

YING NIAN WU PUBLICATIONS

Preprints

1. R Gao, J Xie, SC Zhu, and **YN Wu** (2021) A representational model of grid cells based on matrix Lie algebras.
2. E Nijkamp*, R Gao*, P Sountsov, S Vasudevan, B. Pang, SC Zhu, and **YN Wu** (2021) Learning energy-based model with flow-based backbone by neural transport MCMC.
3. R Gao, J Xie, S Huang, Y Ren, SC Zhu, and **YN Wu** (2021) Learning V1 simple cells with vector representations of local contents and matrix representations of local motions.

Published

1. Han, W., Pang, B., and **Wu, Y. N.** (2021) Robust transfer learning with pretrained language models through adapters. The Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP 2021).
2. Qiu, L. Liang, Y., Zhao, Y., Lu, P., Peng, B., Yu, Z., **Wu, Y. N.** and Zhu, S. C. (2021) SocAoG: incremental graph parsing for social relation inference in dialogues. The Joint Conference of the 59th Annual Meeting of the Association for Computational Linguistics and the 11th International Joint Conference on Natural Language Processing (ACL-IJCNLP 2021).
3. Pang, B., Nijkamp, E., Han, T., and **Wu, Y. N.** (2021) Generative text modeling through short run inference. The 16th Conference of the European Chapter of the Association for Computational Linguistics (EACL).
4. Nijkamp, E., Pang, B., **Wu, Y. N.**, and Xiong, C. (2021) SCRIPT: Self-Critic Pre-Training of Transformers. The 2021 Conference of the North American Chapter of the Association for Computational Linguistics - Human Language Technologies (NAACL-HLT 2021).
5. Xie*, J., Zheng*, Z., Fang, X., Zhu, S. C., and **Wu, Y. N.** (2021) Cooperative training of fast thinking initializer and slow thinking solver for conditional learning. IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI). Accepted.
6. Xie*, J., Xu*, Y., Zheng, Z., Zhu, S. C., and **Wu, Y. N.** (2021) Generative PointNet: deep energy-based learning on unordered point sets for 3D generation, reconstruction and classification. Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR).
7. Zhu, Y., Gao, R., Huang, S., Zhu, S. C., and **Wu, Y. N.** (2021) Learning neural representation of camera pose with matrix representation of pose shift via view synthesis. Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR).
8. Pang, B., Zhao, T., Xie, X., and **Wu, Y. N.** (2021) Trajectory prediction with latent belief energy-based model. Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR).
9. Huang, H. J., Huang, K. C., Cap, M., Zhao, Y., **Wu, Y. N.**, and Baker, C. (2021) Risk-bounded planning in probabilistic dynamic environments. 2021 IEEE International Conference on Robotics and Automation (ICRA).
10. Xie, X., Zhang, C., Zhu, Y., **Wu, Y. N.**, and Zhu, S. C. (2021) Congestion-aware multi-agent trajectory prediction for collision avoidance. 2021 IEEE International Conference on Robotics and Automation (ICRA).
11. Gao, R., Song, Y., Poole, B., **Wu, Y. N.**, and Kingma, D. P. (2021) Learning energy-based models by diffusion recovery likelihood. International Conference on Learning Representations (ICLR).
12. Xie*, J., Zheng*, Z., Fang, X., Zhu, S. C., and **Wu, Y. N.** (2021) Learning cycle-consistent cooperative networks via alternating MCMC teaching for unsupervised cross-domain translation. The Thirty-Fifth AAAI Conference on Artificial Intelligence (AAAI) 2021.

13. Demirdjian, L., Xu, Y., Bahrami-Samani, E., Pan, Y., Pan, Z., Stein, S., Xie, Z., Park, E., **Wu, Y. N.**, and Xing, Y. (2020) Detecting allele-specific alternative splicing from population-scale RNA-seq data. *American Journal of Human Genetics*, 107:461-72.
