CURRICULUM VITAE

WEIHONG GUO (1/22/2026)

Department of Mathematics, Applied Mathematics and Statistics
Case Western Reserve University
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EDUCATION

- Ph. D. in Applied Mathematics**,** University of Florida, Gainesville, Florida, May 2007
  Thesis Title: Medical image segmentation and diffusion weighted Magnetic Resonance Image analysis

- Master in Statistics, University of Florida, Gainesville, Florida, May 2007
  Thesis Title: A nonparametric model for simultaneous segmentation and adaptive denoising

- B. S. in Computational Mathematics, Central University for Nationalities, Beijing, China, 1999
  Thesis Title: An algorithm for automatic detection of contact cable of electric railway from digital images

PROFESSIONAL APPOINTMENTS

- 07/2022 – Chair, Case Western Reserve University, Cleveland, OH
- 09/2021 – 06/2022, Interim Chair, Case Western Reserve University, Cleveland, OH
- 07/2021 – 08/2021, Associate Chair, Case Western Reserve University, Cleveland, OH
- 07/2021 -- Professor, Case Western Reserve University, Cleveland, OH
- 07/2015 – 06/2021, Associate Professor, Case Western Reserve University, Cleveland, OH
- 07/2009-- 06/2015: tenure track Assistant Professor, Case Western Reserve University, Cleveland, OH
- 08/2007 -- 06/2009: tenure track Assistant Professor, The University of Alabama, Tuscaloosa, AL
- 05/2005 -- 08/2005: intern, Siemens Corporate Research Inc., Princeton, NJ
- 02/1999 -- 06/1999: intern, China Academy of Railway Science, Beijing, China

PROFESSIONAL MEMBERSHIPS

- SIAM and SIAM Activity Group on Imaging Science, Data Science, Uncertainty Quantification
- IEEE
- AWM

- ICSA
- Eastern North American Region International Biometric Society

PROFESSIONAL AWARDS AND HONORS

- 11/2023, Case Western Reserve University Innovation award
- 09/2013-08/2016, Warren E. Rupp professorship (2 years at Assistant Professor rank and one year at Associate Professor rank).
- 08/ 2008-05/2009, University of Alabama Research award.

PROFESSIONAL SERVICES

Editorial Service:

- Academia Medical Imaging and Radiation Therapy funding editorial advisory board, since 2026
- Inverse Problems and Imaging, since 2012.
- International Journal of Biomedical Imaging, guest editor, 2011.

Grant Review Service: National Science Foundation, Austrian Science Fund.

Scientific Community Service:

- SIAM activity group in imaging, secretary, since Jan. 2026
- SIAM activity group in imaging, member of best paper prize and early career prize selection committee, since 2025
- SIAM conference in imaging sciences, program chair, 2026
- Faculty advisor of SIAM student chapter at CWRU, since 2021.
- Funding member of SIAM Gator Student Chapter, treasure of SIAM Gator Chapter, 2004

Scholarly Review:

- Applied Mathematics Letters (February 2024)
- CSIAM Transactions on Applied Mathematics (January 2025, May 2025)
- Computers and Mathematics with Applications (February 2024)
- Journal of Computational Mathematics (April 2024)
- Journal of Scientific Computing (May 2021)
- Information Fusion (February 2021)
- International Multi-Conference on Complexity, Informatics and Cybernetics (December 2020)
- IEEE transaction on geoscience and remote sensing (June 2021, April 2021, January 2021, December 2020, February 2020)
- Inverse Problems and Imaging (December 2022 twice, February 2020, April, June, July, 2019, October and August 2017, September 2013 twice, October 2010, June 2009, July 2025)
- Journal of the Operations Research Society of China (September 2019)
- Sensing and Imaging (August 2019)
- Journal of Electronic Imaging (December 2016)
- International Journal for Numerical Methods in Biomedical Engineering (December 2016).
- SIAM Journal on Scientific Computing (August 2016, October 2008)

- SIAM Journal on imaging science (June 2024, August 2022, March 2021, December 2017, March 2016, July 2025, September 2025 (twice))
- SIAM Review (March 2024)
- International Journal on Computer Vision (March 2016)
- Signal Processing (November 2015)
- IET image processing (January, 2019, September 2015)
- BIT Numerical Mathematics (August 2015, August 2016, December 2015, June 2013, January 2011)
- Computer Methods in Biomechanics and Biomedical Engineering: Imaging & Visualization (March 2014)
- Elsevier Computers and Mathematics with Applications (March 2014)
- Journal of Mathematical Imaging and Vision (October 2021, December 2020, July 2018 twice, June 2017, January 2014, May 2024, September 2025)
- International Symposium on Biomedical Imaging (November 2013)
- Magnetic Resonance in Medicine (December 2019, April 2013)
- IEEE Signal Processing Letters (November 2012, December 2012)
- Molecular Based Mathematical Biology (October 2012)
- International Journal of Imaging Systems and Technology (January 2012)
- IEEE Transactions on Biomedical Engineering (July 2012)
- IEEE Transaction on Image Processing (December 2012, October 2011)
- Signal Processing (November 2015, December 2012, November 2012 twice, June 2012, June 2011)
- Mathematics of Computation (January 2010)
- Visual Communication and Image Processing (January 2010 twice)
- International Journal of Biomedical Imaging (November 2009)
- International Journal of Tomography and Statistics (June 2009)
- International Symposium on Optical Engineering and Photonic Technology (June 2009)
- International Conference on Scale Space and PDE Methods in Computer Vision (2007)
- International Workshop on Energy Minimization Methods in Computer Vision and Patter Recognition (2006)
- International Conference on Control, Automation, Robotics and Vision (2006)
- International Conference on Scale Space and Variational Methods (SSVM) (March 2021, February 2017, February 2025)
- ISPRS, Journal of Photogrammetry and Remote Sensing (May 2019)
- Discrete and Continuous Dynamical System (June 2022)

Conference Organizing:

- SIAM annual meeting, a two-session mini-symposium on Imaging and Inverse Problems: Theory, Computation, and Data-Driven Methods, Cleveland, Ohio, July 6-10, 2026.
- ICSA, mini-symposium on Integrate Statistics into Deep Learning for Digital Image Processing and Analysis, Zhuhai, China, June 27-29, 2025.
- Joint Mathematical Meeting, a two-session mini-symposium on modelling and optimization on graph-structured data, co-organized with Yifei Lou and Jing Qin, Seattle, WA, January 8-11, 2025.

