcommittee of IEEE CIS (2013-)
3. Board Member, the INNS Governors (2013-)
4. The Senior Member of INNS (SM, 2013-)
5. Member, Bioinformatics and Bioengineering Technical Committee of IEEE CIS (2012-)

6. Member, Neural Networks Technical Committee of IEEE CIS (2012-)
7. Member, the International Neural Network Society (INNS) (2012-)
8. Associate Editor, IEEE/ACM Transactions on Computational Biology & Bioinformatics (2018-)
9. Associate Editor, Current Protein & Peptide Science (2016-);
10. Current Protein & Peptide Science(2015-);
11. Associate Editor, Neural Networks(2012-);
12. Associate Editor, International Journal of Data Mining and Bioinformatics (IJDMB) (2012-);
13. The Board Member of Applied Informatics Journal (EBM'07-)
14. Associate Editor, International Journal of Data Mining and Bioinformatics (IJDMB)
15. The Board Member of Advances in Artificial Neural System (EBM'07-)  
[<http://www.hindawi.com/journals/aans/editors.html>]
16. The Board Member of Journal of Pattern Recognition Research (JPRR) (EBM'06-09)[<http://www.jprr.org/>]
17. Transactions of the Institute of Measurement and Control (Advisory Board Member'06-09)[<http://www.sagepub.com/journalsProdEditBoards.nav?prodId=Journal201831>]
18. The Board Member of Neurocomputing (EBM'05-08)
19. The Board Member of Information Sciences (EBM'05-08)
20. The Board Member of Int.Journal of Information Technology (EBM'05-09)
21. The Active Member of New York Academy of Sciences(NYAM'98)
22. The Board Member of Int.Journal of Information Fusion (EBM'99-04)
23. The Vice Director of Young Program Committee of CIE (CIE-YCVD'00-07)
24. The Senior Member of IEEE (SM, 1998-)
25. The Senior Members of China Institute of Electronics (CIE-SM, 1996-)

#### ■ Guest Editor Services:

1. De-Shuang Huang, Vitoantonio Bevilacqua, and M. Michael Gromiha, Guest Editorial for Special Section on the 13th International Conference on Intelligent Computing (ICIC), IEEE/ACM Transactions on Computational Biology & Bioinformatics, vol. 16, no. 3, pp. 749-750. 2019.
2. De-Shuang Huang, Guest editorial for special section on the 13th international conference on intelligent computing (ICIC), Cognitive Systems Research, vol.53, pp. 1-2. 2019.
3. De-Shuang Huang, Vitoantonio Bevilacqua, and M. Michael Gromiha, Guest Editorial for Special Section on the 12th International Conference on Intelligent Computing (ICIC), IEEE/ACM Transactions on Computational Biology & Bioinformatics, vol. 15, no. 5, pp. 1433-5. 2018.
4. De-Shuang Huang, Vitoantonio Bevilacqua, and M. Michael Gromiha, Guest Editorial for Special Section on the 11th International Conference on Intelligent Computing (ICIC), IEEE/ACM Transactions on Computational Biology & Bioinformatics, vol. 14, no. 5, pp. 1104-5. 2017.
5. Lin Zhu, Vitoantonio Bevilacqua, and De-Shuang Huang, Special issue on Advanced Intelligent Computing Methodologies and Applications, Neurocomputing, Vol.188, pp.1-2, May 5, 2016.
6. De-Shuang Huang, Vitoantonio Bevilacqua, and M. Michael Gromiha, Guest Editorial for Special Section on the 10th International Conference on Intelligent Computing (ICIC), IEEE/ACM