14. Pang, B.*, Han, T.*, Nijkamp, E.*, Zhu, S. C., and **Wu, Y. N.** (2020) Learning latent space energy-based prior model. *Neural Information Processing Systems (NeurIPS)*, 2020.
15. Pang, B., Han, T., and **Wu, Y. N.** (2020) Learning latent space energy-based prior model for molecule generation. *Machine Learning for Molecules Workshop at NeurIPS 2020*.
16. Pang, B., Nijkamp, E., J. Cui, Han, T., and **Wu, Y. N.** (2020) Semi-supervised learning by latent space energy-based model of symbol-vector coupling. *ICBINB Workshop at NeurIPS 2020*.
17. Han, T., Zhang, J., and **Wu, Y. N.** (2020) From em-projections to variational auto-encoder. *Deep Learning through Information Geometry Workshop at NeurIPS 2020*.
18. Xu, Y., Xie, J., Zhao, T., Baker, C., Zhao, Y., and **Wu, Y. N.** (2020) Energy-based continuous inverse optimal control. *Machine Learning for Autonomous Driving Workshop at NeurIPS 2020*.
19. Sang, Y., Xing, X., **Wu, Y. N.** and Ruan D. (2020) Imposing implicit feasibility constraints on deformable image registration using a statistical generative model. *Journal of Medical Imaging*. Accepted.
20. Xie, J.*, Zheng, Z.*, Gao, R., Wang, W., Zhu, S. C., and **Wu, Y. N.** (2020) Generative VoxelNet: learning energy-based models for 3D shape synthesis and analysis. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*. Accepted
21. Xing, X., Gao, R., Han, T., Zhu, S. C., and **Wu, Y. N.** (2020) Deformable generator networks: unsupervised disentanglement of appearance and geometry. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*. Accepted.
22. Nijkamp, E.*, Pang, B.*, Han, T., Zhou, L., Zhu, S. C., and **Wu, Y. N.** (2020) Learning multi-layer latent variable model with short run MCMC inference dynamics. *European Conference on Computer Vision (ECCV)*.
23. Xie, J, Zhu, S. C., and **Wu, Y. N.** (2020) Learning energy-based spatial-temporal generative ConvNets for dynamic patterns. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*.
24. Zhang, Q., Wang, X., **Wu, Y. N.**, Zhou, H., Zhu, S. C. (2020) Interpretable CNN for object classification. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*.
25. Li, Q., Huang, S., Hong, Y., Chen, Y., **Wu, Y. N.** and Zhu, S. C. (2020) Closed loop neural-symbolic learning via integrating neural perception, grammar parsing, and symbolic reasoning. *International Conference on Machine Learning (ICML)*.
26. Gao, R., Nijkamp, E., Kingma, D. P., Xu, Z., Dai, A. M., and **Wu, Y. N.** (2020) Flow contrastive estimation of energy-based model. *Computer Vision and Pattern Recognition (CVPR)*.
27. Xing, X., Wu, T., Zhu, S. C., and **Wu, Y. N.** (2020) Towards interpretable image synthesis by learning sparsely connected AND-OR networks. *Computer Vision and Pattern Recognition (CVPR)*.
28. Han, T., Nijkamp, E., Pang, B., Zhou, L., Zhu, S. C., and **Wu, Y. N.** (2020) Joint training of variational auto-encoder and latent energy-based model. *Computer Vision and Pattern Recognition (CVPR)*.
29. Xie., J, Lu, Y., Gao, R., Zhu, S. C., and **Wu, Y. N.** (2020) Cooperative learning of descriptor and generator networks. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 42(1): 27-45.
30. Zhu, Y., Gao, T., Fan, L., Huang, S., Edmonds, M., Liu, H., Gao, F., Zhang, C., Qi, S., **Wu, Y. N.**, Tenenbaum, J. B., and Zhu, S. C. (2020) Dark, beyond deep: a paradigm shift to cognitive AI with humanlike common sense. *Engineering, Special Issue on Artificial Intelligence*.