- SIAM conference on Imaging Science, a two-session mini-symposium on High Resolution Image Restoration and Reconstruction, co-organized with Gabriel Steidl, Toronto, Canada, July 6-9, 2020.
- NSF supported Workshop on Recent Development on Mathematical/Statistical approaches in Data Science (MSDAS), University of Texas at Dallas, co-organized with Yifei Lou (host organizer), Jing Qin and Ming Yan, May 31-June 2, 2019.
- SIAM conference on Imaging Science, a four-session mini-symposium on Image restoration, enhancement and algorithms (co-organized with Xue-cheng Tai, Ke Chen and Guohui Song), Bologna, Italy, June 5-8, 2018.
- SIAM conference on Imaging Science, one mini-symposium on Image segmentation, classification and applications (co-organized with Xiaoqun Zhang) and one mini-symposium on recent developments in image reconstruction and restoration (co-organized with Rodrigo Platte), Albuquerque, New Mexico, May 23-26, 2016.
- International Council for Industrial and Applied Mathematics (ICIAM), mini-symposium on Variational image analysis and applications (co-organized with Jing Qin), Beijing, China, August 10-14, 2015.
- SIAM conference on imaging science, mini-symposium on variational PDE and multi-scale multi-directional sparse representation in imaging (co-organized with Julia Dobrosotskaya), Hong Kong, China, May 12-14, 2014.
- Joint mathematical meeting, SIAM Mini-symposium on Recent Mathematical Developments in Imaging (co-organized with Luminita Vese), Baltimore, MD, January 15-18, 2014.
- SIAM conference on imaging science, mini-symposium sparse and redundant representations for image reconstruction and geometry extraction, Philadelphia, PA, May 20-22, 2012.
- SIAM conference on imaging science, Mini-symposium Statistical and Probabilistic Methods in Image Analysis and Sampling, Chicago, IL, April 12-14, 2010.
- SIAM student workshop, Co-organizer, Gainesville, FL, March 3-4, 2004.

External Committee Member

- Nicolas Makaroff, Université Paris Dauphine-PSL, France, graduated 2024
- PhD Defense Committee, Junying Meng, Beijing Normal University
- PhD Defense Committee Chair, Haifeng Li, Beijing Normal University, graduated November 2021
- PhD Committee for Rasmus Dalgas Kongskov at Denmark Technical University, graduated in 2017

Internal Committee Member:

- Bo Xu, Civil Engineering, CWRU, graduated Spring 2026
- Lu Wang, PQHS, CWRU, graduated Spring 2025
- Jeanpun Antarasen, Physics, CWRU, current
- Weinan Li, PhD, Civil Engineering, CWRU, graduated 2023
- Yiqiao Liu, PhD, Biomedical Engineering, CWRU, graduated 2021
- David Prabu, PhD, Biomedical Engineering, CWRU, 2019

- Yuming Gu, Master, Biomedical Engineering, CWRU, 2018
- Xuefei Wang, PhD, Civil Engineering, CWRU, 2017
- Lijun Yu, PhD, Mathematics, CWRU, 2016
- Yuru Li, Civil Engineering, CWRU, 2016
- Quan Gao, PhD, Civil Engineering, CWRU, 2016
- Patiwet Wuttisarnwattana, PhD, Biomedical Engineering, CWRU, 2015
- Hong Lu, PhD, Biomedical Engineering, CWRU, 2014
- Hao Yu, PhD, Civil Engineering, CWRU, 2014
- Laura Homa, PhD, Mathematics, CWRU, 2013

SERVICE

Department

- Department chair since 2021 September.

  Key achievements: flip a hostile department climate to a welcoming, collegial one; improve quantity and quality of staff support to faculty and students, including creating a new staff position Manager of Graduate Student Service; hired seven tenure track faculty (3 statisticians, three pure mathematicians, one applied mathematician) and three instructors; restructured service courses for better quality and less sections; created several new graduate and undergraduate new courses; created mentor support system for PhD students teaching the first time, multiple creative incentives such as monthly cake/fruit social, PhD/faculty bonding, peer/faculty mentoring for first time PhD student teacher.
- Undergraduate studies committee, 2009-2010
- Graduate studies committee: 2010-1011, 2012-2013, 2013-2014, 2014-2015, 2015-2016,2018-2019, 2019-2020. 2020-2021
- Colloquium committee, 2011-2012, 2012-2013
- Qualifying exam committee (numerical analysis and scientific computing), 2010-present
- Budget and planning committee, 2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021
- Appointments committee, 2016-2017, 2017-2018, 2018-2019, 2019-2020
- Associate Department Chair, 7/1/2021-9/6/2021
- Interim Department Chair, 9/7/2021 – 6/30/2022
- Major advisor for mathematics and applied mathematics program, 2012-present
- Funder and organizer of the Mathematical Imaging seminar

College

- College of Arts and Science Budget Committee, September 2023 –
- College of Arts and Science Committee on Educational Programs, January – May 2019
- Department representatives for college open houses for prospective students, on a regular yearly basis.

University

- Faculty senate finance committee 2024 – present
- Fellow of the Institute of the Science of Origins, August 2014 – present
- Executive board of Asian Faculty Association, August 2018 – present

- Vice President of Asian Faculty Association, August 2025 – present

- Treasure of Asian Faculty Association, August 2019 – 2025

MENTORING ACTIVITIES

Post-doc supervision
- Ferhat Arslan, current

Doctoral supervision
- Griffin Keeter, current
- Sara Stinchcomb, current
- Jiasen Zhang, current
- Junying Meng, "Research on Learning Methods Based on Local and Nonlocal Variational Regularization for Specific Image Tasks", Beijing Normal University, China, PhD, co-advised, graduated 2024. Current position: Shanxi University.
- Haifeng Li, "Research and Application of Image Segmentation Based on Prior Information and Entropy Regularized Optimal Transport", Beijing Normal University, China, PhD, co-advised, graduated 2021. Current position: post-doc at Peking University.
- Wei Wan, Beijing Normal University, China, PhD, co-advised, graduated in July 2019. Current position: professor at North China Electric Power University.
- Richard Lartey, "Analog image modeling based super resolution and application in multi-spectral imaging", Case Western Reserve University, PhD, graduated August 2018. Current position: research associate at Cleveland Clinic Foundation.
- Yue Zhang, "Sparse modeling in image processing and machine learning: models and theories", Case Western Reserve University, PhD, graduated May 2018. Current position: senior research scientist at Siemens Healthineers.
- Thomas Atta-Fosu, "Fourier based method for simultaneous segmentation and nonlinear image registration", Case Western Reserve University, PhD, graduated 2017. Current position: deep learning engineer at Intel.
- Liangjian Deng, University of Electronic Science and Technology of China, PhD, graduated 2016. Current position: Assistant professor at University of Electronic Science and Technology of China.
- Si Wang, University of Electronic Science and Technology of China, PhD, graduated 2016. Current position: Postdoctoral fellow at University of Electronic Science and Technology of China.
- Jing Qin, "Prior information guided image processing and compressive sensing", Case Western Reserve University, PhD, graduated May 2013. Current position: tenure track Assistant Professor at University of Kentucky.