- Transactions on Computational Biology and Bioinformatics, vol.13, no.1, pp.1-3, January/February, 2016.
7. Yoonsuck Choe, Asim Roy, Haibo He, and De-Shuang Huang, "Conference Report on 2015 International Joint Conference on Neural Networks (IJCNN 2015)," IEEE Computational Intelligence Magazine, February 2016.
  8. De-Shuang Huang, Special issue on Advanced Intelligent Computing Theory and Methodologies, Neurocomputing, Vol.151, pp.953-954, March 3, 2015.
  9. De-Shuang Huang, Special issue, BMC Bioinformatics, Vol.15, Supplement 15, 2014, <http://www.biomedcentral.com/bmcbioinformatics/supplements/15/S15> (SCI).
  10. Bin Hu, Xiaohua Hu, De-Shuang Huang, Special Section on the 2013 IEEE Conference on Bioinformatics and Biomedicine (BIBM), IEEE Trans. on Nanobioscience, vol.13, no.2, pp.63-64, June, 2014 (SCI).
  11. De-Shuang Huang, Special issue on Advanced Intelligent Computing Theory and Methodologies, Neurocomputing, Vol.137, pp.1-2, August 5, 2014.
  12. De-Shuang Huang, Deliang Wang, Special issue on Advanced Theory and Methodology in Intelligent Computing, Neurocomputing, Vol.116, pp.1-2, 2013.
  13. M Michael Gromiha, De-Shuang Huang, Special issue on Advanced intelligent computing theories and their applications in bioinformatics, BMC Bioinformatics, Vol.14, Supplement 8, 2013, <http://www.biomedcentral.com/bmcbioinformatics/supplements/14/S8> (SCI).
  14. M Michael Gromiha, De-Shuang Huang, Special issue on Advanced intelligent computing theories and their applications in bioinformatics, BMC Bioinformatics, Vol.13, Supplement 7, 01/2012, DOI: 10.1186/1471-2105-13-S7-I1  
pp.11(<http://www.biomedcentral.com/bmcbioinformatics/supplements/13/S7>) (SCI).
  15. De-Shuang Huang, Special issue on advanced intelligent computing theory and methodology, Computers in Human Behavior, Vol.27, No.5, pp.1467, 2011 (SSCI).
  16. De-Shuang Huang, Special Issue on Intelligent Computing in Protein Science, Protein and Peptide Letters, Vol.17, No.9, pp.1067-1068, 2010 (SCI).
  17. De-Shuang Huang, Special Issue on Advanced Intelligent Computing Theory and Methodology, Pattern Recognition Letters, vol.30, pp.781-781, 2009 (SCI).
  18. Ngoc Thanh Nguyen and De-Shuang Huang, Special Issue on Knowledge Management for Autonomous Systems and Computational Intelligence, Journal of Universal Computer Science, vol.15, no.4, pp. 704-704, 2009 (SCI).
  19. De-Shuang Huang, Special Issue on Advanced Intelligent Computing Theory and Methodology in Genomics Proteomics & Bioinformatics, Genomics Proteomics & Bioinformatics, Vol.6, No.2, pp.757-758, 2008.
  20. De-Shuang Huang, Special Issue on Advanced Intelligent Computing Theory and Methodology, Applied Mathematics and Computation, Vol.205, No.2, pp.507-510, 2008 (SCI).
  21. De-Shuang Huang, Special Issue on Advanced Intelligent Computing Theory and Methodology in Protein Science, Protein and Peptide Letters, Vol.15, No.5, pp.427-427, 2008 (SCI).
  22. De-Shuang Huang, Special Issue on Intelligent Computing Theory and Methodology, Applied Mathematics and Computation, Vol.185, No.2, pp.757-758, 2007 (SCI).
  23. De-Shuang Huang, P. Premaratne, Advanced Neurocomputing Theory and Methodology, Neurocomputing, Vol.70, No.4-6, pp.623-624, 2007 (SCI).
  24. De-Shuang Huang, Special Issue, Transactions of the Institute of Measurement and Control, Vol.208

No.3, pp.207-208, 2006 (SCI).

25. Yuan-Yan Tang, De-Shuang Huang, Intelligent Computing and Applications, International Journal of Pattern Recognition and Artificial Intelligence Vol. 20, No. 2, pp.111-112, 2006 (SCI).

#### ■ Organizing International Conferences:

1. The General Chair of "The 15<sup>th</sup> International Conference on Intelligent Computing (ICIC2019)", August 3-6, 2019, Nanchang, China (<http://ic-ic.tongji.edu.cn/2019/index.htm>).
2. The General Chair of "The 14<sup>th</sup> International Conference on Intelligent Computing (ICIC2018)", August 15-18, 2018, Wuhan, China (<http://ic-ic.tongji.edu.cn/2018/index.htm>).
3. The General Chair of "The 13<sup>th</sup> International Conference on Intelligent Computing (ICIC2017)", August 7-10, 2017, Liverpool, UK (<http://ic-ic.tongji.edu.cn/2017/index.htm>).
4. The General Chair of "The 12<sup>th</sup> International Conference on Intelligent Computing (ICIC2016)", August 2-5, 2016, Lanzhou, China (<http://ic-ic.tongji.edu.cn/2016/index.htm>).
5. The General Chair of "The 11<sup>th</sup> International Conference on Intelligent Computing (ICIC2015)", August 20-23, 2015, Fuzhou, China (<http://ic-ic.tongji.edu.cn/2015/index.htm>).
6. The General Chair of "The 10<sup>th</sup> International Conference on Intelligent Computing (ICIC2014)", August 3-6, 2014, Taiyuan, China (<http://ic-ic.tongji.edu.cn/2014/index.htm>).
7. The General Chair of "The 9<sup>th</sup> International Conference on Intelligent Computing (ICIC2013)", July 28-31, 2013, Nanning, China (<http://ic-ic.tongji.edu.cn/2013/index.htm>).
8. The General Chair of "The 8<sup>th</sup> International Conference on Intelligent Computing (ICIC2012)", July 25-29, 2012, Huangshan, China (<http://ic-ic.tongji.edu.cn/2012/index.htm>).
9. The General Chair of "The 7<sup>th</sup> International Conference on Intelligent Computing (ICIC2011)", August 11-14, 2011, Zhengzhou, China (<http://ic-ic.tongji.edu.cn/2011/index.htm>).
10. The General Chair of "The 6<sup>th</sup> International Conference on Intelligent Computing (ICIC2010)", August 18-21, 2010, Changsha, China (<http://ic-ic.tongji.edu.cn/2010/index.htm>).
11. The General Chair of "The 5<sup>th</sup> International Conference on Intelligent Computing (ICIC2009)", September 16-19, 2009, Ulsan, Korea (<http://ic-ic.tongji.edu.cn/2009/index.htm>).
12. The General Chair of "The 4<sup>th</sup> International Conference on Intelligent Computing (ICIC2008)", September 15-18, 2008, Shanghai, China (<http://ic-ic.tongji.edu.cn/2008/index.htm>).
13. The General Chair of "The Third International Conference on Intelligent Computing (ICIC2007)", August 21-24, 2007, Qingdao, China (<http://ic-ic.tongji.edu.cn/2007/index.htm>).
14. The General Chair of "The Second International Conference on Intelligent Computing (ICIC2006)", August 16-19, 2006, Kunming, China (<http://ic-ic.tongji.edu.cn/2006/index.htm>).
15. The General Chair of the 2005 International Conference on Intelligent Computing (ICIC2005), August 23-26, 2005, Hefei, China (<http://ic-ic.tongji.edu.cn/2005/index.htm>).

