

Curriculum Vitae

Yu-Ping WANG

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CONTACT INFORMATION

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RESEARCH INTERESTS

Computer vision and image analysis, medical imaging, bioinformatics and computational biology, geometric modeling and computer visualization, genomic signal processing, systems biology and the development of biomedical imaging instruments.

EDUCATION

Post-doctoral study in Medical Imaging, Washington University School of Medicine, St. Louis, 1999-2000.

Ph.D. in Communications and Electronic Systems, School of Electrical and Information Engineering, Xi'an Jiaotong University, P. R. China, 1996.

M.S. in Computational Mathematics, Faculty of Science, Xi'an Jiaotong University, Xi'an, P.R. China, 1993.

B.S. in Applied Mathematics, Tianjin University, Tianjin, P.R. China, July 1990.

PROFESSIONAL POSITIONS

*1. July, 2016- Present: Professor, Biomedical Engineering (Primary), and Biostatistics & Bioinformatics, Computer Science, and Neurosciences, Tulane University
Director of Multiscale Bioimaging and Bioinformatics Lab, School of Science and Engineering
Program member of Tulane Cancer Center (TCC) and Center for Bioinformatics and Genomics (CBG) at School of Medicine and School of Public Health and Tropical Medicine*

2. June 2010-June 2016, Associate Professor, Department of Biomedical Engineering, Tulane University

*3. September, 2003- May 2010: Assistant Professor, Computer Science and Electrical Engineering, University of Missouri-Kansas City
Collaborating member of UMKC Center for Research on Interfacial Structure & Properties (UMKC-CRISP), School of Dentistry*

Conducted research, service and teaching in the area of biomedical imaging, with a focus on imaging problems in genomics/genetics.

4 April, 2001-August 2003: Senior Research Engineer, Advanced Digital Imaging Research, LLC, League City, TX.

Conducted cytogenetic imaging research and development work, supported by several NIH SBIR (Small Business Innovation Research) grants.

5 March 2000-March 2001: Senior Research Engineer, Perceptive Scientific Instrument Inc; Research engineer, Electrical Engineering Department, Texas A&M University.

Performed research and development work on chromosomal image analysis with florescence in situ hybridization (FISH) imaging.

6 March 1999-March 2000: Research Associate, Cardio-Vascular Image Analysis Lab., Washington University Medical Center, St. Louis.

Developed computational algorithms for tagged MRI image motion and strain analysis used for heart disease diagnosis at Washington University Medical Center, St. Louis.

7 Oct. 1996 - Feb. 1999: Research Fellow, Wavelets Strategic Research Program, National University of Singapore, Singapore.

Performed research on wavelets based image processing algorithms and applied them to fingerprint recognition and compression, and mammographic image enhancement.

HONORS and AWARDS:

1. College of Fellows at the American Institute for Medical and Biological Engineering (AIMBE), 2017.
2. NIH Academic Research Enhancement Award (AREA), 2009
3. Easter Scholar Professorship, Shanghai University for Science and Technology, China, 2010-2013 (*上海东方学者特聘讲座教授*)
4. Senior Membership, IEEE, since 2006
5. List in Marquis Who's Who in America, since 2006
6. Keynote speaker, Wavelet Conference XI, San Diego, July 2005.
7. University of Missouri-Kansas City Faculty Research Grant award, 2004.

8. Awards for best university graduates of Shannxi Province, China, 1996.
One of the highest honors for university graduate students.
9. Excellent postgraduate awards at Xi'an Jiaotong University, 1995.
10. The 505 awards conferred by a famous enterprise in China, 1994.
11. Chen DaXie awards under the name of a famous Chinese scientist Chen DaXie at Xi'an Jiaotong University, 1992.
12. Third place in college mathematics contests among nearly twenty colleges in the city of Tianjin, 1990.
13. Excellent student awards in Tianjin University, 1989.

TECHNICAL SKILLS

Programming Skills:

C/C++, Fortran, Basic, Pascal, OpenGL, Matlab, HTML, (La)TeX, UNIX Scripts.

OS's and Platforms:

Unix/Linux, Macintosh, and MS-Windows.

RESEARCH GRANT SUPPORT

Ongoing projects at Tulane after July 2010

1. NIH R01MH104680-01A1, Integration of fMRI, genomics, network and biological knowledge, \$1,923,493, 9/24/2015 – 6/30/2019, Role: PI.
2. NSF 1539067, RII Track-2 FEC: Developmental Chronnecto-Genomics (Dev-CoG): A Next Generation Framework for Quantifying Brain Dynamics and Related Genetic Factors in Childhood, \$5,858,210.00, Aug. 1 2015-July 30 2019, site PI with Tulane's share of \$1,175,920, with other PIs: Drs. Vince Calhoun, Julia Stephen, and Tony Wilson.
3. NIH 1R01MH104680-01, Integration of brain imaging with genomic and epigenomic data, \$2,071,571, 08/01/2014 - 07/31/2018, Role: PI.
4. NIH 1R01 GM109068-01A1, Integration of multiscale genomic data for comprehensive analysis of complex diseases, 09/17/2014 - 08/30/2019, \$1,608,775, Role: PI.
5. NIH U19AG055373, Trans-omics integration of multi-omics studies for male osteoporosis, 09/15/2017 – 03/31/2022, \$9,559,562, PI: HW. Deng, Role: PI/Director of Bioinformatics and Biostatistics Core.
6. NIH R01 MH121101, Developmental Multimodal Imaging of Neurocognitive Dynamics (Dev-MIND), 08/19/2019 – 05/31/2024, PI: Tony Wilson, Role: site PI
7. NIH 1R15GM088802-01, Accurate detection of chromosomal abnormalities with multi-color image processing, Role: PI, 09/21/2009-8/20/2012, \$241,341.

8. NIH 1R21LM010042-01, A New Paradigm for Integrated Analysis of Multiscale Genomic Imaging Datasets, \$404,459., Role: PI, 07/01/2009-06/30/2013, \$404,459.
9. NSF, DBI 0849932, Multiscale Genomic Imaging Informatics, Role: PI, 12/01/2009-11/30/2012, \$536,175.
10. Ladies Leukemia League, Bioinformatics technique for accurate subtype classification of myelodysplastic syndrome (MDS), Role: PI, \$50K. 06/01/2011-05/30/2012, \$50,000.
11. NIH 5P50AR055081-06, Genomic Convergence for female osteoporosis risk genes, Role: Co-investigator (PI: Hong-Wen Deng), effort: 0.6 academic month, 08/01/2012-07/31/2013, \$1,016,513.
12. NIH R21CA159936-03, A fluorescence histology system for in vivo breast tumor margin assessment, Role: Co-investigator (PI: Jonathan Q. Brown), effort: 1 summer month, 09/01/2012-2/23/2013, \$123,466

Funded projects at UMKC before July 2010

1. University of Missouri Research Board, High resolution imaging of chromosome abnormalities, \$26,800, Role: PI; 01/01/2005-12/31/2005.
2. UMKC FRG, "High Resolution Probe of Genetic Aberrations Powered by Advanced Image Computing Techniques," Role: PI; \$7,000, 6/1/2005-5/31/2006.
3. Kansas City Area Life Sciences Research Institute (KCALS) Development Grant, Computational imaging technique for integrated molecular karyotyping and gene expression analysis, Role: PI, \$25,000, from 1/1/07-12/30/07.
4. Kansas City Area Life Sciences Research Institute (KCALS) Patton Trust Grant, Rapid and accurate detection of chromosomal abnormalities via multi-color imaging, Role: PI, \$50,000, from 10/1/08-8/30/2009.
5. University of Missouri Research Board, Integrated Structure/Property/Function Imaging Platform, \$17,300, PI: Wang Yong, Role: co-PI; 12/15/2004-12/31/2005.
6. NIH R03 DE015735-01A1, Dentin/Adhesive Interface Structure/Property Imaging, PI: Wang Yong, Role: co-PI, \$147,000, 03/01/2005 - 02/28/2007, 15% effort. The grant supports one month summer salary per year and two graduate research assistants.
7. NIH NGA: 1 R13 DK69504-01, Dental Science Research Training Program for Engineers, PI: KATZ, J LAWRENCE, Role: co-mentor. \$648,000, 9/20/2004-7/31/2007.