31. Xie, J., Gao, R., Nijkamp, E., Zhu, S. C., and **Wu, Y. N.** (2020) Representation learning: a statistical perspective. *Annual Review of Statistics and Its Application*, Vol. 7, March, 2020.
32. Xie, J.*, Gao, R.*, Zheng, Z., Zhu, S. C., and **Wu, Y. N.** (2020) Motion-based generator model: unsupervised disentanglement of appearance, trackable and intrackable motions in dynamic patterns, *AAAI Conference on Artificial Intelligence (AAAI)*.
33. Nijkamp, E.*, Hill, M.*, Han, T., Zhu, S. C., and **Wu, Y. N.** (2020) On the anatomy of MCMC-based maximum likelihood learning of energy-based models, *AAAI Conference on Artificial Intelligence (AAAI)*.
34. Sang, Y., Xing, X., **Wu, Y. N.** and Ruan D. (2020) Imposing implicit feasibility constraints on deformable image registration using a statistical generative model. *Proc. SPIE 11313, Medical Imaging 2020*.
35. Zhang Z.*, Pan Z.*, Ying Y., Xie Z., Adhikari S., Phillips J., Carstens R.P., Black D.L., **Wu Y. N.**, Xing Y. (2019) Deep learning-augmented RNA-seq analysis of transcript splicing. *Nature Methods*, 16:307-310.

36. Gao, R., Nijkamp, E., Xu, Z., Dai, A. M., Kingma, D. P., and **Wu, Y. N.** (2019) Flow contrastive estimation of energy-based model. *Neurips Workshop on Bayesian Deep Learning*.
37. Edmonds, M.*, Gao, F.*, Liu, H.*, Xie, X.*, Qi, S., Rothrock, B., Zhu, Y., **Wu, Y. N.**, Lu, H., and Zhu, S. C. (2019) A tale of two explanations: enhancing human trust by explaining robot behavior, *Science Robotics*, Vol. 4, No. 37, 4663.
38. Han, T., Xing, X., Wu, J., and **Wu, Y. N.** (2019) Replicating neuroscience observations on ML/MF and AM face patches by deep generative model, *Neural Computation*, 31 (12), 2348-2367.
39. Pang, B., Nijkamp, E., and **Wu, Y. N.** (2019) Deep learning with TensorFlow: a review. *Journal of Educational and Behavioral Statistics*.
40. Lu, H., **Wu, Y. N.**, and Holyoak, K. J. (2019) Emergence of analogy from relation learning. *Proceedings of the National Academy of Sciences (PNAS)*, 116 (10), 4176-4181.
41. Nijkamp, E., Hill, M., Zhu, S. C., and **Wu, Y. N.** (2019) Learning non-convergent non-persistent short-run MCMC toward energy-based model. *Neural Information Processing Systems (NeurIPS)*.
42. Han, T.*, Nijkamp, E.*, Fang, X., Hill, M., Zhu, S. C., and **Wu, Y. N.** (2019) Divergence triangle for joint training of generator model, energy-based model, and inference model. *Computer Vision and Pattern Recognition (CVPR)*.
43. Xing, X., Han, T., Gao, R., Zhu, S. C., and **Wu, Y. N.** (2019) Unsupervised disentangling of appearance and geometry by deformable generator network. *Computer Vision and Pattern Recognition (CVPR)*.
44. Zhao, T., Xu, Y., Monfort, M., Choi, W., Baker, C., Zhao, Z., Wang, Y., and **Wu, Y. N.** (2019) Multi-agent tensor fusion for contextual trajectory prediction. *Computer Vision and Pattern Recognition (CVPR)*.
45. Zhang, Q., Yang, Y., Ma, H., and **Wu, Y. N.** (2019) Interpreting CNNs via decision trees. *Computer Vision and Pattern Recognition (CVPR)*.
46. Gao, R.*, Xie, J.*, Zhu, S. C., and **Wu, Y. N.** (2019) Learning grid cells as vector representation of self-position coupled with matrix representation of self-motion. *International Conference on Learning Representations (ICLR)*.