#### ■ Conference Services:

1. International Advisory Committee Member, 12th IEEE Conference on Automation Science and Engineering, Texas, USA, 21-25 August, 2016.
2. 2015 International Joint Conference on Neural Networks, General Chair

- (<http://www.ijcnn.org/committee>) , Killarney, Ireland, July 12 - 16, 2015.
3. International Advisory Committee, the 21st International Conference on Neural Information Processing (ICONIP2014) (<http://iconip2014.org/#!/index.php#top>) , Kuching, Sarawak, Malaysia, 3-6 November, 2014.
  4. Program Committee Member, The 2014 Sixth IEEE International Conference on Evolutionary Computation Theory and Application (ECTA2014), Oct. 22-24, 2014, Rome, Italy (<http://www.ecta.ijcci.org/ProgramCommittee.aspx>).
  5. 2014 IEEE World Congress on Computational Intelligence-International Joint Conference on Neural Networks, Technical Committee Co-Chair (<http://www.ieee-wcci2014.org/committees.htm>) , July 6-11, 2014, Beijing, China.
  6. The 2014 11th IEEE Computational Intelligence in Bioinformatics and Computational Biology - CIBCB, Program Committee Chair (<http://web.mst.edu/~cornss/CIBCB2014/index-3.html>) , May 21-24, 2014, Honolulu, USA.
  7. Poster Co-Chairs, The IEEE International Conference on Bioinformatics and Biomedicine (BIBM), December 18-21, 2013, Shanghai, China (<http://bibt2013.tongji.edu.cn/organization.htm>).
  8. Asia Liaison, The 2013 International Joint Conference on Neural Networks, August 4-9, 2013, Dallas, TX, USA.
  9. The 2013 IEEE International Conference on Big Data, Steering Committee Member (<http://www.ischool.drexel.edu/bigdata/bigdata2013/organization.htm>) , October 6-9, 2013, Santa Clara, CA, USA.
  10. The Program Committee Member of The 2010 International Joint Conference on Computational Intelligence (IJCCI2010), October 24-26, 2010 in Valencia, Spain ([http://www.icec.ijcci.org/program\\_committee.asp](http://www.icec.ijcci.org/program_committee.asp)) .
  11. The Program Committee Member of The 2010 Fourth International Symposium on Intelligent Distributed Computing (ISIDC2010), September 16-18, 2010 in Tangier, Morocco (<http://www.ieee.ma/~idc2010/committees.html>) .
  12. The Program Committee Member of The 2010 IEEE International Conference on Networking, Sensing and Control (ICNSC2010), April 11-13, 2010 in Chicago, USA (<http://tigger.uic.edu/~hdarabi/committee.htm>).
  13. The Program Committee Member of The 2009 IEEE International Conference on Evolutionary Computation (ICEC2009), Oct. 5-7, 2009 in Portugal ([http://www.icec.ijcci.org/Program\\_Committee.htm](http://www.icec.ijcci.org/Program_Committee.htm)).
  14. The Program Committee Member of The 2nd International Symposium on Intelligent Distributed Computing (IDC2008), 18-20 September 2008 in Catania, Italy (<http://idc08.diit.unict.it/committees.html>).
  15. The Program Committee Member of The International Symposium on Optimization and Systems Biology (OSB 2007), August 7 to 9, 2007, Beijing, China (<http://www.aporc.org/OSB/2007/Committees.php>).
  16. The Program Committee Member of International Symposium on Intelligent and Distributed Computing (IDC'2007), October 18-20, Craiova, Romania ([http://software.ucv.ro/~badica\\_costin/idc2007/committees.html](http://software.ucv.ro/~badica_costin/idc2007/committees.html)).
  17. The Program Committee Chair of "2006 Workshop on Intelligent Computing & Bioinformatics of CAS", 12-14 November 2006, Hefei, China ([http://www.ic-ic.org/wicb2006/index\\_E.htm](http://www.ic-ic.org/wicb2006/index_E.htm)) .
  18. The General Chair of "The Second International Conference on Intelligent Computing (ICIC2006)", 16-19 August 2006, Kunming, China (<http://www.ic-ic.org/2006/index.htm>) .
  19. The Program Committee Member of the 2006 IEEE Swarm Intelligence Symposium (SIS2006), May 12-14, 2006, Indiana, USA (<http://www.computelligence.org/sis/2006/committee.php>).
  20. The Program Committee Member of the 2006 IEEE International Conference on Networking, Sensing and Control (ICNSC2006), April 23-25, 2006, Florida, USA (<http://web.umn.edu/~icnsc06/>).
  21. The General Chair of the 2005 International Conference on Intelligent Computing (ICIC2005), August