8. Summer consultant with ADIR (League city, TX) for an NIH SBIR grant through a research gift contract, Role: PI, about \$6,125, July, 2005.
9. NIH 1R21AR054449-01A1, Osteocytes as dynamic cells, PI: Sarah Dallas. Role: co-PI, 07/01/2007 - 06/29/2009. \$399,233.

Selected past research grants working in the industry

1. NIH SBIR Grant (5R44HD33658-03): Wavelet Enhancement of Chromosome Banding Patterns (Phase 2), co-investigator.
2. NIH SBIR Grant (1R43GM/CA62724-01): Wavelet-Based AROS Compression of Cytogenetic Images (Phase 1), co-investigator.
3. NIH SBIR Grant (1R43 HD38151 -02): Improved classifier for automated multiplex FISH (Phase 2), co-investigator.
4. 1996-1999: Computer vision and medical image processing using wavelets technique, WSRP programme funded by NSTB and DOE of Singapore, PI of a sub project.
5. 1995-1996: Denoising of seismic signals using multiresolution technique, funded by Henan Oil field Co., China (RMB 20,000), PI.

TEACHING

Courses taught at Tulane University

Spring 2011- current, Mathematical Modeling of Biological Systems, 3 credit hours
 Fall 2011-current, Introduction to Biomedical Imaging and Analysis, 3 credit hours
 Fall 2012, Departmental Seminar, 1 credit hour

Courses taught at the UMKC

Fall 2003, ECE 590IP/ECE 486, Digital Image Processing, 3 credit hours
 Winter 2004, ECE 590B, Introduction to Biomedical Imaging, 3 credit hours
 Fall 2004, ECE 590IP/ECE 486, Digital Image Processing, 3 credit hours
 Winter 2005, ECE 590B, Introduction to Biomedical Imaging, 3 credit hours
 Fall 2005, ECE 590IP/ECE 486, Digital Image Processing, 3 credit hours
 CS 352, Data Structure and Algorithms, 3 credit hours
 Winter 2006, ECE 590B, Introduction to Biomedical Imaging, 3 credit hours
 ECE 484/590PR, Pattern Recognition, 3 credit hours
 Fall 2006, ECE 590IP/ECE 486, Digital Image Processing, 3 credit hours
 Winter 2007, ECE 590B, Introduction to Biomedical Imaging, 3 credit hours
 Fall 2007, ECE 590IP/ECE 486, Digital Image Processing, 3 credit hours
 ECE 590CI, Foundations of Computational Intelligence, 3 credit hours
 Winter 2008, ECE 590B, Introduction to Biomedical Imaging, 3 credit hours

Research Supervision at Tulane University

Post-Doctoral/Research Assistant Professor

1. Hongbao Cao, PhD from Louisiana Tech, 2009F-2013, now research fellow at NIMH/NIH
2. Wenlong Tang, 2011S-2012, PhD from Univ. of Maryland, now Investigator I at Novartis Institutes for BioMedical Research
3. Junbo Duan, 2011S-2012, PhD from Nancy University of France, now Assistant Professor at Xi'an Jiaotong University
4. Jianhua, Sheng 2009-2010 (at UMKC), now Professor at Hangzhou University for Electronic Sciences and Technology
5. Keith Dillion, PhD from UCSD, 2014-2016, now Assistant professor at University of New Haven
6. Chen Qiao, PhD from Xi'an Jiaotong Univ., 2014F-present, now Professor at Xi'an Jiaotong University
7. Fang Jian, PhD from Xi'an Jiaotong Univ., 2015S-2018, now Investigator I at Novartis Institutes for BioMedical Research
8. Deng Su-Ping, PhD from Chinese Academy of Science, 2015S-2017
9. Pascal Zille, PhD from Ecole Centrale de Lyon, Lyon, France, 2015F-2018S
10. Md. Ashad Alam, PhD from The Institute of Statistical Mathematics, The Graduate University for Advanced Studies, Japan, 2015F-current
11. Li Xiao, PhD from University of Delaware, 2017F-present
12. Qingxiang Feng, PhD from University of Macro, 2018S-2020F
13. Hosseinzadeh Kassani, Peyman, PhD from Yonsei University, 2018S-2020S
14. Zhongxing Zhou, PhD, from Tianjin University, 2019F-present
15. Shaojie Tang, PhD, from Xi'an Jiaotong University, 2019F-2020S

Doctoral Dissertations

1. Dongdong Lin, PhD, 2011S-2015, Thesis title: Sparse models for multimodal imaging and genomic data integration, Tulane University, received BME Outstanding Graduate Student award in 2013. Now works as a postdoc at Mind Research Network.
2. Jinyao Li, 2011S-2015F, PhD, Tulane University, Thesis title: Multicolor fluorescence in situ hybridization (M-FISH) image analysis based on sparse representation models.
3. Shaolong Cao, 2011F-2016S, Thesis title: Unified Sparse Regression Models for Sequence Variants Association Analysis, Tulane University
4. Alexej Gossman, 2014F-2018S, Thesis title: Regaining Control of False Findings in Feature Selection, Classification, and Prediction on Neuroimaging and Genomics Data
5. Wenxing Hu, 2015S-2020F, Discovering complex relationships between multimodal imaging and omics data, Tulane University
6. Junqi Wang, 2015F-present, Tulane University
7. Yuntong Bai, 2015F-present, Tulane University
8. Aiyang Zhang, 2016S-present, Tulane University
9. Li Guan, 2016S-2017, Jointly with James (Mac) Hyman of Tulane Math. Dept.
10. Biao Cai, 2016F-present, Tulane University

11. Owen Richfield, 2016F-2017, Tulane University
12. Gemeng Zhang, 2017S-present, Tulane University
13. Qinhan Zhou, 2018F-2019F, Tulane University
14. Gang Qu, 2018 F-present, Tulane University

Lab Research Technician

Zheng Zhao (2015S-present); Min Wang (2015S-2017S).

Visiting Scholars hosted

1. Chunmei Yu, associate professor, school of information engineering, Southwest University of Science and technology, Aug. 2011-Feb. 2012.
2. Xinguo Jiang, associate professor, School of Information and Communication, Guilin University of Electronic Technology, 2012F-2013F
3. Jie Wu, associate professor, Biomedical Engineering, University of Shanghai for Science and Technology, 2015F-present
4. Gang Li, associate professor, Changan University, 2016S-2017S
5. Chunlei Li, associate professor, Zhongyuan University of Technology, 2017S-present
6. Kaiming Wang, associate professor, Changan University, 2017S-2018S
7. Lu Guo, visiting PhD student, Tianjin University, 2017S-2018S
8. Shengnan Lu, associate professor, Changan University, 2018S-2019
9. Yipu Zhang, lecturer, Changan University, 2018S-2019F
10. Liangliang Liu, PhD student, Zhongnan University, 2019F-2020F
11. Guixia Pan, assistant professor, Anhui Medical University, 2019F-2020F

Master Dissertations

1. Michael Coletti, 2012s-2014, currently Biomedical Flight Controller at Wyle Integrated Science and Engineering Group, Houston, TX

Undergraduates including Senior Design

Shishi Wu (2011), Stephen J. Pagonis (2011), Ethan Ellis (2012), Adam Kovacs (2013) Emily Nitzberg (2016), Owen Richfield (2016), Emma Bortz (2016), John McGee (2016) Chelales Erika (2016), Clarke, Alexandra (2016), Begeman, Andrew (2016), Jason Dent (2017), Knapp, Benjamin (2017), Bui, Thanh-Thu (2017), Conrad, Kevin (2017), Isabelle Lian (2019F-2020S).

Student Mentoring at UMKC (before July 2010)

1. David Dai, 2008-2009, UMKC
2. Stuerke Cecil, 2008-2010., UMKC
3. Yang Michael Song, 2007, UMKC
4. Ahmed Aadil Shaikh, 2005-2006, UMKC
5. Temrangsitornrat, Mongkol, 2005, UMKC
6. Doynov, Plamen Gueorguiev, 2005, UMKC

Masters Theses Supervised

1. Ragib Husain, Thesis title: *Wavelet based peak detection with application to biomedical*

imaging. Graduated in 2004; returned to India.

2. Ashok Dandpat, Thesis title: *Classification of multiplex fluorescence in situ hybridization images using wavelets and fuzzy clustering*. Graduated in the fall of 2005; now works at Black and Veatch in Kansas City.

