

CURRICULUM VITAE

Name: Yang, Junfeng (Yang, J. F., in Chinese: 杨俊锋)

Date and Place of Birth: August 1981, Weixian County, Hebei Province, P. R. China

Academic Degree: Ph. D. (2009)

Present Position: Professor, Department of Mathematics, Nanjing University

Mailing Address:

Department of Mathematics, Nanjing University
#22 Han-Kou Road, Nanjing, P. R. China
Zipcode: 210093
E-mail: jfyang@nju.edu.cn

Homepage: <http://math.nju.edu.cn/~jfyang/>
<http://math.nju.edu.cn/users/58>

Education

- August 2007 ~ February 2009: Department of Computational and Applied Mathematics, Rice University. Joint Ph. D. Education Program, Advisor: Yin Zhang. Thesis: A class of fast algorithms for total variation image reconstruction.
- September 2006 ~ June 2009: Ph. D., Department of Mathematics, Nanjing University. Advisor: Bing-Sheng He.
- August 2004 ~ February 2006: Institute of Computational Mathematics and Scientific/Engineering Computing, Academy of Mathematics and System Sciences, Chinese Academy of Sciences. Joint M. Sc. Education Program, Advisor: Ya-Xiang Yuan. Thesis: Some algorithms in unconstrained optimization.
- September 2003 ~ June 2006: M. Sc., Institute of Mathematics and Information Sciences, Hebei Normal University.
- September 1999 ~ June 2003: B. Sc., Department of Mathematics, Hebei Normal University.

Working

- January 2017 ~ Present: Professor, Department of Mathematics, Nanjing University.
- January 2012 ~ December 2016: Associate Professor, Department of Mathematics, Nanjing University.
- July 2009 ~ December 2011: Lecturer, Department of Mathematics, Nanjing University.

Visiting

- July 2017 ~ August 2017: Department of Applied Mathematics, The Hong Kong Polytechnic University. Host: Xiaojun Chen
- March 2015 ~ May 2015: Department of Mathematics, The Chinese University of Hong Kong. Host: Raymond H. Chan
- Summer of 2014, June ~ November 2015: Department of System Engineering and Engineering Management, The Chinese University of Hong Kong. Host: Shiqian Ma
- September 2010 ~ July 2011: Research Fellow, Singapore-MIT Alliance, National University of Singapore. Project Leader: Kim-Chuan Toh.
- Summers of 2009 ~ 2011: Department of Mathematics, Hong Kong Baptist University. Host: Xiao-Ming Yuan.

Research Interests

Optimization theory, algorithms and applications.

Publications

1. Junfeng Yang, An algorithmic review for total variation regularized data fitting problems in image processing, *Operations Research Transactions*, 21(4):69–83, 2017.
2. Guoyong Gu, Suhong Jiang, and Junfeng Yang, A TVSCAD approach for image deblurring with impulsive noise, *Inverse Problems*, 33(12):125008 (21pp), 2017.
3. Junfeng Yang, Compressive sensing and L1-norm decoding by ADMM, *Science Focus*, 11(6):47–51, 2016.
4. Shiqian Ma, Junfeng Yang, Applications of gauge duality in robust principal component analysis and semidefinite programming, *Science China Mathematics*, 59(8):1579–1592, 2016.
5. Liusheng Hou, Hongjin He, Junfeng Yang, A partially parallel splitting method for multiple-block separable convex programming with applications to robust PCA, *Computational Optimization and Applications*, 63:273–303, 2016.
6. Caihua Chen, Raymond H. Chan, Shiqian Ma, Junfeng Yang, Inertial Proximal ADM-M for Linearly Constrained Separable Convex Optimization, *SIAM Journal on Imaging Sciences*, 8(4):2239–2267, 2015.
7. Caihua Chen, Shiqian Ma, Junfeng Yang, A general inertial proximal point algorithm for mixed variational inequality problem, *SIAM Journal on Optimization*, 25(4):2120–2142, 2015.