- 23-26, 2005, Hefei, China (<http://www.ic-ic.org/2005/index.htm>).
22. The Program Committee Member of the third International Conference on Machine Learning and Cybernetics (ICMLC2005), August 18-21, 2005, Guangzhou, China ([http://www.icmlc2005.hbu.edu.cn/pro\\_c.htm](http://www.icmlc2005.hbu.edu.cn/pro_c.htm)).
  23. The Far East Liaison of 2005 International Joint Conference on Neural Networks (IJCNN2005)" (<http://faculty.uwb.edu/ijcnn05/index.html>) , July 31-August 4, 2005, Montréal, Québec, Canada.
  24. The Program Committee Member of the IEEE International Symposium on Neural Networks (ISNN'04), August 19-21, 2004, Dalian, China ([http://ei.dlut.edu.cn:8080/seaskydxxy/web/jy/ISNN\\_2004/committees.htm](http://ei.dlut.edu.cn:8080/seaskydxxy/web/jy/ISNN_2004/committees.htm)).
  25. The Program Committee Member of the third International Conference on Machine Learning and Cybernetics (ICMLC 2004), August 26-29, 2004, Shanghai, China ([http://www4.comp.polyu.edu.hk/~cike/icmlc/pro\\_committe.htm](http://www4.comp.polyu.edu.hk/~cike/icmlc/pro_committe.htm)).
  26. The Program Committee Member of 2004 International Joint Conference on Neural Networks (IJCNN'04), July 22-24, 2004, Budapest, Hungary (<http://www.conferences.hu/budapest2004/IJCNN-IPC.htm>) .
  27. The Program Committee Member of 2004 Fifth International Conference on Intelligent Data Engineering and Automated Learning (IDEAL'04), August 25-27, 2004, Exeter, UK (<http://www.dcs.ex.ac.uk/ideal04/>).
  28. The Program Committee Member of 2003 IEEE Intelligent Automation Conference (IAC) held in Hong Kong, December 15 - 17, 2003 (<http://www2.acae.cuhk.edu.hk/~ciac2003/pc.html>).
  29. The Program Committee Member of the International Conference on Artificial Intelligence and Applications held in Spain in September 2003 (<http://www.iasted.org/conferences/2003/spain/aiaa.htm>).
  30. Global Technical Committee Member of the Third International DCDIS Conference on Engineering Applications and Computational Algorithms held in Guelph, Ontario, Canada, May 15-18, 2003(<http://monotone.uwaterloo.ca/~journal/conference03.htm>).
  31. The Program Committee Member of International Conference on Neural Networks and Computational Intelligence held in Cancun, Mexico in May 19-21, 2003 (<http://www.iasted.org/conferences/2003/cancun/nci.htm>).
  32. On August 14-18, 2002, organized the 8th National Youth Conf. of Chinese Institute of Electronics and assumed the Program Committee Chairman.
  33. The Session Chairman "Artificial Intelligence and Neural Networks" of the International Conference on Signal Processing (ICSP), Beijing, China, Aug. 26-30, 2002.
  34. The Session Chairman "Artificial Intelligence and Neural Networks" of the World Congress on Computers (WCCSP), Beijing China, Aug. 21-25, 2000.
  35. The Session Chairman "Pattern Analysis and Neural Computation" of the International Conference on Parallel and Distributed Processing and Applications (PDPA), Las Vegas, Nevada, USA, June 28-July 1, 1999.
  36. The Session Chairman "Neural Networks and Evolutionary Computation" of the Second International Conference on Information Fusion (ICIF), Sunnyvale Hilton, Inn, Sunnyvale, California, USA, July 6-8, 1999.
  37. The Session Chairman "Artificial Intelligence and Neural Networks" of the International Conference on Signal Processing (ICSP), Beijing, China, Oct. 12-16, 1998.
  38. The Program Committee Member of the International Conference on Multi-Source and Multi-Sensor Information Fusion (ICMSMSIF), and the Session Chairman "Pattern Recognition based on Neural Networks and Genetic Algorithm", Las Vegas, Nevada, USA, July 21-24, 1998.
  39. The Session Chairman "Pattern recognition" of Chinese Conference on Neural Computation (CCNC), Nanjing, China, Oct. 16-19, 1997.
  40. The Session Chairman "Pattern recognition" of Chinese Conference on Neural Networks (CCNN),



Chengdu, China, Oct.28-Nov.2, 1996.

## RESEARCH INTERESTS:

Pattern Recognition, Biological and Artificial Neural Networks, Bioinformatics and Image Processing.