3. Gunampally, Maheswar Reddy. Thesis on *microarray image segmentation and quantization*. Graduated in the fall of 2006 and now works in Los Angeles.

4. Komatreddy, Lakshmi, Thesis on *hyperspectral imaging data classification*, 2005.

95. Nakkerthi, Sunil, *Clustering for M-FISH image segmentation*, 2004.

6. Bolaram, Shashikar, *Spectroscopic imaging processing using ICA*, (terminated).

7. El-Ghoussein, Fadi Mohammed, *Fiber tracking from neuron images*, (in progress).

8. Vattikuti, Leelavenkatakrishna, *Fusion of genetic data using ICA*, (in progress).

Master/PhD Committee Memberships

1. Lu Tingfei, Thesis title: *The development of an automatic metaphase finding system for human chromosome study*, Jan, 26, 2004.

2. Pavan Kumar Reddy Yanala, Thesis title: *Automated Detection of Metaphase Chromosomes for Fluorescence In Situ Hybridization and Routine Cytogenetics.*, Oct, 8, 2004

3. Sachin Mathur, *Biological significance of clustering of microarray data*, 2004.

4. Swetha Thummala, *Reducing effects of false alarms using responses*, Oct. 2005.

5. Jubin Sanghvi, *IFREE - An Indexed Forest of Representer Expression Extractor for position frequency matrices to rapidly detect novel motifs*, Feb., 2006.

6. Balaji Jayaraman, *Hierarchical representation of protein folding patterns based on contact map distances*, May 1, 2006.

7. Li Zhichuan, *Modeling organization structures in UML*, March 21, 2007.

8. Megha Andra, *Structure property function software for complementary analysis of multimodal dental imaging/spectral data*, April 27, 2007.

9. Ranganathan Parthasarathy, *Biomaterial characterization using indigenously developed software SPF*, July 26, 2007.

10. Yao Hongzhi, Dept. of Physics, Chair: Wai-Yim Ching

Required Graduate Projects (Direct Reading)

1. Bysani Balavenkatak.

2. Mohan, Anand, Microarray spot segmentation.

3. Vaddiparthi Vaddiparthi, Jahnavi, Fall of 2006, Jointly Analyzing Gene Expression and Copy Number Data in Breast Cancer Using Data Reduction Models

4. Rachakonda, Venu, Microarray CGH analysis.

5. Stuerke Cecil, Low Resolution Technique for Fast Identification of Carotid Artery in Computed Tomography

Students mentoring in the industry before joining UMKC

I have mentored the following students during their internship at the ADIR.LLC, in Houston, TX.

- 1 Liu Zhongming and Hua Jianping, PhD students, EE Dept., Texas A&M University
- 2 Choi Hyohoon and Mehul Sampat, PhD students, ECE dept., University of Texas at Austin.
- 3 Vermolen Bart , PhD student, Delft University of Technology
- 4 Li Xianyou, Master student, CS, University of Houston in Clear Lake.

PROFESSIONAL SERVICE

Technical Committee

Member of Machine Learning for Signal Processing [technical committee](#) of the IEEE Signal Processing Society, 2006-2008

Member of the technical committee on signal processing, Chinese Geophysical Society, 1996-present.

Chair of EMBS New Orleans Chapter, IEEE, 2012-

Membership of recent conference program committee since 2007

1. 2007 International Workshop on Machine Learning for Signal Processing, Aug. 27-29, 2007, Thessaloniki, Greece.
2. IEEE Workshop on Genomic Signal Processing and Statistics, Finland, 2007
3. International Workshops on Machine Learning in Biomedicine and Bioinformatics (ICMLA'07), Dec. 13-15, Cincinnati, Ohio, 2007
4. ACM CIKM workshop "Data and Text Mining in Bioinformatics" (DTMbio'07), 2007
5. IEEE International Conference on Bioinformatics and Biomedicine (BIBM), November 2-4, 2007 in San Jose, California
6. The 7th International Workshop on Data Mining in Bioinformatics (BIOKDD '07), in conjunction with ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (SIGKDD'07), August 12th, 2007, San Jose, CA
7. IEEE workshop on "Mining and Management of Biological Data" (MMBD). MMBD will be held in Omaha, Nebraska, USA on October 28th, 2007 and will be held in conjunction with the 7th International Conference on Data Mining (ICDM)
8. 2008 IEEE Region 5 Technical, Professional and Student Conference, April. 17-20, Kansas City, MO.
9. 2008 IEEE World Congress on Computational Intelligence (WCCI 2008) to be held at the Hong Kong, June 1-6, 2008.
10. International Conference on Bioinformatics, Computational Biology, Genomics and Chemo informatics (BCBGC-08), 7-10 of July 2008 in Orlando, FL, USA
11. The 2008 International Conference on Bioinformatics and Computational Biology (BIOCOMP'08): July 14-17, 2008, Las Vegas, USA
12. Fourth International electronic Conference on Computer Science 2008 (IeCCS 2008). (<http://www.ieccs.net/>)
13. IEEE International Conference on Bioinformatics and Biomedicine (BIBM), November 7-9, 2008, in Philadelphia, PA.

14. 2008 IEEE International Workshop on Machine Learning for Signal Processing, Oct. 16-19, 2008, Cancun, Mexico.
15. The Seventh International Conference on Machine Learning and Applications, December 11-13, 2008, San Diego, California, USA.
16. International Joint Conferences on Bioinformatics, systems biology and intelligent Systems (IJCBS) September 24-27, 2009, Shanghai, China
17. International Conference on Bioinformatics, Computational Biology, Genomics and Chemo informatics (BCBGC-08), July 2009 in Orlando, FL
18. IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS'2009), May 17 –21, 2009, Minneapolis, Minnesota.
19. 2009 IEEE International Workshop Machine Learning for Signal Processing (MLSP'09), September 2-4 2009, Grenoble, France
20. IEEE International Conference on Bioinformatics and Biomedicine (BIBM09), Washington DC, USA, Nov. 1-4, 2009
21. International Conference on Bioinformatics, Computational Biology, Genomics and Chemo informatics (BCBGC-08), July 2010 in Orlando, FL
22. 2010 IEEE International Workshop Machine Learning for Signal Processing (MLSP'10), Aug 29, 2010, Kittila, Finland
23. IEEE International Conference on Bioinformatics and Biomedicine (BIBM09), Washington DC, USA, Jan, 2011
24. The 10th International Conference on Machine Learning and Applications, Honolulu, Hawaii, Dec. 18-21, 2011
25. IEEE International Conference on Bioinformatics and Biomedicine (BIBM10), Atlanta, Georgia, USA, Nov. 12-15, 2011
26. The 5th IEEE International Conference on Systems Biology (ISB 2011), Zhuhai, China, September 2-4, 2011
27. MMIAA'11, Microscopic Image Analysis with Applications in Biology Chicago, IL, August 1, 2011.
- 28 13th WSEAS International Conference on Mathematics and Computers in Biology and Chemistry (MCBC'12), Lasi, Romania, June 13-15, 2012.
29. IEEE International Conference on Bioinformatics and Biomedicine (BIBM11), Philadelphia, Georgia, USA, Oct. 4-7, 2012.
30. GLOBAL HEALTH 2012, The First International Conference on Global Health Challenges, be October 21-26, 2012, Venice, Italy.
31. 11th International Conference on Machine Learning and Applications ICMLA 2012, December 12-15, 2012, Boca Raton, Florida, USA
32. The 2012 IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS'12), Washington, DC, December 2-4, 2012.
33. IEEE International Conference on Bioinformatics and Biomedicine (BIBM13), Shanghai, Dec. 17-21, 2013.
34. IEEE International Conference on Bioinformatics and Biomedicine (BIBM14), Belfast, UK, Nov. 2-5, 2014.
35. 13th International Workshop on Data Mining in Bioinformatics (BIOKDD'14) August 24, 2014, New York City, NY, USA