Masters supervision
- Paramjyoti Mohapatra, CWRU, graduated 2024. Currently a PhD student in Cornell.
- Michael Judkovich, CWRU, graduate 2020. Current position: software engineer at Bloomberg LP.
- Daniel Kessler, BS/MS, Case Western Reserve University, graduate in May 2019. Current position: software developer at Epic.

- Benjamin Cowen, BS/MS, Case Western Reserve University, May 2015. Joined Los Alamos National Laboratory after finishing PhD at NYU.
- Sadeq Damrah, MS, the University of Alabama, May 2008. Current position: Assistant Professor of Australia College of Kuwait.

Undergraduate research supervision

- Binayek Tiwari, CWRU, summer 2025 – current
- Grant Konkel, CWRU, 2023-2025
- Paramjyoti Mohapatra, CWRU, 2021-2023
- Nicholas Rochakim, CWRU, 2021
- Michael Judkovich, CWRU, 2020.
- Luke Dotson, CWRU, spring, summer 2019.
- Daniel Kessler, CWRU, spring and fall 2019, joined PhD program of Univeristy of Winsconsin at Madison.
- Daniel Kessler (joined Epic), Micaela Richter (entered PhD program at Ohio State University), Runtian Miao, CWRU, summer 2018.
- Yuta Hozumi, CWRU, summer 2017. Entered Michigan State University PhD program.
- Shuyang Zhang and Peng Zhu, CWRU, summer 2015.
- Dana Jetter, CWRU, summer 2013. Joined CWRU dental school.

High school student mentoring

- Joseph Mo, Beachwood high school, summer 25 – spring 26
- Coco Liu, Hathaway Brown high school, summer 2017.
- Sara Hasen, Solon high school, summer 2016.

RESEARCH FUNDING

- 2025, NIH Quantum Computing Challenge, Collaboration with IBM and Cleveland Clinic.
- 2024 -2025 Collaborate@ICERM, Brown University
- 2021-2023 Collaborate@ICERM, Brown University
- 2019-2022 American Institute of Mathematics, SQuaREs, NSF
- Leading Principal Investigator, (33%, shared with A. Gelb and G. Song) NSF DMS *Collaborative research: an integrated approach to convex optimization algorithms,* 9/15/2015-8/31/2019. Award total: $127,267.
- 02/2014-06/2015, Case Western Reserve ACES+ ADVANCE grant, $5000.
- 02/2012-06/2013, Case Western Reserve ACES+ ADVANCE grant, $5000.
- Principal Investigator (33%, shared with C. Mizutani and R. Sousa-Neves), NIH NIBIB 1R21EB016535-01. *Real-time visualization of neural stem cell transcriptome*. 9/30/2012-8/31/2014. Sub-award total: $42,183.

PUBLICATIONS

The order of authors in the mathematics literature is often, though not always, in alphabetical order. In the engineering literature, the order may reflect contribution and /or seniority. In

interdisciplinary contributions, the ordering of the authors may vary. Moreover, in the field of image processing and analysis, peer reviewed conference proceeding publication is also important. Oral presentations at conferences like CVPR, IPMI, ISBI usually have acceptance rates less than 6%, 15%, 30% respectively.

Patent

1. Qingguo Zeng, Richard Lartey and **Weihong Guo**, *Graph Total Variation for ECGI*, China patent ZL201980084030.6, CN113226179B, August 30th, 2024
2. Qingguo Zeng, Richard Lartey and **Weihong Guo**, *Graph Total Variation for ECGI*, U.S. patent 11504046, November 22nd, 2022
3. **Weihong Guo** and Zhizhou Wang, *Fast Geometric Flows Based White Matter Fiber Tract Segmentation in DT-MRI*, U.S. 7627155. Dec.1st, 2009.

Research Publications

1. Junying Meng, Gangxuan Zhou, Jun Liu, **Weihong Guo,** "Dual-scale volume priors with Wasserstein based consistency for semi-supervised medical image segmentation", Biomedical Signal Processing and Control, Elsevier, 2026.
2. T. Dinh, J. Lee, S. Islam, N. Nanda, D. Bjelivuk, D. Andrews, J. Zhang, N. Mani, J. Zhou, A. Wolfrath, D. Borgonia, S. Martinez, J. Skitzki, D. Fang, **W. Guo**, J. Wang, R. Obeng. Efineptakin alfa (NT-I7) improves overall survival and induces tertiary lymphoid structures in murine lung tumors, bioRxiv 2025.09.15.676444, accepted by Genes and Diseases, 2026.
3. Jiasen Zhang, Xi Qiao, Liangliang Zhang, **Weihong Guo**, "BASIN: Bayesian mAtrix variate normal model with Spatial and sparsIty priors in Non-negative deconvolution", arXiv:2510.16130, 2025, submitted to Nature Computational Science, in revision.
4. Myson Burch, Jiasen Zhang, Gideon Idumah, Hakan Doga, Richard Lartey, Lamis Yehia, Mingrui Yang, Murat Yildirim, Mihriban Karaayvaz, Omar Shehab, **Weihong Guo**, Ying Ni, Laxmi Parida, Xiaojuan Li, Aritra Bose, "Towards Quantum Tensor Decomposition in Biomedical Applications", arXiv:2502.13140, 2025, submitted to Nature Methods after one revision.
5. Mazlum F. Arslan, **Weihong Guo**, Shuo Li, "Neuromanifold-Regularized KANs for Shape-fair Feature Representations", Proceedings of International Conference on Computer Vision, 2025.
6. Jiasen Zhang, Mingrui Zhang, **Weihong Guo**, Brian Xavier, Michael Bolen, Xiaojuan Li, "Detection-guided deep learning-based model with spatial regularization for lung nodule segmentation", 15 (5), Quantitative Imaging in Medicine and Surgery, 2025.
7. **Weihong Guo**, Yifei Lou, Jing Qin, Ming Yan, "Time-Varying Graph Signal Recovery Using High-Order Smoothness and Adaptive Low-rankness", Advances in Data Science, Springer, 2025.
8. Haiyan Cheng, Cristina Garcia-Cardona, **Weihong Guo**, Sara Hahner, Yuan Liu, Yifei Lou, Michela Marini, and Sui Tang, "Unfolding Deep Learning End-to-End Method for Phase Retrieval", Advances in Data Science, Springer, 2025.
9. Michela Marini, Haiyan Cheng, Cristina Garcia-Cardona, **Weihong Guo**, Sara Hahner, Yuan Liu, Yifei Lou, and Sui Tang, "A Comparison Study of Graph Laplacian Computation", Advances in Data Science, Springer, 2025.
10. Mazlum F. Arslan, **Weihong Guo**, Shuo Li, "Single-source Domain Generalization in Deep