## LIST OF RESEARCH PROJECTS

1. "The Study of Computational Methods for Analyzing the Relationship Between Genomic Non-Coding Variants and TF Regulatory Activities," Key Project of National Natural Science Foundation of China, 2.7 Million RMB, 2018.1-2022.12 (61133010, De-Shuang Huang).
2. "The Study of Constructing and Analyzing Methods of Gene Regulatory Networks Based on Probabilistic Graphical Model", Key Project of International Cooperation and Exchanges NSFC, 2.45Million RMB, 2016.1-2020.12 (61532008, De-Shuang Huang).
3. "The Study of Computational Methods for the Discovery of Transcription-Factor-Binging-Site Motifs", National Natural Science Foundation of China, 0.63Million RMB, 2016.1-2019.12 (31571364, De-Shuang Huang).
4. "Pattern Extraction and Analysis in High-throughput Microbiome Data", Key project of National Natural Science Foundation of China, 2.9Million RMB, 2016.1-2020.12 (61532008, Xiaohua Hu, De-Shuang Huang).
5. "The Study of Key Technology of Integration and Analysis of Microbial Group Data", National High Technology Research and Development Program of China (863 Project), 0.47Million RMB, 2014.1-2015.12 (2014AA021502, De-Shuang Huang).
6. "The Study of Key Technology of Index, Search and Storage of Biological Big Data Expression", National High Technology Research and Development Program of China (863 Project), 0.50 Million RMB, 2015.1 – 2016.12 (2015AA020101, De-Shuang Huang).
7. "The Study of Methods of Multi-scale Analysis for the Functional Modules in Tissue-specific Protein-protein Interaction Network," Natural Science Foundation of China, 0.16 Million RMB, 2016.1-2016.12 (61572364, De-Shuang Huang).
8. "The Study of Robust Steganography Methods of H. 265 Videos without Intra-frame Distortion Drift", Natural Science Foundation of China, 0.68 Million RMB, 2016.1-2019.12 (61572447, Yun-Xia Liu, De-Shuang Huang).
9. "The 2014 Annual International Conference on Intelligent Computing," Natural Science Foundation of China, 0.04 Million RMB, 2014.07-2014.09 (61410306035, De-Shuang Huang).
10. "Interaction between Virus and Human Protein Forecast Method Research," Chinese-Korea International Cooperation Projects, 0.16 Million RMB, 2014.7-2016.6 (61411140249, De-Shuang Huang).

11. "The Study of Construction Methods of Gene Regulatory Networks," the PhD Programs Foundation of Ministry of Education of China, 0.12 Million RMB, 2013.1-2014.12 (20120072110040, De-Shuang Huang).
12. "The Study of Protein-Protein Interaction and Protein Function Prediction Methods Based on Machine Learning," Key Project of National Natural Science Foundation of China, 2.8 Million RMB, 2012.1-2016.12 (61133010, De-Shuang Huang).
13. "The Study of Protein-Protein Interaction Prediction Methods Based on the Integration of Multiple Classifiers and the Calibration for Manifold Learning," National Natural Science Foundation of China, 0.35 Million RMB, 2011.1-2013.12 (31071168, De-Shuang Huang).
14. "Chinese-Korea Bilateral Conference," Natural Science Foundation of China: 0.068 Million RMB, 2009.1-2009.12 (30900321, De-Shuang Huang) (Finished).
15. "The Study of Novel Feature Extraction and Classification Methods in Highly Complex and Hetero-structured Data," Natural Science Foundation of China: 0.34 Million RMB, 2009.1-2011.12 (60873012, De-Shuang Huang).
16. "Mathematical Modeling and Machine Learning of Non-Constructed Data," National Basic Research Development Program of China (973 Program), 0.7 Million RMB, 2008.1-2012.12 (2007CB311002, De-Shuang Huang) .
17. "The Study of Several Key Problems of Highly Complex and Hetero-Constructed Data in Pattern Recognition," National High Technology Research and Development Program of China (863 Program), 0.9 Million RMB , 2007.1-2009.12(2007AA01Z167, De-Shuang Huang) (Finished).
18. "Computational Analysis of Protein-Protein Interactions", Joint Research Project under The KOSEF-NSFC Cooperative Program: 0.04 Million RMB, 2007.6.1-2009.5.31 (30711140358, De-Shuang Huang) (Finished).
19. "The Analysis and Modeling in Multiple Tools of Coding Rules with Learning and Memory in Colony Spiking Activities of Hippocampus," The Guide Project of Innovative Base of CAS, 1.0 Million RMB , 2006.1-2009.12 (KSCX1-YW-R-30,De-Shuang Huang) (Finished).
20. "The Study of Coding Rules with Learning and Memory in Colony Neurons of Hippocampi of Small Rats," Oversea Outstanding Scholars Fund of CAS, 0.5 Million RMB, 2005.7-2008.7 (Zhuo Qian, De-Shuang Huang)(Finished).
21. "The Study of Kernel Methods in Protein Homology Detection," Natural Science Foundation of China: 0.20 Million RMB, 2006.1-2008.12 (30570368, De-Shuang Huang) (Finished).
22. "The Study of Coding Rules with Learning and Memory in Colony Neurons of Hippocampus of Small Rats," Oversea Outstanding Scholars Fund of CAS, 0.5 Million RMB , 2005.7-2008.7(Finished).
23. "The Study of a Novel Constrained Learning Algorithm Encoded by the a Priori Information from Problems," Natural Science Foundation of China: 0.24 Million RMB, 2005.1-2007.12 (60472111, De-Shuang Huang) (Finished).
24. "The Genetic Selectivity and Optimization of Radial Basis Probabilistic Neural Networks," Natural Science Foundation of China: 0.17 Million RMB, 2002.1-2003.12(De-Shuang Huang) (Finished).

25. The Dedicated Grant for the Recipient of "Hundred Talents Program of CAS": 2 Million RMB, 2001.3-2004.3 (De-Shuang Huang) (Finished).
26. "The Structure Optimization of Feedforward Neural Network Classifiers Based on Information Entropy Theory," Natural Science Foundation of China: 0.125 Million RMB, 1998.1-2000.12 (De-Shuang Huang) (Finished).
27. "The Study of Generalization Capability of Feedforward Neural Network Classifiers," Postdoctor Scientific Research Grant of China (June 1996-June 1997).
28. "The Study of Multimedia Data Compression Technique," Postdoctor Scientific Research Grant of China (November 1994-November 1995).