8. Zhida Shen, Zhe Geng, Junfeng Yang, Image reconstruction from incomplete convolution data via total variation regularization. *Statistics, Optimization and Information Computing*, 3(1):1–14, 2015.
9. Guoyong Gu, Bingsheng He, Junfeng Yang, Inexact Alternating-Direction-Based Contraction Methods for Separable Linearly Constrained Convex Optimization, *Journal of Optimization Theory and Applications*, 163:105–129, 2014.
10. Junfeng Yang, Defeng Sun, Kim-Chuan Toh, A proximal point algorithm for log-determinant optimization with group Lasso regularization, *SIAM Journal on Optimization*, 23(2):857–893, 2013.
11. Xiaoming Yuan, Junfeng Yang, Sparse and low rank matrix decomposition via alternating direction method, *Pacific Journal of Optimization*, 9(1):167–180, 2013.
12. Junfeng Yang, Xiaoming Yuan, Linearized augmented Lagrangian and alternating direction methods for nuclear norm minimization, *Mathematics of Computation*, 82(281):301–329, 2013.
13. Yunhai Xiao, Junfeng Yang, Xiaoming Yuanuan, Alternating algorithms for total variation image reconstruction from random projections, *Inverse Problems and Imaging*, 6(3):547–563, 2012.
14. Bean San Goh, Zheng Peng, Cho Seng Lee, Junfeng Yang, and Min Kong, Approximate greatest descent method and quasi-Newton matrices in optimization, *Dynamics of Continuous, Discrete and Impulsive Systems, Series B: Applications and Algorithms*, 18(1):17–28, 2011.
15. Raymond H. Chan, Junfeng Yang, Xiaoming Yuanuan, Alternating direction method for image inpainting in wavelet domains, *SIAM Journal on Imaging Sciences*, 4(3):807–826, 2011.
16. Junfeng Yang, Yin Zhang, Alternating direction algorithms for L1-problems in compressive sensing, *SIAM Journal on Scientific Computing*, 33(1):250–278, 2011.
17. Wotao Yin, S. Morgan, Junfeng Yang, Yin Zhang, Practical compressive sensing with Toeplitz and circulant matrices, *Proceedings of SPIE*, 7744, 77440K, 2010.
18. Junfeng Yang, Yin Zhang, Wotao Yin, A fast alternating direction method for TVL1-L2 signal reconstruction from partial Fourier data, *IEEE Journal of Selected Topics in Signal Processing*, 4(2):288–297, 2010.
19. Junfeng Yang, Yin Zhang, Wotao Yin, An efficient TVL1 algorithm for deblurring multichannel images corrupted by impulsive noise, *SIAM Journal on Scientific Computing*, 31(4):2842–2865, 2009.
20. Junfeng Yang, Wotao Yin, Yin Zhang, Yilun Wang, A fast algorithm for edge-preserving variational multichannel image restoration, *SIAM Journal on Imaging Sciences*, 2(2):569–592, 2009.

21. Bingsheng He, Xiang Wang, Junfeng Yang, A comparison of different contraction methods for monotone variational inequalities, *Journal of Computational Mathematics*, 27(4):459–473, 2009.
22. Junfeng Yang, Dynamic power price problem: an inverse variational inequality approach, *Journal of Industrial and Management Optimization*, 4(4):673–684, 2008.
23. Yilun Wang, Junfeng Yang, Wotao Yin, Yin Zhang, A new alternating minimization algorithm for total variation image reconstruction, *SIAM Journal on Imaging Sciences*, 1(3):248–272, 2008.

Other writings

1. Raymond H. Chan, Shiqian Ma, and Junfeng Yang, *Inertial primal dual algorithms for structured convex optimization*, <http://arxiv.org/abs/1409.2992>
2. Junfeng Yang, Xin Liu and Yin Zhang, A class of stationary iterative methods for saddle point problems: convergence and extension. Not submitted.
3. Min Tao, and Junfeng Yang, Alternating direction algorithms for total variation deconvolution in image reconstruction. *Optimization Online*, November 17, 2009; TR0918, Department of Mathematics, Nanjing University, 2009/11; Research rep., Rice University, 2009/11. http://www.optimization-online.org/DB_HTML/2009/11/2463.html
4. Junfeng Yang, Wotao Yin, Yin Zhang, and Yilun Wang, A class of fast algorithm for total variation image restoration, *OpenStax CNX*, vol. 1, pp. 4–7, 2008.

Selected Conference Talks

- July 3-6, 2016: Euro OR, Poznan, Poland (Presentation: Inertial Proximal ADMM)
- August 10-14, 2015: International Congress on Industrial and Applied Mathematics (ICIAM), Beijing (Presentation: A general inertial proximal point method for mixed variational inequality)
- July 12-17, 2015: International Symposium on Mathematical Programming, Pittsburgh, USA. (Presentation: Inertial Proximal ADMM)
- August 19–24, 2012: International Symposium on Mathematical Programming, Berlin, Germany. *Session organizer: Variational Signal Processing – Algorithms and Applications. Presentation: A Class of Stationary Iterative Methods for Saddle Point Problems: Convergence and Extension.*
- May 16–19, 2011: SIAM Conference on Optimization, Darmstadt, Germany. *Presentation: A proximal point algorithm for log-determinant optimization with group Lasso regularization.*

- August 22–28, 2009: International Symposium on Mathematical Programming, Chicago, USA. *Presentation: A study of algorithms and models for sparse solution recovery via ℓ_1 -minimization.*
- August 9, 2009: Summer School–Optimization Theory and Applications, Harbin Normal University, Harbin. *Presentation: A brief introduction to compressive sensing.*

Codes

- RecPC: Sparse signal Reconstruction from Partial Circulant measurements.
<http://www.caam.rice.edu/~optimization/L1/RecPC/>
- IADM_NNLS: Inexact Alternating Direction Method for Nuclear Norm regularized Least Squares problems. http://math.nju.edu.cn/~jfyang/IADM_NNLS/index.html
- LRSd: Low-Rank Sparse matrix Decomposition.
<http://math.nju.edu.cn/~jfyang/LRSd/index.html>
- YALL1: Your ALgorithm for L1. <http://yall1.blogs.rice.edu/>
- RecPF: Image Reconstruction from Partial Fourier coefficients.
<http://www.caam.rice.edu/~optimization/L1/RecPF/>
- FTVd: Fast Total Variation Deconvolution.
<http://www.caam.rice.edu/~optimization/L1/ftvd/>