47. Xie, J.*, Gao, R.*, Zheng, Z., Zhu, S. C., and **Wu, Y. N.** (2019) Learning dynamic generator model by alternating back-propagation through time. *AAAI Conference on Artificial Intelligence (AAAI)*.
48. **Wu, Y. N.**, Gao, R., Han, T., and Zhu, S. C. (2019) A tale of three probabilistic families: discriminative, descriptive and generative models. *Quarterly of Applied Mathematics*, Vol. 77, No. 2, pp423-465.
49. Heinzerling, K. G., Briones, M., Thames, A. D., Hinkin, C. H., Zhu, T., **Wu, Y. N.**, and Shoptaw, S. J. (2019) Randomized, placebo-controlled trial of targeting neuroinflammation with Ibudilast to treat methamphetamine use disorder. *Journal of Neuroimmune Pharmacology*.
50. Xing, X., Zhu, S. C., and **Wu, Y. N.** (2019) Inducing sparse coding and And-Or grammar from generator network. *Workshop on Network Interpretability for Deep Learning, AAAI-19: 33rd AAAI Conference on Artificial Intelligence*.
51. Han, T., Lu, Y., Wu, J., Xing, X., and **Wu, Y. N.** (2019) Learning generator networks for dynamic patterns. *2019 IEEE Winter Conference on Applications of Computer Vision (WACV)*, 809-818.
52. Huang, S., Qi, S., Xiao, Y., Zhu, Y., **Wu, Y. N.**, and Zhu, S. C. (2018) Cooperative holistic scene understanding: unifying 3D object, layout, and camera pose estimation. *Neural Information Processing Systems (NeurIPS)*.
53. Zhang, Q., **Wu, Y. N.**, Zhu, S. C., and Zhang, H. (2018) Mining a deep And-OR object semantics from web images via cost-sensitive question-answer-based active annotations. *Computer Vision and Image Understanding*, vol. 176-177, page 33-44.
54. Xing, X., Gao, R., Han, T., Zhu, S. C., and **Wu, Y. N.** (2018) Deformable generator network: unsupervised disentanglement of appearance and geometry. *ICML workshop on Theoretical Foundations and Applications of Deep Generative Models*.
55. Han, T., Xing, X., and **Wu, Y. N.** (2018) Learning multi-view generator network for shared representation. *International Conference on Pattern Recognition*.
56. Han, T., Wu, J., and **Wu, Y. N.** (2018) Replicating active appearance model by generator network. *International Joint Conference on Artificial Intelligence (IJCAI)*.
57. Guo, J., Xu, N., Qian, K., Shi, Y., Xu, K., **Wu, Y. N.**, and Alwan, A. (2018) Deep neural network based i-vector mapping for speaker verification using short utterances. *Speech Communication*, 105: 92-102.

58. Li, X., Guan, Y., **Wu, Y. N.**, and Zhang, Z. (2018) Piano multipitch estimation using sparse coding embedded deep learning. *EURASIP Journal on Audio, Speech, and Music*, 2018:11.
59. **Wu, Y. N.**, Xie, J., Lu, Y., and Zhu, S. C. (2018) Sparse and deep generalizations of the FRAME model. *Annals of Mathematical Sciences and Applications*, Vol.3, no. 1, 211-254.
60. Lu, Y., Gao, R., Zhu, S. C., and **Wu, Y. N.** (2018) Exploring generative perspective of convolutional neural networks by learning random field models. *Statistics and Its Interface*, Volume 11, 515-529.