Organizers of the workshops

1. [2004 IEEE International Symposium on Biomedical Imaging: From Nano to Macro.](#) (Co-organizer with Robert F. Murphy of CMU on special session on genetic imaging), Washington DC, 2004.
2. Wavelets and Signal Processing, National University of Singapore, Sept. 1998.
3. Geometric Analytic Methods in Image Processing, National University of Singapore, Feb. 1999.
4. Co-chair (with Ye Duan of Univ. of Missouri), Multiscale Biomedical Imaging informatics workshop, in conjunction with IEEE International Conference on Bioinformatics and Biomedicine (BIBM11), Philadelphia, Oct. 4-7, 2012.
5. Co-organizer (with Vince Calhoun of The Mind Research Network) of Special session on Computational methods for Integrative analysis of imaging and genetic data, International Symposium on Biomedical Imaging (ISBI 2013), San Francisco, CA, April 8-11, 2013
6. Chair of poster session, ACM Conference on Bioinformatics, Computational Biology and Biomedicine (ACM BCB'13), Washington D.C., September, 22-25, 2013, ACM BCB'14, Los Angeles, 2014, and ACM-BCB'15, Atlanta, GA, Sept 9-12, USA.
7. Organizing committee (industrial liaison), International Symposium on Biomedical Imaging (ISBI 2013), Beijing, China, April 28-May 2, 2014.
8. Mini-symposium on neuroimaging, genetics and data modeling, 2016 SIAM Imaging Sciences, Albuquerque, May 26, 2016
9. Special session on Integration of multiscale heterogenous medical data, ICASSP'17, New Orleans, March 5-9, 2017
10. Member of organizing committee (Student Award Chair), International Symposium on Biomedical Imaging (ISBI 2018), Washington DC, 2018
11. Co-chair of International workshop on Mathematics in Advanced Medical Imaging: Models, Algorithms, and Big Data, from 30 December 2019 -- 3rd January 2020, Sanya China, (<http://www.tsimf.cn/meeting/cnshow?id=183>).

Editorship

Associate editor, IEEE Trans. Medical Imaging (TMI), 2019-present
Associate editor, IEEE/ACM Trans. Computational Biology and Bioinformatics (TCBB), 2019-present
Associate Editor, Journal of Neuroscience Methods; July 2013-present
Guest editor (with Prof. Hu Y. H., Univ. Of Wisconsin, Madison) for the Journal of VLSI Signal Processing-Systems for Signal, Image, and Video Technology Special issue on Genomic Signal Processing, 38(3), Nov, 2004 ([Guest editorial](#))
Associate editor, World Research Journal of Molecular Cytogenetics, 2012-present
Review editorial board, Frontier in Genetics, 2010-present
Associate Editor, JSM Biotechnology & Biomedical Engineering, 2013-present
Editorial board member, JSM Biomedical Imaging Data Papers, 2014-present
Associate Editor, EURASIP Journal on Bioinformatics and Systems Biology, 2015-present

Member of Editorial Board, International Journal of Data Mining and Bioinformatics (IJDM), 2016-2019

Review for funding agencies

Ad hoc grant reviewer for the National Institute of Health (NIH); a list of some recent study sections:

- NIH Challenge grant panel (June 2009),
 - NIH Health IT, Chicago (June 8 2010)
 - NIH SBIR, San Francisco (Oct. 20, 2010)
 - NIH Health IT, Baltimore (March 7, 2011)
 - NIH SBIR, Washington DC (Oct. 27, 2011)
 - NLM Biomedical Library and Informatics (BLR), Washington DC (June 7-8, 2012)
 - NIH Bioinformatics in Surgical Sciences, Biomedical Imaging and Bioengineering (SBIB Q (80), June 17, 2013, Nov. 22, 2013, June 6, 2014, Oct. 23, 2015, Feb. 26, 2016.
 - NIH Biomedical Computing and Health Informatics (BCHI), June 11, 2013.
 - NIH Analysis of Genome-wide Gene and Environment (GXE) interactions, May 29-30, 2014
 - NIH Clinical Informatics, New Orleans, March 16, 2015
 - NIH NIH Director's Early Independence Award (DP5), Nov., 2016
 - NIH NIDA Avenir Award Program for Genetics or Epigenetics of Substance Abuse (DP1), mail reviewer, Feb. 2, 2017, Dec. 15, 2017
 - NIH "BD2K Community-Based Data and Metadata Standards Efforts (R24)" study section, March 13, 2017.
 - NIH Biodata Management and Analysis (BDMA) study section, June 8-9, 2017, Oct. 25-26, 2018
 - NIH NIDA Avenir Award Program for Genetics or Epigenetics of Substance Abuse (DP1), mail reviewer, Dec. 16, 2019
 - NIH Intellectual and Developmental Disabilities Research Center (IDDR) Center grant review panel, April 21-22, 2020
 - NIH Brain Disorders and Related Neurosciences Fellowship Study Section (F01A), Virtual video format, March 11-12, 2021
- Reviewer and panelist for NSF BME program, 7/31-8/1, 2012
- Reviewer for NSF ABI program, 2010
- Reviewer and panelist for NSF CCF program, 2004-present
- Reviewer for Fundação para a Ciência e a Tecnologia (FCT), the Portuguese Foundation for Science and Technology, Aug. 2012
- Reviewer for Czech Science Foundation (GACR), Oct., 2012.
- Reviewer for Singapore A*STAR program, Nov. 2013
- Reviewer for the University of Missouri Research Board, 2004-present
- Reviewer for the Science and Technology Development Program, North Carolina Biotechnology Center, 2009
- James and Esther King Biomedical Research Program, Florida Department of Health, 2010

Bankhead-Coley Cancer Research Program, Florida Department of Health, 2013
Innovation Partnership throughout the Commonwealth of Pennsylvania, Nov., 2010
University of Texas System, UT BRAIN Seed Grant review, June 5, 2015.
IEEE Senior membership selection panel, New Orleans, LA, Jan. 6, 2011
Medical Research Council (MRC), United Kingdom (UK), Sept. 15, 2016
Swiss National Science Foundation (SNSF), mail reviewer, June 5, 2020

Book Review

Genomic Signal Processing, Edward Dougherty and Ilya Shmulevich, Princeton University Press, 2002.
Medical Image Analysis, Second Edition, Atam Dhawan, John Wiley & Sons, Inc., 2009

Journal Review (above 150 papers for over 60 journals)

I have been a regular reviewer for over 60 journals including

IEEE Trans. Signal Processing,
IEEE Trans. Signal Processing Letters,
IEEE Trans. Image Processing,
IEEE Trans. Pattern Analysis and Machine Intelligence,
IEEE Trans. Medical Imaging
IEEE Trans. Biomedical Engineering (Got the appreciation letter for reviewing three papers within one month period from the Editor in Chief, 2004).
IEEE Trans. Circuit and System for Video Technology
IEEE Trans. Multimedia
IEEE Trans. Signal Processing Magazine
Signal Processing
Applied and Computational Harmonic Analysis
Journal of Fourier Analysis and Applications
Computers in Biology and Medicine
International Journal of Biomedical Imaging
Cytometry, part A
Journal of Technology in Cancer Research and Treatment
Computer Vision and Image Understanding
International Journal of Image and Graphics
Circuits, Systems and Signal Processing
Journal of X-Ray Science and Technology
Science in China
Journal of ZheJiang University, English edition. China
International Journal of Data Mining and Bioinformatics
EURASIP Journal on Bioinformatics and Systems Biology
Frontiers in Bioscience, in the Encyclopedia of Bioscience
BMC Bioinformatics, BMC Systems Biology
Neurocomputing,
Bioinformatics

Journal of American Medical Informatics
Annals of Applied Statistics
IEEE J. Biomedical Engineering and Health Informatics

In addition, I have reviewed numerous conferences in the area of signal/image processing and wavelets such as ICASSP, ICIP and ISBI.

Consultant to the industries

Advanced Digital Imaging Research, LLC, League City, TX
Midwest Cardiovascular Technologies, Kansas City, MO
Spectral Genomics Inc, Houston, TX

University Service at Tulane University

New Faculty Search committee, 2010-present, Dept. of Biostatistics & Bioinformatics
Executive committee member of Center for Bioinformatics and Genomics, 2010-present,
External committee, 2010-present, Biomedical Engineering Dept., Tulane University

University Service at UMKC

1. New Faculty Teaching Scholarship, 2004
2. Graduate and doctoral faculty member, 2004-present
3. Computational Biology and Bioinformatics Committee working with Dean William Osborne, 2003
4. Faculty Budget Advisory Committee, UMKC, 2005-2006
5. Bioinformatics faculty searching Committee, School of Medicine, 2006-2008
6. Collaborating Member of CRISP, UMKC school of Density, 2003-present
7. Member of Geosciences Information Certificate Program, Dept. of Geosciences, 2006
8. Mentor of Eric Akers from ECE of University of Kansas (KU), preparing for the future faculty program, 2006-2007
9. Curriculum development committee on the development of bioinformatics and bioengineering courses, 2007
10. Biomedical engineering program development committee with Associate Dean Sohraby, 2008.