Learning Segmentation via Lipschitz Regularization", Proceedings of the Medical Image Computing and Computer Assisted Interventions, Morocco, October 6-10, 2024.

11. Junying Meng, Weihong Guo, Jun Liu and Mingrui Yang, Assembling a Learnable Mumford-Shah Type Model with Multigrid Technique for Image Segmentation, SIAM Journal on Imaging Sciences, Vol. 17, No. 2, pp. 1007--1039, 2024
12. Paramjyoti Mohapatraa, Richard Lartey, **Weihong Guo**, Michael Judkovich, and Xiaojuan Li, "A Geometric Flow Approach for Segmentation of Images with Inhomongeneous Intensity and Missing Boundaries", Journal of Image and Graphics, Vol. 12, No. 1, pp. 23-31, 2024.
13. Jiasen Zhang, **Weihong Guo**, A New Regularization for Deep Learning-Based Segmentation of Images with Fine Structures and Low Contrast, MDPI, Sensors, 2023.
14. Paramjyoti Mohapatra, **Weihong Guo**, Mingrui Yang, Richard Lartey, Xiaojuan Li, Variational Model Augmented Deep Learning for Small Training Data MRI Thigh Muscle Segmentation, ISMRM, 2023.
15. Haifeng Li ,**Weihong Guo**, Jun Liu , Li Cui and Dongxing Xie, Image Segmentation with Adaptive Spatial Priors from Joint Registration, SIAM Journal on Imaging Sciences, Vol.15,No.3, pp.1314-1344, 2022.
16. Emily Evans**, Weihong Guo,** Asli Genctav, Sibel Tari, Carlotta Domeniconi, Anarina Murillo, Julia Chuang, Loulwah AISumait, Priya Mani, Noha EI-Zehiry, "Role Detection and Prediction in Dynamic Political Networks", Advances in Data Sciences, p232-252,2021.
17. **Weihong Guo,** Jing Qin, "Two-Stage Geometric Information Guided Image Reconstruction", Advances in Data Sciences, p3-23,2021.
18. **Weihong Guo,** Michael Judkovich, Richard Lartey, Dongxing Xie, Mingrui Yang, Xiaojuan Li, "A Marker Controlled Active Contour Model for Thigh Muscle Segmentation in MR Images", International Society for Magnetic Resonance in Medicine Conference, 2021.
19. **Weihong Guo,** Yifei Lou, Jing Qin, Ming Yan, "A Novel Regularization Based on the Error Function for Sparse Recovery", Journal of Scientific Computing, 87:31, 2021.
20. Liangjian Deng, **Weihong Guo,** Ting-Zhu Huang, "Image Edge Sharpening via Heaviside Substitution and Structure Recovery", Advances in Data Science, p25-48, 2021.
21. Liam Burrows, **Weihong Guo,** Ke Chen, and Francesco Torella, "Reproducible Kernel Hilbert Space based Global and Local Image Segmentation", Inverse Problems and Imaging, 2020. Doi: 10.3934/ipi.2020048.
22. Wei Wan, **Weihong Guo,** Haiyang Huang, and Jun Liu, "Non-negative and Non-local Sparse Tensor Factorization Based on Hyperspectral Image Super-resolution", IEEE transaction on geoscience and remote sensing, 58(12), p8384-8394, 10.1109/TGRS.2020.2987530, 2020.
23. Wei Wan, **Weihong Guo**, Jun Liu, Haiyang Huang, "Non-local Blind Hyperspectral Image Super Resolution via 4D Sparse Tensor Factorization and Low Rank", Inverse Problems and Imaging, 2020, 14 (2): 339--361.
24. Emily Evans, **Weihong Guo,** Asli Genctav, Sibel Tari, Carlotta Domeniconi, Anarina Murillo, Julia Chuang, Loulwah AlSumait, Priya Mani, Noha El-Zehiry, "Role Detection and Prediction in Dynamic Political Networks", WisDM 2019 proceeding, to appear, 2020.
25. Richard Lartey, **Weihong Guo**, Xiaoxiang Zhu, Claas Grohnfeldt, "Analog Image Modeling for 3D Single Image Super Resolution and Pansharpening", Frontiers in Applied Mathematics and Statistics , http://doi.org/10.3389/fams.2020.00022, 2020.
26. Liam Burrows, **Weihong Guo**, Ke Chen, Francesco Torella, "Edge Enhancement for Image

Segmentation using a RKHS Method", Annual Conference on Medical Image Understanding and Analysis, p 198-207, Springer, Cham, 2019.