61. Gao, R., Lu, Y., Zhou, J., Zhu, S. C., and **Wu, Y. N.** (2018) Learning generative ConvNets via multigrid modeling and sampling. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
62. Xie*, J., Zheng*, Z., Gao, R., Wang, W., Zhu, S. C., and **Wu, Y. N.** (2018) Learning descriptor networks for 3D shape synthesis and analysis. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
63. Zhang, Q., **Wu, Y. N.**, and Zhu, S. C. (2018) Interpretable convolutional neural networks. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
64. Xie., J, Lu, Y., Gao, R., and **Wu, Y. N.** (2018) Cooperative learning of energy-based model and latent variable model via MCMC teaching. *AAAI-18: 32nd AAAI Conference on Artificial Intelligence*.
65. Zhang, Q., Cao, R., Shi, F., **Wu, Y. N.**, and Zhu, S. C. (2018) Interpreting CNN knowledge via an explanatory graph. *AAAI-18: 32nd AAAI Conference on Artificial Intelligence*.
66. Xie, J., Zhu, S. C., and **Wu, Y. N.** (2017) Synthesizing dynamic patterns by spatial-temporal generative ConvNet. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
67. Xie, J., Xu, Y., Nijkamp, E., **Wu, Y. N.**, and Zhu, S. C. (2017) Generative hierarchical structural learning of sparse FRAME models. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
68. Zhang, Q., Cao, R., **Wu, Y. N.**, and Zhu, S. C. (2017) Mining object parts from CNNs via active question-answering. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
69. Xie, J., Douglas, P., **Wu, Y. N.**, Brody, A., and Anderson, A. (2017) Decoding the Encoding of Functional Brain Networks: an fMRI Classification Comparison of Non-negative Matrix Factorization (NMF), Independent Component Analysis (ICA), and Sparse Coding Algorithms. *Journal of Neuroscience Methods*, 282, 81-94.
70. Park E., Guo J., Shen S., Demirdjian L., **Wu Y. N.**, Lin L., and Xing Y. (2017) Population and allelic variation of A-to-I RNA editing in human transcriptomes. *Genome Biology*, 18:143.
71. Han, T., Lu, Y., Zhu, S. C., and **Wu, Y. N.** (2017) Alternating back-propagation for generator network. *AAAI-17: 31st AAAI Conference on Artificial Intelligence*.
72. Zhang, Q., Cao, R., **Wu, Y. N.**, and Zhu, S. C. (2017) Growing interpretable part graphs on ConvNets via multi-shot learning. *AAAI-17: 31st AAAI Conference on Artificial Intelligence*.
73. Xie, J., Lu, Y., Zhu, S. C., and **Wu, Y. N.** (2016) A Theory of Generative ConvNet. *International Conference on Machine Learning (ICML)*.
74. Lu, Y., Zhu, S. C., and **Wu, Y. N.** (2016) Learning FRAME models using CNN filters. *AAAI-16: 30th AAAI Conference on Artificial Intelligence*.
75. Heinzerling, K., Demirdjian, L., **Wu, Y. N.**, and Shoptaw S. (2016). Single nucleotide polymorphism near CREB1, rs7591784, is associated with pretreatment methamphetamine use frequency and outcome of outpatient treatment for methamphetamine use disorder. *Journal Psychiatry Research*, 74:22-9.
76. Shen, S., Wang, Y., Wang, C., **Wu, Y. N.**, and Xing Y. (2016) SURVIV: Survival Analysis of mRNA Isoform Variation. *Nature Communications*, 7:11548.
77. Wu, W. B. and **Wu, Y. N.** (2016) High-dimensional linear models with dependent observations. *Electronic Journal of Statistics*, 10, 352-379.
78. Dai, J., Lu, Y., and **Wu, Y. N.** (2016) Generative modeling of convolutional neural networks. *Statistics and Its Interface*, 9, 485-496.
79. Lee, K. J., Chen, R. B., and **Wu, Y. N.** (2016) Bayesian variable selection for finite mixture model of linear regressions. *Computational Statistics and Data Analysis*, 96, 1-16.
80. Chen, R. B., Chu, C. H., Yuan, S. and **Wu, Y. N.** (2016) Bayesian sparse group selection. *Journal of Computational and Graphical Statistics*, 25, 665-683.