#### ■ Prizes

1. The Project **"Key Technologies and Applications of Image Processing in Complex Scene"** received the First-Class Prize in Wu Wenjun Award for Advancement of Artificial Intelligence Science and Technology of China in 2018.
2. The Project **"The Study of Theories and Methodologies of Intelligent Learning and Computing"** received the First-Class Prize in Natural Science of Ministry of Education of China in 2016.
3. The Project **"The Study of Theories and Applications of Neural Networks and Statistical Learning"** received the First-Class Prize in Natural Science of Anhui Province of China in 2010.
4. In July, 2005, one Figure within the SCI indexed paper published in Digital Signal Processing A Review Journal was selected as publicizing in the cover of the journal.
5. The Project **"Automatic Plant Leaves Recognition System Based on Image Processing Techniques"** won the First Runner-up at Intelligence@Society Contest 2004 held in Hong Kong on Nov. 10, 2004.
6. The Project **"BP Neural Networks Based Intelligent Image Retrieval System"** won the Finalist at Intelligence@Society Contest 2004 held in Hong Kong on Nov. 10, 2004.
7. In August, 2004, Figure 11 with the paper published in Neural Computation with Impact Factor over 2.7 was selected as publicizing in the cover of Neural Computation.
8. The Project **"The Study of Mechanism and Structure Optimization for Outer-Supervised learning Feedforward Neural Networks"** received the Third-Class Prize in Natural Science of Anhui Province of China in 2001.
9. The book **"Systematic Theory of Neural Networks for Pattern Recognition"** (Publishing House of Electronic Industry of China, May 1996, 323 pages) won the the Second-Class Prize of the 8th Excellent High Technology Books of China in June 1997, and the Prize of Excellent Books of Publishing House of Electronic Industry of China in October 1997.
10. The Project **"Testing, Recognition and Classification of the properties of Radar Targets"** received the Second-Class Prize of Xidian University, in 1994.

#### ■ Monographs (3)

1. **BOOK:** D.S. Huang, The Study of Data Mining Methods for Gene Expression Profiles (in Chinese), Science Press of China, March 2009 (462 pages).
2. **BOOK:** D.S. Huang, Intelligent Signal Processing Technique for High Resolution Radars (in Chinese), Publishing House of Machine Industry of China, February 2001 (179 pages).
3. **BOOK:** D.S. Huang, Systematic Theory of Neural Networks for Pattern Recognition (in Chinese), Publishing House of Electronic Industry of China, May 1996 (323 pages).

#### ■ Edited Books (46)

1. **Edited Books:** De-Shuang Huang, Vitoantonio Bevilacqua, Prashan Premaratne, and Phalguni Gupta, *Intelligent Computing Theories and Application*, Lecture Notes in Computer Science (LNCS 10954), Springer, August 2018, ISBN 978-3-319-95929-0 (910 页).
2. **Edited Books:** De-Shuang Huang, Kang-Hyun Jo, and Xiao-Long Zhang, *Intelligent Computing Theories and Application*, Lecture Notes in Computer Science (LNCS 10955), Springer, August 2018, ISBN 978-3-319-95932-0 (856 页).
3. **Edited Books:** De-Shuang Huang, Michael Gromiha, Kyungsook Han, and Abir Hussain, *Intelligent Computing Methodologies*, Lecture Notes in Artificial Intelligence (LNAI 10956), Springer, August 2018, ISBN 978-3-319-95956-3 (874 页).
4. **Edited Books:** De-Shuang Huang, Vitoantonio Bevilacqua, Prashan Premaratne, and Phalguni Gupta, *Intelligent Computing Theories and Application*, Lecture Notes in Computer Science (LNCS 10361), Springer, August 2017, ISBN 978-3-319-63308-4 (807 pages).
5. **Edited Books:** De-Shuang Huang, Kang-Hyun Jo, and Juan Carlos Figueroa-García, *Intelligent Computing Theories and Application*, Lecture Notes in Computer Science (LNCS 10362), Springer, August 2017, ISBN 978-3-319-63311-4 (833 pages).
6. **Edited Books:** De-Shuang Huang, Abir Hussain, Kyungsook Han, and M. Michael Gromiha, *Intelligent Computing Methodologies*, Lecture Notes in Computer Science (LNAI 10363), Springer, August 2017, ISBN 978-3-319-63314-5 (781 pages).
7. **Edited Books:** De-Shuang Huang, Vitoantonio Bevilacqua, Prashan Premaratne, *Intelligent Computing Theories and Application*, Lecture Notes in Computer Science (LNCS 9771), Springer, August 2016, ISBN 978-3-319-42290-9 (882 pages).
8. **Edited Books:** De-Shuang Huang, Kang-Hyun Jo, *Intelligent Computing Theories and Application*, Lecture Notes in Computer Science (LNCS 9772), Springer, August 2016, ISBN 978-3-319-42293-0 (924 pages).
9. **Edited Books:** De-Shuang Huang, Kyungsook Han, Abir Hussain, *Intelligent Computing Methodologies*, Lecture Notes in Computer Science (LNAI 9773), Springer, August 2016, ISBN 978-3-319-42296-1 (879 pages).
10. **Edited Books:** De-Shuang Huang, Vitoantonio Bevilacqua, Prashan Premaratne, *Intelligent Computing Theories and Methodologies*, Lecture Notes in Computer Sciences (LNCS 9225), Springer, August 2015, ISBN 978-3-319-22180-9 (752 pages).
11. **Edited Books:** De-Shuang Huang, Kang-Hyun Jo, Abir Hussain, *Intelligent Computing Theories and Methodologies*, Lecture Notes in Artificial Intelligence (LNAI 9226), Springer, August 2015, ISBN 978-3-319-22186-1 (751 pages).