27. Julia Dobrosotskaya, **Weihong Guo,** "Data adaptive multi-scale representations for image analysis", Proceedings of SPIE, Wavelets and Sparsity XVIII, 2019.
28. Liang-Jian Deng, Gemine Vivone,**Weihong Guo**, Mauro Dalla Mura, Jocelyn Chanussot, "A Variational Pansharpening Approach Based on Reproducible Kernel Hilbert Space and Heaviside Function", IEEE transaction on image processing, 28 (9), p4330-4344, 2018.
29. Thomas Atta-Fosu**, Weihong Guo,** "Joint Segmentation and Nonlinear Registration Using Fast Fourier Transform and Total Variation", Research in Shape Analysis, Springer, p111-132, 2018.
30. **Weihong Guo,** Guohui Song and Yue Zhang, "PCM-TV-TFV: A Novel Two-Stage Framework for Image Reconstruction from Fourier Data", SIAM Journal on Imaging Sciences, 10(4): pp2250-2274, 2017.
31. Julia Dobrosotskaya**, Weihong Guo, "**A PDE-Free Variational Method for Multi-Phase Image Segmentation Based on Multiscale Sparse Representations", Journal of Imaging, MDPI, 2017.
32. Liang-Jian Deng, Gemine Vivone,**Weihong Guo**, Mauro Dalla Mura, Jocelyn Chanussot, "A Variational Pansharpening Approach Based on Reproducible Kernel Hilbert Space and Heaviside Function", Proc. International Conference on Image Processing, 2017.
33. Si Wang, **Weihong Guo**, Ting-Zhu Huang, Garvesh Raskutti, "Image inpainting using reproducing kernel Hilbert space and Heaviside functions", Journal of Computational and Applied Mathematics, volume 311, issue C, p551-564, 2017.
34. Yue Zhang, Soumya Ray, **Weihong Guo**, "On the Consistency for Feature Selection with LASSO for Nonlinear Targets", Int. Conf. Machine Learning, 2016.
35. Thomas Atta-Fosu, **Weihong Guo**, Dana Jeter, Claudia Mizutani, Nathan Stopczynski, Rui Sousa-Neves, "3D Clumped Cell Segmentation Using Curvature Based Seeded Watershed", Journal of Imaging, MDPI, 2016.
36. Liangjian Deng, **Weihong Guo**, Ting-Zhu Huang, "Single Image Super-Resolution by Approximated Heaviside Functions", Information Sciences, volume 348 Issue C, p107-123, 2016.
37. Liangjian Deng, **Weihong Guo**, Ting-Zhu Huang, Xi-Le Zhao, "Heavisde Image Edge Sharpening", IEEE international workshop on multimedia signal processing, 2015.
38. Liangjian Deng, **Weihong Guo**, Ting-Zhu Huang, Single image super-resolution via an iterative reproducing kernel Hilbert space method, IEEE Transactions on Circuits and Systems for Video Technology, 2015.
39. Julia Dobrosotskaya**, Weihong Guo**, **"**A PDE-free variational model for multiphase image segmentation", Proc. SPIE 9597, Wavelets and Sparsity XVI, 2015.
40. Si Wang, **Weihong Guo**, Ting-Zhu Huang, "Weighted total generalized variation for compressive sensing reconstruction", Proc. Int. Conf. Sampling Theory and Applications (SampTA), p244-248, 2015.
41. **Weihong Guo**, Jing Qin, and Sibel Tari, "Automatic prior shape selection for image segmentation", Research in Shape Modeling, Chapter 1: p1-8, Springer (2015).
42. **Weihong Guo**, Jing Qin, Wotao Yin, "A new detail-preserving regularization scheme", SIAM J. Imaging Science, 7(2), p1309-1334,2014.
43. **Weihong Guo**, Jing Qin, "A geometry guided image denoising scheme", Inverse Problems and Imaging, 7(2): p499-521, 2013.

44. **Weihong Guo**, Ming-Jun Lai, "Box spline wavelet frames for image edge analysis, SIAM J. Imaging Science, 6(3), p1553-1578, 2013.
45. Jing Qin, **Weihong Guo**, "An efficient compressive sensing MR Image Reconstruction Scheme", Proceedings of International Symposium on Biomedical Imaging, p306-309, 2013.
46. **Weihong Guo**, Wotao Yin, "Edge guided reconstruction for Compressive Imaging", SIAM J. Imaging Science, 5(3), p809-834, 2012.
47. Jun Miao, **Weihong Guo**, Sreenath Narayan, David L. Wilson, "A simple application of compressed sensing to further accelerate partially parallel imaging", Magnetic Resonance Imaging, 31(1), p75-85, 2012.
48. Jing Qin, **Weihong Guo**, "An automatic additive and multiplicative noise removal scheme with sharpness preservation", Proceedings of International Symposium on Biomedical Imaging, p1819-1822, 2011.
49. Chuan Li, Qi Hao, **Weihong Guo**, Fei Hu, "Compressive neural activity detection with fMR images using Graphical Model Inference", International Journal of Computational Biology and Drug Design, 3(3): p187-200, 2011.
50. **Weihong Guo**, Wotao Yin, *"EdgeCS: Edge Guided Compressive Sensing Reconstruction",* **invited full paper**, Proceedings of SPIE Visual Communication and Image Processing, Vol. 7744, 77440L, p1-10, 2010.
51. Feng Huang, Yunmei Chen, Wotao Yin, Wei Lin, Xiaojing Ye, **Weihong Guo**, Arne Reykowski, *"A rapid and robust numerical algorithm for sensitivity encoding with sparsity constraints: Self-feeding sparse SENSE",* Magnetic Resonance in Medicine, Oct; 64(4): p1078-88, 2010.
52. **Weihong Guo,** Feng Huang, *"Adaptive Total Variation Based Filtering for MRI Images with Spatially Inhomogeneous Noise and Artifacts",* Proceedings of International Symposium on Biomedical Imaging, p101-104, 2009.
53. Chuan Li, Qi Hao, **Weihong Guo,** Fei Hu, "A Hybrid Approach for Compressive Neural Activity Detection with Functional MR Images", Proceedings of IEEE Engineering in Medicine and Biology Society, p4787-4790, 2009.
54. **Weihong Guo**, Feng Huang, "*A Local Mutual Information Guided Denoising Technique and Its Application to Self-calibrated Partially Parallel Imaging",* D. Metaxas et al. (Eds): proceedings of Medical Image Computing and Computer Assisted Intervention, Part II, Lecture notes on Computer Science 5242, p937-947, 2008.
55. **Weihong Guo**, Yunmei Chen, Qingguo Zeng, "A *Geometric Flow Based Approach for Diffusion Tensor Image Segmentation"* Special issue on Mathematical and Statistical Methods for Diagnoses and Therapies, Journal of Philosophical Transaction A: Mathematical, Physical and Engineering Sciences, 366(1874): p2279-92, 2008. **Invited cover paper.**
56. Yunmei Chen, **Weihong Guo**, Qingguo Zeng, Yijun Liu, "A *Nonstandard Smoothing in Reconstruction of Apparent Diffusion Coefficient Profiles from Diffusion Weighted Images",* Journal of Inverse Problems and Imaging (IPI), Volume 2, Number 2, 205-224, 2008.
57. **Weihong Guo**, "M*edical Image Segmentation and Diffusion Weighted Magnetic Resonance Image Analysis",* PhD Thesis, 2007.
58. **Weihong Guo**, Yunmei Chen, *"Using Non-parametric Kernel to Segment and Smooth Images Simultaneously",* Proceedings of International Conference on Image Processing (ICIP), p217-220, 2006.