81. Xie, J., Lu, Y., Zhu, S. C., and **Wu, Y. N.** (2016) Inducing wavelets into random fields via generative

- boosting. *Applied and Computational Harmonic Analysis*, 41, 4-25.
82. Zhang, Q., **Wu, Y. N.**, and Zhu, S. C. (2015) Mining and-or graphs for graph matching and object discovery, *International Conference on Computer Vision (ICCV)*.
 83. Dai, J., Lu, Y., and **Wu, Y. N.** (2015) Generative modeling of convolutional neural networks. *International Conference on Learning Representations (ICLR)*.
 84. Fleishman, G. M., Fletcher, P. T., Gutman, B. A., Prasad, G., **Wu, Y. N.**, Thompson P. M. (2015) Geodesic Refinement Using James-Stein Estimators. *5th MICCAI Workshop on Mathematical Foundations of Computational Anatomy*.
 85. Xie, J., Hu, W., Zhu, S. C., and **Wu, Y. N.** (2015). Learning sparse FRAME models for natural image patterns, *International Journal of Computer Vision*, 114, 91-112.
 86. Anderson, A., Douglas, P. K., Kerr, W. T., Haynes, V. S., Yuille, A. L., Xie, J., **Wu, Y. N.**, and Cohen, M. S. (2014) Non-negative Matrix Factorization of Multimodal MRI, fMRI and Phenotypic Data reveals Differential Changes in Default Mode Subnetworks in ADHD. *NeuroImage*, 102, 207-219.
 87. Yi, H., Hu, W., Zi, Z., Zhu, S. C., and **Wu, Y. N.** (2014) Unsupervised learning of compositional sparse code for natural images. *Quarterly of Applied Mathematics*, 72, 373-406.
 88. Xie, J., Hu, W., Zhu, S. C., and **Wu, Y. N.** (2014) Learning inhomogeneous FRAME models for object patterns. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
 89. Dai, J., Hong, Y., Hu, W., Zhu, S. C., and **Wu, Y. N.** (2014) Unsupervised learning of dictionaries of hierarchical compositional models. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
 90. Barbu, A., Wu, T., **Wu, Y. N.** (2014) Learning mixtures of Bernoulli templates by two-round EM with performance guarantee. *Electronic Journal of Statistics*, 8, 3004-3030.
 91. Lee, J., **Wu, Y. N.**, and Kim, G. (2014) Unbalanced data classification using support vector machines with active learning on scleroderma lung disease patterns. *Journal of Applied Statistics*, 42, 676-689.
 92. Shen, S., Park, J. W., Lu, Z. X., Lin, L., Henry, M. D., **Wu, Y. N.**, Zhou, Q., Xing, Y. (2014) rMATS: robust and flexible detection of differential alternative splicing from replicate RNA-seq data, *Proceedings of National Academy of Science (PNAS)*, 111(51):E5593-601.
 93. Dai, J., **Wu, Y. N.**, Zhou, J., and Zhu, S. C. (2013) Co-segmentation and co-sketch by unsupervised learning. *Proceedings of International Conference of Computer Vision (ICCV)*.
 94. Chen, R. B., Chu, C. H., Lai, T. Y. and **Wu, Y. N.** (2011) Stochastic matching pursuit for Bayesian variable selection. *Statistics and Computing*, 21, 247-259.
 95. Hu, W., **Wu, Y. N.**, and Zhu, S. C. (2011) Image representation by active curves. *International Conference on Computer Vision*.
 96. **Wu, Y. N.**, Si, Z., Gong, H., and Zhu, S. C. (2010) Learning active basis model for object detection and recognition. *International Journal of Computer Vision*, 90, 198-235.
 97. Si, Z., Gong, H., Zhu, S. C., and **Wu, Y. N.** (2010) Learning active basis models by EM-type algorithms. *Statistical Science*, 25, 458-475.