Community service

1. Promotion & Tenure review for University of Pittsburg, University of Oklahoma, University of Texas, University of Massachusetts, Indiana University, etc.
2. Attended the Project lead the way at Summit Technology Academia , Lee's Summit, Oct. 29, 2004
3. 19th Science Pioneer's Meet the Mentor Day, Union Station, Oct, 2005

Invited seminars and presentations (Selected since 2000)

1. Integration of multi-modal brain imaging and genomics data with both linear and deep collaborative learning, Univ. of Texas Health Sciences in Houston, Dept. of Biostatistics and Data Sciences, Feb. 2, 2021, online Zoom seminar.
2. Integration of multi-modal brain imaging and -omics for precision medicine, University of Arkansas at Little Rock, Sept. 29, online Zoom seminar.
3. From linear to deep collaborative learning with applications to multi-modal fMRI and genomics data integration, 4nd International Conference on Electronic Information Technology and Computer Engineering (EITCE 2020), **Keynote talk**, Nov. 6-8, 2020, Xiamen, China, online Zoom meeting.
4. Integration of multi-omics and brain imaging data, School of Big Data Sciences, Fudan University, Shanghai, China, Jan. 7, 2020.
5. Mathematical modelling for big genomic imaging data analysis, Dept. of Mathematics, Hohai University, Nanjin, China, Jan.6, 2020.
6. Machine learning for multi-modal data integration with biomedical applications, 3nd International Conference on Electronic Information Technology and Computer Engineering (EITCE 2019), **Keynote talk**, Oct. 18-20, 2019, Xiamen, China.
7. Integration of brain imaging and genomic data for precision medicine, Tulane Hayward Genetics Grand Rounds, Sept. 9, 2019
8. Mathematical modelling for big genomic imaging data analysis, School of Mathematical Sciences, Xidian University, Xi'an, July 10, 2019
9. Integration of brain imaging and genomic data for precision medicine, July 9, BME department, FMMU, July 9, 2019
10. Deep collaborative learning with application to multi-modal fMRI data integration, 4th International Conference on Big Data and Information Analytics, December 17-19, 2018, Houston, TX
11. Representation of multi-modal data: from linear collaborative learning to deep learning models, 2nd International Conference on Mathematics of Data Science, ICMDs 2018, November 2-4, 2018, Old Dominion University, Norfolk, Virginia
12. Group SLOPE model with application to genomic data analysis, International Symposium on large scale complex data analysis, Yunnan University, Kunming, Oct. 20, 2018.
13. Mathematical modelling for big genomic imaging data analysis, Kunming University of Science and Technology, Kunming, Oct. 19, 2018.
14. Biomedical imaging meets genomics for precision medicine, Northwestern Polytechnical University, Xi'an, Oct. 17, 2018.
15. Integration of multiscale brain imaging and genomic data with novel mathematical models, **Keynote talk**, The 2nd International Symposium on Image Computing and Digital Medicine (ISICDM 2018), Oct. 13-15, 2018 in Chengdu, China
16. Fast and accurate Detection of imaging and genetics associations with Greedy projected distance correlation, International Chinese Statistics Association (ICSA) China conference, July 4, 2018.
17. A half day course on Integration of multiscale heterogenous brain imaging and genomics, 5th International workshop on statistical genetics and genomics, Shandong University, Jinan, June 30, 2018.

18. Mathematical modeling for multiscale imaging and genomics data integration, Center for Applied Mathematics, & Institute for Medical Engineering, Tianjin University, June 28, 2018
19. Co-regularized regression for the integration of brain imaging and genomics data, Nonstandard Brain Image Analysis workshop, NUS, Singapore, June 23, 2018.
20. Fast and accurate detection of imaging and genetics associations with Greedy projected distance correlation, first International Symposium on Genomics Medicine and Translational Medicine, Suzhou China, June 14-17, 2018
21. Group SLOPE model with application to genomic analysis, 7th International Conference on Computational Harmonic Analysis, Vanderbilt University, TN, May 14-18, 2018.
22. Integration of multiscale brain imaging and (epi)genomics, Biostatistics seminar, Univ. of Texas Houston Health Sciences Center, Feb. 13, 2018.
23. Integration of multiscale brain imaging and (epi)genomics, Department of Biomedical Engineering, School of Biomedical Engineering & Imaging Sciences, King's College London (KCL), UK, Jan. 9, 2018.
24. Brain imaging meets (epi)genomics, Department of Physiology, Tulane University, Oct., 30, 2017.
25. Sparse modeling for integrative analysis of imaging and genomic data, Biostatistics seminar, LSU Health Sciences Center, Feb. 20, 2017.
26. Invited speaker for “Mathematics and Statistics in Big Data Integration” workshop at Tsinghua Sanya International Mathematics Forum (TSIMF) from December, 26—30, 2016.
27. Sparse models for integrative analysis of imaging and genomic data, Tongji University, Dec. 22, 2016.
28. Informatics approaches for integrative analysis of imaging and genomic data, Tulane Department of Biochemistry and Molecular Biology, Dec. 12, 2016.
29. Sparse models for integrative analysis of imaging and genomic data, Tulane Department of Global Biostatistics and Data Sciences, Nov. 18, 2016.
30. Invited speaker at Michigan State University for the Science at the Edge seminar series, Oct. 7, 2016.
31. Integration of neuroimaging, (epi)genomics, networks and biological knowledge, School of Mathematics and Statistics, Xi'an Jiaotong University, July 20, 2016.
32. Integration of neuroimaging, (epi)genomics, networks and biological knowledge, The third medical image computing workshop (<http://www.mics2016.com>), Guangzhou, Keynote talk, July 16, 2016.
33. Integration of neuroimaging, (epi)genomics, networks and biological knowledge, Cornell University Medical School, New York City, June 21, 2016.
34. Modeling and Integration of Imaging and Genomics Data, 2016 SIAM Imaging Sciences, Albuquerque, May 26, 2016.
35. Invited speaker at Bioinformatics Department, University of Texas Southwestern Medical Center, May 9, 2016.
36. Integration of multiscale brain imaging and genomics data, Tulane Structural and Cellular Biology Departmental Seminar, March, 29, 2016.
37. Integration of fMRI imaging and genomics data, 15th Annual Red Raider Mini-Symposium at Texas Tech University, Nov. 6-7, 2015.