59. **Weihong Guo**, Qingguo Zeng, Yunmei Chen, Yijun Liu *"Reconstruct White Matter Fiber Traces Using Multi-Tensor Deflection in DWI",* Proceedings of International Symposium on Biomedical Image (ISBI), p69-72, also presented in SIAM'06 Conference on Imaging Science, 2006.
60. Yunmei Chen, **Weihong Guo**, Qingguo Zeng, Xiaolu Yan, Yijun Liu *"Apparent Diffusion Coefficient Approximation and Diffusion Anisotropy Characterization in DWI",* Proceedings of International Conference on Information Processing in Medical Imaging (IPMI), 246-257. (Acceptance rate < 26%), 2005.
61. Yunmei Chen, **Weihong Guo**, Qingguo Zeng, Xiaolu Yan, Feng Huang, Hongchao Zhang, Guojun He, Baba C. Vemuri, Yijun Liu "*Estimation, Smoothing and Characterization of Apparent Diffusion Coefficient Profiles from High Angular Resolution DWI",* Proceedings of IEEE computer society conf. on Computer Vision and Pattern Recognition (CVPR), p588-593. (Acceptance rate < 6.5%), 2004.
62. Yunmei Chen, **Weihong Guo**, Qingguo Zeng, Baba C. Vemuri, Yijun Liu "*Recovery of Intra-Voxel Structure from HARD DWI",* Proceedings of IEEE International Symposium on Biomedical Imaging (ISBI), p1028-1031, 2004.
63. Yunmei Chen, **Weihong Guo**, Feng Huang, David Wilson, A. Geiser "*Using Prior Shape and Points in Medical Image Segmentation",* Lecture Notes in Computer Science, Proceedings of International Workshop on Energy Minimization Methods in Computer Vision and Patter Recognition (EMMCVPR), p291-305, 2003.

In Books:

1. Qingguo Zeng, Yunmei Chen, **Weihong Guo**, Yijun Liu, "Recover Multi-tensor Structure from HARD MRI under Bi-Gaussian Assumption", Multiscale Optimization Methods and Applications, p379-386, ISBN 0387295496, Springer, 2005.

In Refereed Abstracts:

1. Ahmed Tahseen Minhaz, Richard Lartey, Zhiyuan Zhang, Jee Hun Kim, Mingrui Yang, Jiasen Zhang, Joseph Mo, **Weihong Guo**, Naveen Subhas, Carl S. Winalski, and Xiaojuan Li, "Clinically Feasible Whole Knee MR T1ρ and T2 Mapping in Under 3 Minutes with Accelerated Imaging and Automated Analysis", International Society for Magnetic Resonance in Medicine, 2025.
2. Paramjyoti Mohapatra, **Weihong Guo**, Mingrui Yang, Richard Lartey, and Xiaojuan Li, "Variational Model Augmented Deep Learning for Small Training Data MRI Thigh Muscle Segmentation", International Society for Magnetic Resonance in Medicine, 2023.
3. **Weihong Guo**, Michael Judkovich, Richard Lartey, Dongxing Xie, Mingrui Yang, and Xiaojuan Li, "A Marker Controlled Active Contour Model for Thigh Muscle Segmentation in MR Images", International Society for Magnetic Resonance in Medicine, 2021.
4. Yue Zhang, **Weihong Guo**, "A novel fidelity and regularity for image reconstruction", SIAM conference on Imaging Science, 2016.
5. Richard Lartey, **Weihong Guo,** Julia Dobrosotskaya, "Classification of hyperspectral data using Besov norm", SIAM conference on Imaging Science, 2016.
6. Thomas Atta-Fosu, **Weihong Guo**, "Curvature based seeded watershed for clumped object segmentation", SIAM conference on Imaging Science, 2016.
7. **Weihong Guo**, Jing Qin and Wotao Yin, "A new detail-preserving regularity scheme",

SIAM conference on Imaging Science, 2014.

8. Yi Wang, **Weihong Guo**, Garvesh Raskutti, Jiyang Sun, "Compressive support detection on multiple hypothesis testing", ", SIAM conference on Imaging Science, 2014.
9. **Weihong Guo** and Ming-Jun Lai, "Box spline wavelet frames for image edge detection", SIAM conference on Imaging Science, 2012.
10. **Weihong Guo** and Jing Qin, "Robust High Frequency Information Guided Compressive Sensing Reconstruction", SIAM conference on Imaging Science, 2012.
11. **Weihong Guo**, Jing Qin and Wotao Yin, "Edge Guided Compressive Imaging Reconstruction", SIAM conference on Imaging Science, 2010.
12. Jiao Miao, **Weihong Guo**, David Wilson, "Improved Compressed Sensing Reconstruction for Equidistant K-Space by Sampling Decomposition and Its Application in Parallel MR Imaging", ISMRM, p4882,2010.
13. **Weihong Guo**, Feng Huang, "An Unsupervised Method to Enhance both SNR and Edges for PPI", ISMRM, p4552, 2009.
14. **Weihong Guo**, Feng Huang, "Combine Reconstructions Using Non-local Operator and Its Application in PPI", ISMRM, p4642, 2009.
15. Z. Zhou, **Weihong Guo**, T. Tang et al., "Multiple Fiber Diffusion Anisotropy Analysis", ISMRM, p1429, 2009.
16. **Weihong Guo**, Feng Huang, "Local Mutual Information Guided Denoising for Self-calibrated PPI*"* Proceedings of the Sixteenth Scientific Meeting and Exhibition of the ISMRM, p.1289, 2008.
17. Qingguo Zeng, **Weihong Guo**, Yunmei Chen, Yijun Liu "White Matter Fiber Tracking Based on Multi-Directional Vector Field*"* Proceedings of the Thirteenth Scientific Meeting and Exhibition of the ISMRM, p218, 2005.
18. Qingguo Zeng, **Weihong Guo**, Yunmei Chen, Yijun Liu "White Matter Fiber Tracking Based on Multi-Directional Vector Field*"* 11th Annual Scientific Meeting of the Organization of Human Brain Mapping, Toronto, Canada, p1649, 2005.
19. Yunmei Chen, **Weihong Guo**, Qingguo Zeng, Yijun Liu "Classification of Intra-Voxel Diffusion from HARD MRI*"* Proceedings of the Twelfth Scientific Meeting and Exhibition of the ISMRM, p252, 2004.