 98. Si, Z. and **Wu, Y. N.** (2010) Wavelet, active basis, and shape script --- a tour in the sparse land. *ACM SIGMM International Conference on Multimedia Information Retrieval, Special session on Statistical Modeling and Learning for Multimedia*.
 99. Si, Z., Gong, H., **Wu, Y. N.**, and Zhu, S. C. (2009) Learning mixed template for object recognition. *Proceedings of Computer Vision and Pattern Recognition (CVPR)*.
 100. **Wu, Y. N.**, Guo, C., and Zhu, S. C. (2008) From information scaling to regimes of statistical models. *Quarterly of Applied Mathematics*, 66, 81-122.
 101. Guo, C., Zhu, S. C. and **Wu, Y. N.** (2007) Primal sketch: integrating structure and texture. *Computer Vision and Image Understanding*, 106, 5-19.
 102. Li, J., Yang, X., **Wu, Y. N.**, and Shoptaw, S. (2007) A random-effect Markov transition model for Poisson-distributed repeated measures with nonignorable missing values. *Statistics in Medicine*, 26, 2519-2532.
 103. Zheng, M., Barrera, L. O., B. Ren, and **Wu, Y. N.** (2007) ChIP-chip: data, model, and analysis. *Biometrics*, 63, 787-796.
 104. **Wu, Y. N.**, Li, J., Liu, Z., and Zhu, S. C. (2007) Statistical principles in image modeling. *Technometrics*, 49, 249-261.

105. Chen, R. B. and **Wu, Y. N.** (2007) A null-space algorithm for overcomplete blind source separation. *Computational Statistics and Data Analysis*, 51, 5519-5536.
106. **Wu, Y. N.**, Si, Z., Fleming, C., and Zhu, S. C. (2007) Deformable template as active basis. *Proceedings of International Conference of Computer Vision (ICCV)*.
107. Xing, Y. Yu, T., **Wu, Y. N.**, Roy, M., Kim, J. and Lee C. (2006) An expectation-maximization algorithm for probabilistic reconstructions of full-length isoforms from splice graphs. *Nucleic Acid Research*, 34, 3150-3160.
108. Kim, T. H, Barrera, L. O., Zheng, M., Qu, C., Singer, M. A., Richmand, T. A., **Wu, Y. N.**, Green, R. G. and Ren, B. (2005) A High-resolution map of active promoters in the human genome, *Nature*, 436, 876-880.
109. **Wu, Y. N.**, Guo, C. E., and Zhu, S. C. (2004) Perceptual scaling. *Applied Bayesian Modeling and Causal Inference from an Incomplete Data Perspective*, Eds. Gelman and Meng, John Wiley.
110. Guo, C., **Wu, Y. N.**, and Zhu, S. C. (2004) Information scaling laws in natural scenes. *Proceedings of 2nd Workshop on Generative Model Based Vision*.
111. Doretto, G., Chiuso, A, **Wu, Y. N.** and Soatto, S., (2003) Dynamic textures. *International Journal of Computer Vision*, 51, 91-109.
112. Guo, C., Zhu, S. C., and **Wu, Y. N.** (2003) Visual learning by integrating descriptive and generative models. *International Journal of Computer Vision*, 53, 5-29.
113. Guo, C., Zhu, S. C., and **Wu, Y. N.** (2003) Towards a mathematical theory of primal sketch and sketchability. *Proceedings of International Conference of Computer Vision (ICCV)*, 1228-1235.
114. **Wu, Y. N.**, Zhu, S. C., and Guo, C. (2002) Statistical modeling of texture sketch. *Proceedings of European Conference of Computer Vision (ECCV)*, 240-254.
115. Zhu, S. C., Guo, C., **Wu, Y. N.** and Wang, Y. (2002) What are textons? *Proceedings of European Conference of Computer Vision (ECCV)*, 793-807.
116. Pinheiro J., Liu, C., and **Wu, Y. N.** (2001) Efficient algorithms for robust estimation in linear mixed-effects models using the multivariate t-distribution. *Journal of Computational and Graphical Statistics*, 10, 249-276.