12. **Edited Books:** De-Shuang Huang, and Kyungsook Han, *Advanced Intelligent Computing Theories and Applications, Lecture Notes in Bioinformatics* (LNAI 9227), Springer, August 2015, ISBN 978-3-319-22053-6 (793 pages).
13. **Edited Books:** De-Shuang Huang, Vitoantonio Bevilacqua, Prashan Premaratne, *Intelligent Computing Theory, Lecture Notes in Computer Sciences* (LNCS 8588), Springer, August 2014, ISBN 978-3-319-09332-1.
14. **Edited Books:** De-Shuang Huang, Kang-Hyun Jo, Ling Wang, *Intelligent Computing Methodologies, Lecture Notes in Artificial Intelligence* (LNAI 8589), Springer, August 2014, ISBN 978-3-319-09338-3.
15. **Edited Books:** De-Shuang Huang, Kyungsook Han, M. Michael Gromiha, *Bio-Inspired Computing and Applications, Lecture Notes in Bioinformatics* (LNBI 8590), Springer, August 2014, ISBN 978-3-319-09329-1.
16. **Edited Books:** De-Shuang Huang, Vitoantonio Bevilacqua, Juan Carlos Figueroa, Prashan Premaratne, *Intelligent Computing Theories, Lecture Notes in Computer Sciences* (LNCS 7995), Springer, July 2013. ISBN 978-3-642-39478-2.
17. **Edited Books:** De-Shuang Huang, Kang-Hyun Jo, Yong-Quan Zhou, Kyungsook Han, *Intelligent Computing Theories and Technology, Lecture Notes in Artificial Intelligence* (LNAI 7996), Springer, July 2013, ISBN 978-3-642-39481-2.
18. **Edited Books:** De-Shuang Huang, Phalguni Gupta, Ling Wang, M. Michael Gromiha, *Emerging Intelligent Computing Technology and Applications, Communications in Computer and Information Science* (CCIS 375), Springer, July 2013, ISBN 978-3-642-39677-9
19. **Edited Books:** De-Shuang Huang, Changjun Jiang, Vitoantonio Bevilacqua, Juan Carlos Figueroa, *Intelligent Computing Technology, Lecture Notes in Computer Sciences* (LNCS 7389), Springer, July 2012. ISBN 978-3-642-31587-9
20. **Edited Books:** De-Shuang Huang, Jianhua Ma, Kang-Hyun Jo, M. Michael Gromiha, *Intelligent Computing Technology and Applications, Lecture Notes in Artificial Intelligence* (LNAI 7390), Springer, July 2012. ISBN 978-3-642-31575-6
21. **Edited Books:** De-Shuang Huang, Phalguni Gupta, Xiang Zhang, Prashan Premaratne, *Emerging Intelligent Computing Technology and Applications, Communications in Computer and Information Science* (CCIS 304), Springer, July 2012. ISBN 978-3-642-31836-8
22. **Edited Books:** De-Shuang Huang, Yong Gan, Prashan Premaratne, Kyungsook Han, *Bio-Inspired Computing and Applications, Lecture Notes in Bioinformatics* (LNBI 6840), Springer, August 2011. ISBN 978-3-642-24552-7
23. **Edited Books:** De-Shuang Huang, Yong Gan, Phalguni Gupta, M. Michael Gromiha, *Advanced Computational Intelligence, Lecture Notes in Artificial Intelligence* (LNAI 6839), Springer, August 2011. ISBN 978-3-642-25943-2
24. **Edited Books:** De-Shuang Huang, Yong Gan, Vitoantonio Bevilacqua, Juan Carlos Figueroa, *Advances in Intelligent Computing, Lecture Notes in Computer Science* (LNCS 6838), Springer, August 2011. ISBN 978-3-642-24727-9
25. **Edited Books:** De-Shuang Huang, Martin McGinnity, Laurent Heutte, Xiao-Ping Zhang, *Advances in Intelligent Computing, Communications in Computer and Information Science* (CCIS 93), Springer, August 2010 (790 pages).