SCHOLARLY PRESENTATIONS AND INVITED TALKS

1. "Unrolling regularized non-negative factorization for spatial transcriptomics cell type deconvolution", ENAR, Indianapolis, Indiana, Eastern North American Region of the International Biometric Society, March 15-18, 2026.
2. "Regularized nonnegative matrix factorization with uncertainty quantification for spot resolved spatial transcriptomics cell type deconvolution", 7th Tsinghua Sanya International Mathematics Forum (TSIMF) Conference on Computational and Mathematical Bioinformatics and Biophysics, Sanya, China, December 15-19, 2025.
3. "MS-MGNet: assembling a learnable Mumford-Shah type model with multigrid technique for image segmentation", the Second Sydney Workshop on Mathematics of Data Science, Sydney, Australia, December 10-12, 2025.
4. "Combine Variational Models and Deep Learning to Dress Overfitting and

Interpretability in Image Segmentation", UCLA online image processing seminar, December 1, 2025.

5. "BASIN: Bayesian mAtrix variate normal model with spatial and sparsity priors in Non-negative deconvolution", October 17, 2025, Department of Statistics seminar, University of Kentucky.
6. "Detection-guided deep learning-based model with spatial regularization for lung nodule segmentation", Zhuhai, China, June 27-29, 2025, International Chinese Statistical Association (ICSA).
7. "Single-source Domain Generalization in Deep Learning Segmentation via Lipschitz Regularization", Proceedings of the Medical Image Computing and Computer Assisted Interventions, Morocco, October 6-10, 2024.
8. "Assemble Learnable Mumford-Shah Type Model With Multi-Grid Technique for Image Segmentation", Computing and Uncertainty Analysis Seminar, CWRU, October 16, 2024.
9. "Bayesian Spatial Transcriptomics Deconvolution Using Graph Laplacian Prior", Wuhan, China, International Chinese Statistical Association, June, 2024.
10. "Nonnegative and Nonlocal Sparse Tensor Factorization-Based Hyperspectral Image Super-Resolution", Computing and Uncertainty Analysis Seminar, CWRU, March 6, 2024.
11. "Nonnegative and Nonlocal Sparse Tensor Factorization-Based Hyperspectral Image Super-Resolution", Association for Woman in Mathematics research symposium, Atlanta, GA, September 30, 2023.
12. "Interpretable Small Training Set Image Segmentation Network Originated from Multi-Grid Variational Model", International Chinese Statistical Association Conference, Chengdu, Sichuan, China, July 1, 2023.
13. "Interpretable Small Training Set Image Segmentation Network Originated from Multi-Grid Variational Model", The University of Electronic Science and Technology of China, Chengdu, Sichuan, China, June 30, 2023
14. "Interpretable Small Training Set Image Segmentation Network Originated from Multi-Grid Variational Model", North China University of Technology, June 28, 2023, Beijing, China
15. "Interpretable Small Training Set Image Segmentation Network Originated from Multi-Grid Variational Model", Beijing Normal University, Beijing, China, June 27, 2023
16. "Interpretable Small Training Set Image Segmentation Network Originated from Multi-Grid Variational Model", Peking University, Beijing, China, June 26, 2023.
17. "Interpretable Small Training Set Image Segmentation Network Originated from Multi-Grid Variational Model", Minzu University, Beijing, China, June 26, 2023.
18. "Image Segmentation with Data Adaptive Spatial and Shape Priors", International Conference on Image Processing and Artificial Intelligence, NeiMeng University, China, virtual, December 18, 2022.
19. "Image Enhancement and Segmentation using Variational Methods", Civil and Environmental Engineering seminar, CWRU, October 28, 2022.
20. "Introduction to Image Segmentation and Some Recent Results", Computing and Uncertainty Analysis seminar in Department of Mathematics, Applied Mathematics and Statistics, CWRU, April 4, 2022.
21. "Bayesian Learning with Uncertainty Quantification Meets Model Based Image

Segmentation", SIAM conference in Imaging Sciences, March 21-25, 2022.

22. "A Novel Regularization Based on the Error Function for Sparse Recovery", SIAM Southeastern Atlantic Section Conference, September 18-19, 2021.
23. "A Novel Regularization Based on the Error Function for Sparse Recovery", Applied Mathematics Seminar, Syracus University, May, 2021.
24. "Image Intensity Function Estimation based Image Super Resolution and Segmentation " Northeast Normal University, China, November, 2020.
25. "Image intensity function estimation based image super resolution and segmentation " Shen Zhen University, China, August, 2020.
26. Analog Image Intenstiy Estimation Based Image Super Resolution and Segmentation, SIAM conference in Imaging Sciences, Toronto, Canada, July 6-9, 2020.
27. "High resolution image reconstruction and segmentation", CWRU Biomedical Engineering imaging hour, February, 2020.
28. "High resolution image reconstruction and feature extraction", CWRU college of arts and sciences data science colloquium, February, 2020.
29. "Image Intensity Function Estimation and its Applications in Image Enhancement and Segmentation", Beijing Normal University, July, 2019.
30. "Image Intensity Function Estimation and its Applications in Image Enhancement and Segmentation", MinZu University of China, July, 2019.
31. "Intensity Function Estimation and its Applications in Image Super Resolution and Segmentation", Cleveland Clinic Foundation, February 2019.
32. "Analog Image Estimation and Applications in Multispectral Image Super Resolution", Central University of Finance and Economics, Beijing, China, June, 2018.
33. "Non-Negative and Non-Local Tensor Dictionary Learning Based Hyperspectral Image Super-Resolution", Beijing Normal University, Beijing, China, June, 2018.
34. "Analog Image Estimation and Applications in Multispectral Image Super Resolution", Nankai University, Tianjin, China, June, 2018.
35. "Non-Negative and Non-Local Tensor Dictionary Learning Based Hyperspectral Image Super-Resolution", International Workshop on Signal Processing, Optimization and Control, Nanjing University, China, June, 2018.
36. "Analog Image Estimation and Applications in Multispectral Image Super Resolution", University of Munich, Munich, Germany, June, 2018.
37. "A Distributed Dictionary Learning and Its Applications", SIAM conference on Imaging Sciences, Balogna, Italy, June, 2018.
38. "Analog Image Estimation and Applications in Multispectral Image Super Resolution", Liverpool University, Liverpool, UK, May, 2018.
39. "Joint Segmentation and Nonlinear Registration Using Fast Fourier Transform and Total Variation", Isaac Newton Institute, University of Cambridge, UK, December 2017.
40. "Analog Image Estimation and Applications in Image Reconstruction and Enhancement", Technical University of Denmark, November 2017.
41. "Image Super Resolution and Fusion with Applications in Multispectral Imaging",Wright Brothers Institute, Dayton, Ohio, September 2017.
42. "Mathematical Image Processing and Reconstruction", Beijing Normal University, China, June 2017.
43. "Single Image Super Resolution and its Applications in Multispectral Imaging", Tsinghua University, China, June 2017.