117. Guo, C., Zhu, S. C., and **Wu, Y. N.** (2001) Visual learning by integrating descriptive and generative methods. *Proceedings of International Conference on Computer Vision (ICCV)*.
118. Yuille, A. L., Coughlan, J., **Wu, Y. N.**, and Zhu, S. C. (2001) Order parameters for detecting target curves in images: when does high level knowledge help? *International Journal of Computer Vision*, 41, 9-33.
119. Soatto, S., Doretto, G., and **Wu, Y. N.** (2001) Dynamic textures. *Proceedings of International Conference of Computer Vision (ICCV)*, 439-447.
120. Saisan, P., Doretto, G., **Wu, Y. N.**, and Soatto, S. (2001) Dynamic texture recognition. *Proceedings of Computer Vision and Pattern Recognition (CVPR)*.
121. Zhu, S. C., Liu, X., and **Wu, Y. N.** (2000) Exploring texture ensembles by efficient Markov chain Monte Carlo - towards a 'trichromacy' theory of texture. *IEEE Pattern Analysis and Machine Intelligence (PAMI)*, 22, 554-569.
122. **Wu, Y. N.**, Zhu, S. C., and Liu, X. (2000) Equivalence of Julesz ensembles and FRAME models. *International Journal of Computer Vision*, 38, 245-261.
123. Yuille, A. L., Coughlan, J., **Wu, Y. N.**, and Zhu, S. C. (2000), Order Parameter Theory for minimax entropy models: How Does High Level Knowledge Helps? *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
124. Liu, J. S. and **Wu, Y. N.** (1999) Parameter expansion for data augmentation. *Journal of the American Statistical Association*, 94, 1264-1274.
125. **Wu, Y. N.**, Zhu, S. C., and Liu, X. (1999) Equivalence of Julesz and Gibbs texture ensembles. *Proceedings of International Conference of Computer Vision (ICCV)*, 1025-1032.
126. Zhu, S. C., Liu, X. W., and **Wu, Y. N.** (1999) Exploring Julesz Ensembles by Efficient MCMC. *Proc. of Workshop on Statistical and Computational Theories of Vision (SCTV)*, Fort Collins, CO.
127. Zhu, S. C. and **Wu, Y. N.** (1999) From local features to global perception. *Journal of Neurocomputing*, 26.
128. Matthyse S., Levy D. L., **Wu Y. N.**, Rubin D. B., and Holzman P. (1999) Intermittent degradation

- in performance in schizophrenia. *Schizophrenic Research*, 40, 131-146.
129. Zhu, S. C., **Wu, Y. N.**, and Mumford, D. B. (1998) Minimax entropy principle and its application to texture modeling. *Neural Computation*, 9, 1627-1660.
 130. Liu, C., Rubin, D. B., and **Wu, Y. N.** (1998) Parameter expansion to accelerate EM - the PX-EM algorithm. *Biometrika*, 85, 755-770.
 131. Rubin, D. B. and **Wu, Y. N.** (1997) Modeling schizophrenic behavior using general mixture components. *Biometrics*, 53, 243-261.
 132. Zhu, S. C., **Wu, Y. N.**, and Mumford, D. B. (1997) Filter, Random field, And Maximum Entropy (FRAME): towards a unified theory for texture modeling. *International Journal of Computer Vision*, 27, 107-126.
 133. Zhu, S. C., **Wu, Y. N.**, and Mumford, D. B. (1996), Filters, Random Fields, and Maximum Entropy (FRAME): towards a unified theory for texture modeling. *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*.
 134. **Wu, Y. N.** (1995) Random shuffling: a new approach to matching problem. *Proceedings of American Statistical Association*, 69-74.
 135. Chernoff, H. and **Wu, Y. N.** (1994) Bounds on inconsistent inferences for sequences of trials with varying probabilities. In *Probability, Statistics and Optimisation*, Edited by F. P. Kelly. John Wiley & Sons. 351-366.