38. Imaging and genomic data integration, 2015 Shanghai Mini-Workshop on Computational Intelligence and Bioinformatics, Tongji University, China, Oct. 25-26, 2015.
39. Integration of multiscale brain imaging and genomics data, 3rd Workshop on Medical Imaging in Suzhou University, China, Oct. 29-30, 2015.
40. Sparse models for the detection of CNVs from NGS and imaging genomics, Dept. of Biostatistics and Bioinformatics, Emory University, Sep. 12, 2015.
41. Big-biomedical Data Integration and Analysis, Invited instructor, Summer 2015: CCNS: Computational Neuroscience Summer School: July 27-31, 2015, SAMSI, Research Triangle Park, NC.
42. The US Turkey Advanced Study Institute on Global Healthcare Grand Challenges, June 22-26, 2015, **Keynote speaker**. Cancelled due to flight change.
43. Multiscale imaging and genomics information integration, Tulane Pathology Department Grand Rounds, June 12, 2015.
44. Multi-scale genomic and imaging information integration, Statistical and Applied Mathematical Sciences Institute (SAMSI), Imaging Genomics webinar, March 23, 2015.
45. Multiscale genomic imaging data integration, University of Houston, Biomedical Engineering Dept., Feb. 16, 2015.
46. Development of sparse models for imaging and genomic data analysis, The Mind Research Network (MRN), New Mexico, NM, Oct. 9, 2014.
47. Development of sparse models for bioimaging and bioinformatics, School of Mathematics and Statistics, Xi'an Jiaotong University, July 3, 2014.
48. Sparse modeling with applications to bioimaging and bioinformatics, Chengdu University for Electronic Science and Technology, June 27, 2014, Chengdu, China.
49. Application of signal processing and machine learning to biomedical image analysis, June 19th, 2014, Zhongyuan Institute of Technology, Zhengzhou, China.
50. Sparse models for multi-omics data integration, 2nd LA Bioinformatics Conference, May 16, 2014, LSU, Baton Rouge, LA.
51. Multiscale integrative imaging genomics, Center for Computational Biology and Bioinformatics, Indianan University, Indianapolis, Jan. 27, 2014.
52. Research at Tulane Multiscale Bioimaging and Bioinformatics Lab, Pennington Biomedical Research Center, Jan. 10, 2014.
53. Bioimaging and Bioinformatics with sparse representations, Tongji University, Shanghai, China, Dec. 27, 2013.
54. Sparse modeling with applications to bioimaging and bioinformatics, Computer Science Department, University of Massachusetts-Boston , Oct. 23, 2013
55. Integrative analysis of imaging and genetic data, University of Maryland-Baltimore, June 13, 2013.
56. Introduction to Tulane Center for Bioinformatics and Genomics, School of Medicine, Xi'an Jiaotong University, Dec., 27, 2012.
57. Sparse modeling for bioimaging and bioinformatics, School of Information and Systems Sciences, Xi'an Jiaotong University, Dec., 28, 2012.
58. Sparse data representations with applications to multiscale integrative genomic informatics, Dept. of Electronic and Information Engineering, The Hong Kong Polytechnic University Dec. 21, 2012.

59. Sparse models for integrative analysis of fMRI imaging and genetic data, Department of Electrical and Electronic Engineering, Hong Kong University, Dec. 20, 2012.
60. Sparse representation for biomedical imaging, guest speaker for Summer School on Biomedical Image Analysis, Shanghai Jiaotong University, June, 2012.
61. Sparse modeling for biomedical imaging, Shanghai University for Science and Technology, July, 2012
62. Application of spare modeling to bioimaging and bioinformatics, June 10th, International Conference on Compressive Sensing, **keynote speaker**, Tianjin, June 9-12, China
63. Sparse representations with applications to multiscale integrative genomic informatics, Biostatistics Dept., LSU Health Center in New Orleans, March 5, 2012.
64. Multiscale genomic and imaging information integration, Stanford University School of Medicine, July, 2011.
65. Research topics on bioimaging and bioinformatics, Institute of Shanghai Biological Sciences, CAS, June 24, 2011.
66. Extraction and integration of multiscale genomic information, University of Shanghai for Science and Technology, June 17, 2011.
67. Multi-scale biomedical imaging from organ/tissue level to molecular/cellular level, University of Shanghai for Science and Technology, June 8, 2011
68. Integration of multi-modality genomic information, Tulane Dept. of Structural and Molecular Biology, Feb.23, 2011
69. Multiscale genomic image informatics, Tulane Cancer Center, Feb.3, 2011
70. Multiscale and multimodality genomic image informatics, Center for Computational Sciences (CCS), Sep., 14, 2010
71. Multiscale genomic image informatics, Dept. of CS, Texas State University, April 5, 2010
72. Multiscale genomic image informatics, Dept. of ECE, Catholic University of American, Washington DC, March 17, 2010
73. Multiscale genomic image informatics, Dept. of CS, University of Massachusetts - Lowell, March 2, 2010
74. Multiscale and multimodality genomic image informatics, Dept. of Computer Science, University of Missouri, Columbia, Oct. 29, 2009.
75. Splines and wavelets for biomedical image analysis, Dept. of ECE, University of New Mexico, Sept. 25, 2009.
76. Multiscale and multimodality genomic image informatics, The Mind Research Network, New Mexico, Sept. 24, 2009.
77. Multiscale and multimodality genomic image analysis, School of Computer Engineering, Nanyang Technological University (NTU), Aug. 11, 2009.
78. Multi-modality Genomic imaging Informatics, Institute of Systems and Informatics, Xi'an Jiaotong University, China, July 29, 2009.
79. High resolution genomic imaging powered by computational image analysis, IEEE Computer Science Society-Kansas City Section, Overland Park, Sep. 18, 2008.
80. Systems genomics driven by multi-modality imaging, Dept. of Automation, Shanghai Jiaotong University, July 22, 2008.

81. Systems biology with multi-modality imaging, CAS-MPG Partner Institute for Computational Biology, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, July 21, 2008.
82. Seminar in the genomic research group, UMKC School of Medicine, March 21, 2008.
83. IMA workshop on Organization of Biological Networks, Univ. of Minnesota, March 3-7, 2008.
84. Talk on Systems genomics driven by multimodality imaging, Molecular Genetics Group, Children's Mercy Hospital and Clinics (CMH), Nov. 1, Kansas City, 2007.
85. Bioinformatics and computational Biology group, Translational Genomics Research Institute (Tgen), April 20, Phoenix, AZ, 2007.
86. Center for Evolutionary Functional Genomics, Dept. of Computer Science & Engineering, April 20, Arizona State University, 2007.
87. Dept. of ECE, Colloquium, Feb. 26, University of Kansas, 2007.
88. Dept. of Math. Seminar, National University of Singapore, July 19, 2006.
89. Talk on high resolution genetic imaging at the Workshop on [Algorithmic Biology: Algorithmic Techniques in Computational Biology](#), the Institute for Mathematical Science (IMS) of National University of Singapore, July 14, 2006.
90. CS and Math Dept. Colloquium, University of Missouri- St. Louis, March, 2006.
91. Frontier in Imaging workshop, University of Minnesota, [IMA Annual Program Year Workshop on Imaging](#), 2005
92. Oral Biology Seminar, School of Dentistry, University of Missouri-Kansas City, 2005
93. School of Computing and Engineering, University of Missouri-Kansas City, Sep. 2005
94. Institute of Automation, Chinese Academia of Sciences, China, June, 2005.
95. School of Mathematical Sciences, Xi'an Jiaotong University, China, May 2005.
96. Institute of Pattern Recognition and Image Processing, Shanghai Jiaotong University, China, May 2005.
97. Midwest Cardio-Vascular Technology, LLC, Kansas City, Nov., 2004.
98. [Second International Conference on Computational Harmonic Analysis](#), Vanderbilt University, TN, 2003.
99. Physics Dept. Seminar, University of Missouri-Kansas City, 2003.
100. CS Dept., University of Houston-Downtown, Feb., 2003.
101. ECE Department, University of Oklahoma, July, 2002.
102. Statistics Department, University of Pennsylvania, Philadelphia, Jan. 1, 2000.
103. Dept. of Math, Washington University, St. Louis, March 2000.
104. Dept. of Electrical Engineering, Texas A&M Univ., July, 2000.
105. IEEE Workshop on Mathematical Methods in Biomedical Image Analysis. Hilton Head Island, SC. 2000.
106. A tutorial on application of Spline and Wavelets to image processing, Annual Cytometry Development Workshop, Pacific Grove, CA, Oct. 2000.