44. "Single Image Super Resolution and its Applications in Multispectral Imaging", University of Science and Technology of China, January 2017.
45. "Effectiveness of Prior Information in Image Processing and Reconstruction", University of Electronic Science and Technology of China, December 2015.
46. "Single Image Super-resolution by Reproducible Kernel Hilbert Space and Heaviside Function", UCLA, November, 2015.
47. "Single Image Super-resolution by Reproducible Kernel Hilbert Space and Heaviside Function", International Workshop on Signal Processing, Optimization and Control, Guangzhou, China, December 2015.
48. "Single Image Super-resolution based on Approximated Heaviside Functions ", Hangzhou, China, August 2015.
49. "A PDE-free Variational Model for Multiphase Image Segmentation", ICIAM, Beijing, China, August 2015.
50. "Variational Methods in Image Reconstruction and Processing", Min Zu University, China, July 2015.
51. "Total Generalized Variation and Shearlet Transform in Image Reonconstruction", Beijing Normal University, China, July 2015.
52. "Efficient Regularization Approaches for Image Reconstruction and Analysis", Arizona State University, January, 2014.
53. "A New Detail-preserving Regularity Scheme", Joint mathematical meeting, Baltimore, MD, January, 2014.
54. "A convex relaxation segmentation scheme based on shearlets", Joint mathematical meeting, Baltimore, MD, January, 2014.
55. "*Compressive inference*", Joint Statistical Meetings, Montreal, Canada, August, 2013.
56. "*Compressive inference*", SAMSI workshop on Statistical and Computational Methodology for Massive Datasets, RTP, NC, April, 2013.
57. "*Effectiveness of Using Prior Information in Compressive Sensing and Image Denoising*", MBI workshop on Mathematical Challenges in Biomolecular/Biomedical Imaging and Visualization, Columbus, OH, February, 2013.
58. *"Robust high frequency information guided compressive sensing reconstruction"*, SIAM conference on Imaging Sciences, Philadelphia, PA, May 20-22, 2012.
59. *"Sparse feature and image reconstruction from sparse measurements",* invited talk at SPIE Wavelets and Sparsity XIV, San Diego, California, August, 2011.
60. *"Edge Guided Compressive Sensing Reconstruction",* invited talk at the Second Midwest Conference on Mathematical Methods for Images and Surfaces, Michigan State University, August, 2011.
61. "*Edge Guided Compressive Imaging Reconstruction*", invited talk at International Conference in Visual Communication and Image Processing, HuangShan, China, July, 2010.
62. *"Efectiveness of Using Edge Information in Compressive Sensing and Image Denoising",* invited talk at Department of Mathematics, Beijing Normal University, China, July, 2010.
63. "*Edge Guided Compressive Imaging Reconstruction*", at Society of Industry and Applied Mathematics Imaging Science conference, Chicago, IL, April, 2010.
64. *"Mathematical Approaches on Some Image Processing and Analysis Problems",* Cleveland State University, Department of Mathematics Colloquium, September, 2009.
65. *"An Unsupervised Adaptive Non-local Means Filter to Remove Inhomogeneous Noise*

and Artifact", the IMACS World Congress, Computational and Applied Mathematics and Applications in Science and Engineering, Athens, GA, August, 2009.

66. *"Adaptive Total Variation Based Filtering for MRI Images with Spatially Inhomogeneous Noise and Artifacts",* International Symposium on Medical Imaging , Boston, MA, June 2009.
67. *"Use Patch Information to Remove Noise and Artifacts from Medical Images",* at Applied Mathematics Seminar of University of Georgia, Athens, GA, April 2009.
68. *"An Unsupervised Adaptive Non-local Means Filter for Partially Parallel Magnetic Resonance Images",* at Ulam Centennial conference, Gainesville, FL, March 2009.
69. *"Denoising by Unsupervised Non-local Means",* at colloquium of Computational and Applied Mathematics department at Rice University, Houston, TX, December, 2008.
70. *"A Local Mutual Information Guided Denoising Technique and Its Application to Self-calibrated Partially Parallel Imaging",* at International Conference on Medical Image Computing and Computer Assisted Intervention, New York City, NY, September, 2008.
71. *"On the improvement of Total Variation Regularization and Its Application on Partially Parallel Imaging"* at Society of Industry and Applied Mathematics Imaging Science conference, San Diego, CA, July, 2008.
72. *"Local Mutual Information Guided Image Enhancement"* at Mathematics Department of the University of Alabama at Birmingham, Birmingham, AL, April, 2008.
73. *"LMI-denoiser: A Local Mutual Information Guided Denoising Technique for Self-calibrated Partially Parallel Imaging"* at Mathematics Department of the University of Alabama Tuscaloosa, AL, December 2007.
74. *"Statistical methods for image registration and segmentation"* at Mechanics Engineering department of the University of Alabama at Birmingham, Birmingham, AL, October 2007.
75. *"A Nonparametric Scheme for Simultaneous Image Segmentation and Smoothing"* at University of Alabama System Joint Applied Mathematics 2007 Annual Meeting, Tuscaloosa, AL, October 2007.
76. *"Using Non-parametric Kernel to Segment and Smooth Images Simultaneously"* at International Conference on Image Processing, Atlanta, Georgia, November 2006.
77. *"Reconstruct White Matter Fiber Traces Using Multi-Tensor Deflection in DWI",* at International Symposium on Biomedical Image, Arlington, Virginia, April 2006.
78. *"Estimation, Smoothing and Characterization of Apparent Diffusion Coefficient Profiles from High Angular Resolution DWI"* at IEEE computer society conference on Computer Vision and Pattern Recognition, Washington D. C. June 2006.
79. *"Apparent Diffusion Coefficient Approximation and Diffusion Anisotropy Characterization in DWI",* at International Conference on Information Processing in Medical Imaging, Glenwood Springs, Colorado, July 2005.
80. *"Recovery of Intra-Voxel Structure from HARD DWI",* at IEEE International Symposium on Biomedical Imaging, Arlington, Virginia, April 2004.
81. *"Recover Multi-tensor Structure from HARD MRI under Bi-Gaussian Assumption",* SIAM student workshop, Gainesville, FL, March 2004.