26. **Edited Books:** De-Shuang Huang, Xiang Zhang, Carlos Alberto Reyes Garcia, Lei Zhang, *Advances in Intelligent Computing*, *Lecture Notes in Artificial Intelligence* (LNAI 6216), Springer, August 2010 (790 pages).
27. **Edited Books:** De-Shuang Huang, Zhongming Zhao, Vitoantonio Bevilacqua, Juan Carlos Figueroa, *Advances in Intelligent Computing*, *Lecture Notes in Computer Science* (LNCS 6215), Springer, August 2010 (790 pages).
28. **Edited Books:** De-Shuang Huang, Kang-Hyun Jo, Hong-Hee Lee, Hee-Jun Kang, Vitoantonio Bevilacqua, *Advances in Intelligent Computing*, LNCS 5754, LNAI 5755, Springer, September 2009 (2254 pages).
29. **Edited Books:** De-Shuang Huang, Donald C. Wunsch II, Daniel S. Levine, Kang-Hyun Jo, *The Series for Advances in Intelligent Computing*, LNCS 5226, LNAI 5227, CCIS 15, Springer, September 2008 (3073 pages).
30. **Edited Books:** De-Shuang Huang, Laurent Heutte, Marco Loog, *Advances in Intelligent Computing*, LNCS 4681, LNAI 4682, CCIS 2, Springer, August 2007 (4637 pages).
31. **Edited Books:** De-Shuang Huang, Hai-Yan Liu, Yun-Yu Shi and Guo-Liang Chen, *The Study of Intelligent Computing Theory and Methodology in Bioinformatics*, (in Chinese), Publishing House of University of Science and Technology of China, November 2006 (229 pages).
32. **Edited Books:** De-Shuang Huang, Kang Li and George William Irwin, *Series for Advances in Intelligent Computing*, LNCS 4113, LNAI 4114, *Lecture Notes in Bioinformatics* (LNBI 4115), *Lecture Notes in Control and Information Sciences* (LNCIS 344 & 345), Springer, August 2006 (5771 pages).
33. **Edited Books:** De-Shuang Huang, Xiao-Ping Zhang and Guang-Bin Huang, *Advances in Intelligent Computing*, LNCS 3644 & 3645, Springer, August 2005 (2114 pages).
34. **Edited Book:** De-Shuang Huang, Xuegong Zhang, Jie Tian and Xiangjun Liu, *Explorations of Frontier Problems in Bioinformatics* (In Chinese), Publishing House of University of Science and Technology of China, November 2004 (232 pages).
35. **Edited Books:** De-Shuang Huang, Zeng-Fu Wang and Zong-Guang Yu, *The Theory and Application of Modern Information Technology* (in Chinese), Vol.I & II, Publishing House of University of Science and Technology of China, August 2002 (1108 pages).

#### 10 Most Relevant Scientific Publications List

1. Wenxuan Xu, Lin Zhu and **D.S.Huang**, "DCDE: An efficient deep convolutional divergence encoding method for human promoter recognition," *IEEE Transactions on NanoBioscience*, vol.18, no.2: 136-145, 2019 (**SCI, EI**).
2. Guohui Chuai, Hanhui Ma, Jifang Yan, Ming Chen, Nanfang Hong, Dongyu Xue, Chi Zhou, Chenyu Zhu, Ke Chen, Bin Duan, Feng Gu, Sheng Qu, **D.S.Huang**, Jia Wei, Qi Liu, "DeepCRISPR: optimized CRISPR guide RNA design by deep learning," *Genome Biology*, vol. 19, no. 1, pp. 80, June 26, 2018, DOI: 10.1186/s13059-018-1459-4.
3. Su-Ping Deng, Shaolong Cao, **D.S.Huang**, and Yu-Ping Wang, "Identifying stages of kidney renal cell carcinoma by combining gene expression and DNA methylation data," *IEEE/ACM Transactions on Computational Biology & Bioinformatics*, vol. 14, no. 5, pp. 1147-1153. 2017.

4. Lin Zhu, Weili Guo, Su-Ping Deng, and **D.S.Huang**, "ChIP-PIT: Enhancing the analysis of ChIP-Seq data using convex-relaxed pair-wise interaction tensor decomposition," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 13, no. 1, pp. 55-63, 2016.
5. Bing Wang and **D.S.Huang**, Changjun Jiang, "A new strategy for protein interface identification using manifold learning method," *IEEE Transactions on NanoBioscience*, vol.13, no.2: 118-123, 2014 (**SCI, EI**).
6. **D.S.Huang**, Hong-Jie Yu, "Normalized feature vectors: A novel alignment-free sequence comparison method based on the numbers of adjacent amino acids," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol.10, no.2, pp.457-467, 2013(**SCI, EI**).
7. Zhu-Hong You, Ying-Ke Lei, **D.S.Huang**, and Xiaobo Zhou, "Using manifold embedding for assessing and predicting protein interactions from high-throughput experimental data," *Bioinformatics*, 26(21):2744-2751, 2010 (**SCI**).
8. Chun-Hou Zheng, **D.S.Huang**, Lei Zhang, and Xiang-Zhen Kong, "Tumor clustering using non-negative matrix factorization with gene selection," *IEEE Transactions on Information Technology in Biomedicine*, vol. 13, no.4, pp 599-607, 2009 (**SCI, EI**).
9. **D.S.Huang**, Ji-Xiang Du, "A constructive hybrid structure optimization methodology for radial basis probabilistic neural networks," *IEEE Transactions on Neural Networks*, vol. 19, no.12, pp 2099-2115, 2008 (**SCI, EI**).
10. **D.S.Huang**, Chun-Hou Zheng, "Independent component analysis based penalized discriminant method for tumor classification using gene expression data," *Bioinformatics*, vol.22, no.15, pp.1855-1862, 2006(**SCI**).