LIST OF PUBLICATIONS (>200 peer reviewed papers as Jan. of 2021)

Book Chapters

1. Yasheng Chen, Yu-Ping Wang and A. A. Amini, Tagged MRI Image Analysis from Splines, chapter 8, "Measurement of Cardiac Deformation from MRI: Physical and

- Mathematical Models, eds. A.A Amini and J.L. Prince, Kluwer Academic Publishers, 2001.
2. Yu-Ping Wang, Chapter 5 in Wavelet Theory and Its Applications, *Xidian University Press*, China, 1993.
 3. Chris Wyatt, Yu-Ping Wang, Merray Loew, and Yue Wang, Medical Imaging enhancement, invited book chapter 7, Biomedical Information Technology, in *Elsevier-Academic Press Series in Biomedical Engineering*, 2007.
 4. Yu-Ping Wang, Qiang Wu, and Ken Castleman, Microscopic image enhancement, invited Book Chapter of Microscopic Image Analysis, edited by Qiang Wu, Fatima Merchant and Ken Castleman, in *Elsevier-Academic Press*, 2008.
 5. Dongdong Lin, Vince D. Calhoun, and Yu-Ping Wang, Chapter 16. Imaging genetics: information fusion and association techniques between biomedical images and genetic factors, "Health Informatics Data Analysis: Methods and Examples", the *Springer book series Health Information Science*, edited by Prof. Yanchun Zhang, Victoria University, Australia, 2014.
 6. Junbo Duan, Xiaoying Fu, Jigang Zhang, Yu-Ping Wang, and Hong-Wen Deng, The Next Generation Sequencing and Applications in Clinical Research, in Application of Clinical Informatics, Chapter 4, edited by Xiangdong Wang, Christian Baumgartner, Denis C. Shields, Hong-Wen Deng, Jacques S. Beckmann, Springer, 2016. DOI 10.1007/978-94-017-7543-4
 7. Ruifeng Wang, Yu Zhou, Shaolong Cao, Yuping Wang, Jigang Zhang, and Hong-Wen Deng, Metagenomic Profiling, Interaction of Genomics with Meta-genomics, Chapter 9 of Application of Clinical Informatics, edited by Xiangdong Wang, Christian Baumgartner, Denis C. Shields, Hong-Wen Deng, Jacques S. Beckmann, Springer, 2016. DOI 10.1007/978-94-017-7543-4
 8. Hao He, Dongdong Lin, Jigang Zhang, Yuping Wang, and Hong-Wen Deng, Biostatistics, Data Mining and Computational Modeling, Chapter 2 of Application of Clinical Informatics, edited by Xiangdong Wang, Christian Baumgartner, Denis C. Shields, Hong-Wen Deng, Jacques S. Beckmann, Springer, 2016. DOI 10.1007/978-94-017-7543-4
 9. Su-Ping Deng, Wenxing Hu, Vince D. Calhoun, Yu-Ping Wang, Classifying Schizophrenia subjects by Fusing Networks from SNPs, DNA methylation and fMRI data, book chapter for "IMAGING GENETICS" edited by Adrian V. Dalca, Nematollah K. Batmanghelich, Mert R. Sabuncu and Li Shen, Elsevier Inc.

Journal publications

1. Mackenzie S Mills, Christine M Embury, Alicia K Klanecky, Maya M Khanna, Vince D Calhoun, Julia M Stephen, Yu-Ping Wang, Tony W Wilson, Amy S Badura-Brack, [Traumatic Events Are Associated with Diverse Psychological Symptoms in Typically-Developing Children](#), Journal of Child & Adolescent Trauma, Date of Publication: 19 Aug 2020; DOI: 10.1007/s40653-019-00284-y
2. Liangliang Liu, Shaojie Tang, Fangxiang Wu, Yu-Ping Wang, Jianxin Wang, [An ensemble hybrid feature selection method for neuropsychiatric disorder classification](#), IEEE/ACM Transactions on Computational Biology and Bioinformatics, Date of Publication: 20 Jan 2021; DOI: 10.1109/TCBB.2021.3053181

3. Guixia Pan, Li Xiao, Yuntong Bai, Tony W Wilson, Julia M Stephen, Vince D Calhoun, Yu-Ping Wang, [Multiview Diffusion Map Improves Prediction of Fluid Intelligence with Two Paradigms of fMRI Analysis](#), IEEE Transactions on Biomedical Engineering, Date of Publication: Dec 31 2020; DOI: 10.1109/TBME.2020.304859
4. Chen Qiao, Lan Yang, Vince D. Calhoun, Zong-Ben Xu, Yu-Ping Wang, [Sparse deep dictionary learning identifies differences of time-varying functional connectivity in brain neuro-developmental study](#), Neural Networks, Date of Publication: Dec 07 2020; DOI: <https://doi.org/10.1016/j.neunet.2020.12.007>
5. Brittany K. Taylor, Jacob A. Eastman, Michaela R. Frenzel, Christine M. Embury, Yu-Ping Wang, Julia M. Stephen, Vince D. Calhoun, Amy S. Badura-Brack, Tony W. Wilson, [Subclinical Anxiety and Posttraumatic Stress Influence Cortical Thinning During Adolescence](#), Journal of the American Academy of Child & Adolescent Psychiatry, Date of Publication: Nov 22 2020; DOI: <https://doi.org/10.1016/j.jaac.2020.11.020>
6. Yuntong Bai, Yun Gong, Jianchao Bai, Jingyu Liu, Hong-Wen Deng, Vince D. Calhoun, Yu-Ping Wang, [A joint analysis of multi-paradigm fMRI data with its application to cognitive study](#), IEEE Transactions on Medical Imaging, Page(s):1-1, Date of Publication: 07 December 2020 ; DOI: 10.1109/TMI.2020.3042786
7. JM Stephen, I Solis, J Janowich, M Stern, MR Frenzel, JA Eastman, MS Mills, CM Embury, NM Coolidge, E Heinrichs-Graham, A Mayer, J Liu, YP Wang, TW Wilson, VD Calhoun [The Developmental Chronnecto-Genomics \(Dev-CoG\) Study: A Multimodal Study on the Developing Brain](#), NeuroImage, Accepted 5 October 2020, Available online 8 October 2020; DOI: <https://doi.org/10.1016/j.neuroimage.2020.117438>
8. Brittany K Taylor, Michaela R Frenzel, Jacob A Eastman, Alex I Wiesman, Yu-Ping Wang, Vince D Calhoun, Julia M Stephen, Tony W Wilson [Reliability of the NIH toolbox cognitive battery in children and adolescents: a 3-year longitudinal examination](#), Psychological Medicine, Oct 9 2020; DOI: 10.1017/S0033291720003487
9. Dathan C Gleichmann, Isabel Solis, Jacqueline R Janowich, Yu-Ping Wang, Vince D Calhoun, Tony W Wilson, Julia M Stephen [Troubled Hearts: Association Between Heart Rate Variability and Depressive Symptoms in Healthy Children](#), Applied Psychophysiology and Biofeedback, Sep 25 2020; DOI: 10.1007/s10484-020-09488-7
10. Li Xiao, Xiang-Gen Xia, Yu-Ping Wang, [Exact and Robust Reconstructions of Integer Vectors Based on Multidimensional Chinese Remainder Theorem \(MD-CRT\)](#), IEEE Transactions on Signal Processing, Date of Publication: Sep 15 2020; DOI: 10.1109/TSP.2020.3023584
11. Oktay Agcaoglu, Tony W Wilson, Yu-Ping Wang, Julia Stephen, Vince Calhoun, [Dynamic Resting State Connectivity Differences in Eyes Open versus Eyes Closed Conditions](#), Brain Connectivity, Date of Publication: Sep 7 2020; DOI:10.1089/brain.2020.0768
12. Li Xiao, Aiyong Zhang, Biao Cai, Julia M Stephen, Tony W Wilson, Vince D Calhoun, Yu-Ping Wang, [Correlation Guided Graph Learning to Estimate Functional Connectivity Patterns from fMRI Data](#), IEEE Transactions on Biomedical Engineering, Date of Publication: Sep 7 2020; DOI: 10.1109/TBME.2020.3022335

