CURRICULUM VITAE

PERSONAL INFORMATION

Name:	Chenglong Bao
Address:	303 Jin Chun Yuan West Bldg., Tsinghua University, 100084
Phone	+8610-62799261
Email:	clbao@mail.tsinghua.edu.cn
Homepage:	https://matbc.github.io

RESEARCH INTERESTS

Image processing, Machine learning, Large scale optimization, Computational harmonic analysis

EDUCATION

- *Ph.D.* in Applied mathematics, National University of Singapore, Singapore 12/2014
  advisors: Prof. Hui Ji and Prof. Defeng Sun
- *B.Sc.* in Mathematics, Sun Yat-Sen University, China 07/2009

WORKING EXPERIENCE

- *Assistant professor*, Yau Mathematical Sciences Center, Tsinghua University 04/2018-present
- *Research fellow*, Department of Mathematics, National University of Singapore 03/2015-12/2017
  advisor: Prof. Zuowei Shen
- *Research assistant*, Department of Mathematics, National University of Singapore 08/2013-02/2015

PROFESSIONAL SERVICE

- *Member:*

  Youth committee member, AI section in Chinese society of Biomedical engineering

- *Organizing committee member:*
  - The workshop of "Computational approaches in imaging sciences", Tsinghua University 12/2018
  - The mini-symposium of "Data driven methods in imaging science" on SIAM Conference on Imaging Sciences, Bologna, Italy 06/2018
  - The 6th ICCM CAM Conference on Geometry and Imaging, Tsinghua University 12/2017
- *Reviewer for journals/conferences:*
  Journal of Machine Learning Research; IEEE Transactions on Pattern Recognition and Machine Intelligence; IEEE Transactions on Image Processing; IEEE Transactions on Signal Processing; IEEE Transactions on cybernetics; IEEE Transactions on Multimedia; Pattern Recognition; Inverse problems and imaging; CVPR 2016, NIPS 2016

PUBLICATIONS

1. **Chenglong Bao**, Jae Kyu Choi and Bin Dong, Whole Brain Susceptibility Mapping Using Harmonic Incompatibility Removal, arXiv1805.12521, 2018

2. Guanhua Zhu, Wei Liu, **Chenglong Bao**. Dudu Tong, Hui Ji, Zuowei Shen, Daiwei Yang and Lanyuan Lu. Investigating energy-based pool structure selection in the structure ensemble modeling with experimental distance constraints: the example from a multi-domain protein Pub 1. Proteins: Structure, Function, and Bioinformatics. 86(5) 501-514. 2018

3. Jae Kyu Choi, **Chenglong Bao** and Xiaoqun Zhang. PET-MRI joint reconstruction by joint sparsity based tight frame regularization. *SIAM Journal on Imaging Sciences*, 11(2), 1179-1204. 2018

4. **Chenglong Bao**, George Barbastathis, Hui Ji, Zuowei Shen and Zhengyun Zhang. Coherence retrieval using trace regularization. *SIAM Journal on Imaging Sciences*, 11(1), 679-706,2018

5. Zhengyun Zhang, **Chenglong Bao**, Hui Ji, Zuowei Shen and George Barbastathi. Apparent coherence loss in phase space tomography. *Journal of the Optical Society of America A*, 34(11), 2025-2033, 2017

6. **Chenglong Bao**, Bin Dong, Likun Hou, Zuowei Shen and Xiaoqun Zhang, Xue Zhang. Image restoration by minimizing zero norm of wavelet frame coefficients. *Inverse Problems*, 32(1),2016

7. Changqing Wang, Judy Kipping, **Chenglong Bao**, Hui Ji and Anqi Qiu. Cerebellar functional parcellation using sparse dictionary learning clustering. *Frontiers in Neuroscience*, 10, 2016

8. Yuhui Quan, **Chenglong Bao** and Hui Ji. Equiangular kernel dictionary learning with applications to dynamic texture analysis. *IEEE Conf. Computer Vision and Pattern Recognition* (CVPR), Las Vegas, 2016

9. **Chenglong Bao**, Hui Ji, Yuhui Quan and Zuowei Shen. Dictionary learning for sparse coding: algorithms and convergence analysis. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 38(7), 1356-1369, 2016

10. **Chenglong Bao**, Hui Ji and Zuowei Shen. Convergence analysis for iterative data-driven tight frame construction scheme. *Applied and Computational Harmonic Analysis*, 38(3), 510-523, 2015

11. **Chenglong Bao**, Yuhui Quan and Hui Ji. A convergent incoherent dictionary learning algorithm for sparse coding. *European Conf. Computer Vision* (ECCV), Zurich, 2014

12. **Chenglong Bao**, Hui Ji, Yuhui Quan and Zuowei Shen. L0 norm based dictionary learning by proximal methods with global convergence. *IEEE Conf. Computer Vision and Patter Recognition* (CVPR), Columbus, 2014

13. **Chenglong Bao**, Jianfeng Cai and Hui Ji. Fast sparsity based orthogonal dictionary learning for image restoration. *14th Int. Conf. Computer Vision* (ICCV), Sydney, 2013

14. **Chenglong Bao**, Yi Wu, Haibin Ling and Hui Ji. Real time robust L1 tracker using accelerated proximal gradient method. *IEEE Conf. Computer Vision and Patter Recognition* (CVPR), 2012

STUDENTS

- Current students
  - Ruixuan Zhang (Undergraduate student)
  - Ge Song (Undergraduate student)
- Past students
  - Jianqiu Lu (Undergraduate student, 2018. Next place: Cornell University)
  - Tongbo Xu (Undergraduate student, 2018. Next place: University of Michigan, Ann Arbor)
  - Xiangbo Mo (Undergraduate student, 2018. Next place: University of California, Davis)