13. Yi-Pu Zhang, Li Xiao, Gemeng Zhang, Biao Cai, Julia M Stephen, Tony W Wilson, Vince D Calhoun, Yu-Ping Wang, [Multi-paradigm fMRI fusion via sparse tensor decomposition in brain functional connectivity study](#), IEEE Journal of Biomedical and Health Informatics, Date of Publication: Aug 25 2020; DOI: 10.1109/JBHI.2020.3019421
14. Liangliang Liu, FangXiang Wu, Yu-Ping Wang, Jianxin Wang, [Multi-Receptive-Field CNN for Semantic Segmentation of Medical Images](#), IEEE Journal of Biomedical and Health Informatics, Date of Publication: Aug 13 2020; DOI: 10.1109/JBHI.2020.3016306
15. Elizabeth Heinrichs-Graham, Brittany K Taylor, Yu-Ping Wang, Julia M Stephen, Vince D Calhoun, Tony W Wilson, [Parietal Oscillatory Dynamics Mediate Developmental Improvement in Motor Performance](#), Cerebral Cortex, Date of Publication: Jul 24 2020; DOI: 10.1093/cercor/bhaa199
16. Zhongxing Zhou, Biao Cai, Gemeng Zhang, Aiyang Zhang, Vince D. Calhoun, Yu-Ping Wang, [Prediction and classification of sleep quality based on phase synchronization related whole-brain dynamic connectivity using resting state fMRI](#), NeuroImage, Accepted 19 July 2020, Available online 22 July 2020; DOI: <https://doi.org/10.1016/j.neuroimage.2020.117190>
17. Abraham D.Killanin, Alex I. Wiesman, Elizabeth Heinrichs-Graham, Boman Groff, Michaela R. Frenzel, Jacob A. Eastman, Yu-Ping Wang, Vince D. Calhoun, Julia M. Stephen, Tony W. Wilson [Development and Sex Modulate Visuospatial Oscillatory Dynamics in Typically-Developing Children and Adolescents](#), NeuroImage, Accepted 20 July 2020, Available online 22 July 2020; DOI: <https://doi.org/10.1016/j.neuroimage.2020.117192>
18. Madison H Fung, Brittany K Taylor, Michaela R Frenzel, Jacob A Eastman, Yu-Ping Wang, Vince D Calhoun, Julia M Stephen, Tony W Wilson, [Pubertal Testosterone Tracks the Developmental Trajectory of Neural Oscillatory Activity Serving Visuospatial Processing](#), Cerebral Cortex, Original Article; 2020; 00: 1-12, Date of Publication: 24 June 2020; DOI: <https://doi.org/10.1093/cercor/bhaa169>
19. Peyman Hosseinzadeh Kassani, Li Xiao, Gemeng Zhang, Julia M. Stephen, Tony W. Wilson, Vince D. Calhoun, Yu-Ping Wang, [Causality based Feature Fusion for Brain Neuro-Developmental Analysis](#), IEEE Transactions on Medical Imaging, Page(s):1-1, Date of Publication: 24 April 2020; DOI: 10.1109/TMI.2020.2990371
20. Peng Peng, Yipu Zhang, Yongfeng Ju, Kaiming Wang, Gang Li, Vince D. Calhoun, Yu-Ping Wang, [Group Sparse Joint Non-negative Matrix Factorization on Orthogonal Subspace for Multi-modal Imaging Genetics Data Analysis](#), IEEE/ACM Transactions on Computational Biology and Bioinformatics, Page(s):1-1, Date of Publication: 02 June 2020; DOI: 10.1109/TCBB.2020.2999397
21. Chen Qiao, Yan Shi, Yu-Xian Diao, Vince D. Calhoun, Yu-Ping Wang, [Log-sum enhanced sparse deep neural network](#), Neurocomputing, Volume 407, 24 September 2020, Pages 206-220; DOI: <https://doi.org/10.1016/j.neucom.2020.04.118>
22. Amy S. Badura-Brack, Mackenzie S. Mills, Christine M. Embury, Maya M. Khanna, Alicia Klanecky Earl, Julia M. Stephen, Yu-Ping Wang, Vince D. Calhoun, Tony W. Wilson, [Hippocampal and parahippocampal volumes vary by sex and traumatic life events in children](#), J Psychiatry Neurosci, Published online on Feb. 20, 2020; DOI: 10.1503/jpn.190013

23. Liangliang liu, Jianhong Cheng, Quan Quan, Fang-Xiang Wu, Yu-Ping Wang, Jianxin Wang, [A Survey on U-shaped networks in Medical Image Segmentations](#), Neurocomputing, Published online on 1 June 2020; DOI: <https://doi.org/10.1016/j.neucom.2020.05.070>
24. Yipu Zhang, Peng Peng, Yongfeng Ju, Gang Li, Vince D. Calhoun, Yu-Ping Wang, [Canonical Correlation Analysis of Imaging Genetics Data Based on Statistical Independence and Structural Sparsity](#), IEEE Journal of Biomedical and Health Informatics, Page(s):1-1, Date of Publication: 10 February 2020; DOI: 10.1109/JBHI.2020.297258
25. Junqi Wang, Li Xiao, Tony W. Wilson, Julia M. Stephen, Vince D. Calhoun, Yu-Ping Wang, [Examining Brain Maturation during Adolescence Using Graph Laplacian Learning Based Fourier Transform](#), Journal of Neuroscience Methods, Available online 10 March 2020, 108649, In Press; DOI: <https://doi.org/10.1016/j.jneumeth.2020.108649>
26. Brittany K. Taylor, Christine M. Embury, Elizabeth Heinrichs-Graham, Michaela R. Frenzel, Jacob A. Eastman, Alex I. Wiesman, Yu-Ping Wang, Vince D. Calhoun, Julia M. Stephen, Tony W. Wilson, [Neural oscillatory dynamics serving abstract reasoning reveal robust sex differences in typically-developing children and adolescents](#), Developmental Cognitive Neuroscience, Volume 42, April 2020, 100770; DOI: <https://doi.org/10.1016/j.dcn.2020.100770>
27. Keith Dillon, Yu-Ping Wang, [Resolution-based spectral clustering for brain parcellation using functional MRI](#), Journal of Neuroscience Methods, Received 19 March 2019, Revised 3 January 2020, Accepted 3 February 2020, Available online 5 February 2020; Volume 335, 1 April 2020, 108628; DOI: <https://doi.org/10.1016/j.jneumeth.2020.108628>
28. Yuntong Bai, Zille Pascal, Vince D. Calhoun, Yu-Ping Wang, [Optimized Combination of Multiple Graphs with Application to the Integration of Brain Imaging and \(epi\)Genomics Data](#), IEEE Transactions on Medical Imaging, Date of Publication: 06 December 2019; DOI: 10.1109/TMI.2019.2958256
29. Li Xiao, Junqi Wang, Peyman H. Kassani, Yipu Zhang, Yuntong Bai, Julia M. Stephen, Tony W. Wilson, Vince D. Calhoun, Yu-Ping Wang, [Multi-Hypergraph Learning Based Brain Functional Connectivity Analysis in fMRI Data](#), IEEE Transactions on Medical Imaging, Date of Publication: 02 December 2019; DOI: 10.1109/TMI.2019.2957097
30. Faghiri A, Stephen J, Wang YP, W Wilson T, Calhoun VD, [Brain development includes linear and multiple nonlinear trajectories: a cross-sectional resting-state fMRI study](#), Brain Connectivity, 2019 Nov 19. PMID: 31744324; DOI: 10.1089/brain.2018.0641
31. Li G, Han D, Wang C, Hu W, Calhoun VD, Wang YP, [Application of deep canonically correlated sparse autoencoder for the classification of schizophrenia](#), Comput Methods Programs Biomed, 2020 Jan; 183:105073. PMID: 31525548; DOI: 10.1016/j.cmpb.2019.105073; Epub 2019 Sep 9.
32. Aiyong Zhang, Jian Fang, Wenxing Hu, Vince D. Calhoun, Yu-Ping Wang, [A Latent Gaussian Copula Model for Mixed Data Analysis in Brain Imaging Genetics](#), IEEE/ACM Transactions on Computational Biology and Bioinformatics, Date of Publication: 01 November 2019; DOI: 10.1109/TCBB.2019.295090

33. Gemeng Zhang, Biao Cai, Aiyong Zhang, Julia M. Stephen, Tony W. Wilson, Vince D. Calhoun, Yu-Ping Wang, [Estimating Dynamic Functional Brain Connectivity with a Sparse Hidden Markov Model](#), IEEE Transactions on Medical Imaging, Date of Publication: 19 July 2019; DOI: 10.1109/TMI.2019.2929959
34. Yuntong Bai, Pascal Zille, Wenxing Hu, Vince D. Calhoun, Yu-Ping Wang, [Biomarker Identification Through Integrating fMRI and Epigenetics](#), IEEE Transactions on Biomedical Engineering, Date of Publication: 02 August 2019; DOI: 10.1109/TBME.2019.2932895
35. Biao Cai, Gemeng Zhang, Wenxing Hu, Aiyong Zhang, Pascal Zille, Yipu Zhang, Julia M. Stephen, Tony W. Wilson, Vince D. Calhoun, Yu-Ping Wang, [Refined measure of functional connectomes for improved identifiability and prediction](#), Human Brain Mapping, Date of Publication: 29 July 2019; PMID: 31355994; DOI: 10.1002/hbm.24741
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Software release

Our group is actively promoting the dissemination of research results via making several software codes and database freely available at the following site:

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