Mingyuan Zhou

The University of Texas at Austin
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Education

- **Duke University**, Durham, NC, May 2013
  Ph.D. in Electrical and Computer Engineering

- **Chinese Academy of Sciences**, Beijing, China, June 2008
  M.Sc. in Signal and Information Processing

- **Nanjing University**, Nanjing, China, June 2005
  B.Sc. in Acoustics, Department of Electronic Science and Engineering

Employment

Assistant Professor of Statistics
Department of Information, Risk, and Operations Management, McCombs School of Business
Department of Statistics and Data Sciences (core faculty with courtesy appointment)
The University of Texas at Austin
July 2013 – Present

Working Papers

1. Mingzhang Yin and **Mingyuan Zhou**, "ARM: Augment-REINFORCE-merge gradient for discrete latent variable models," arXiv:1807.11143, July 2018.
2. Aaron Schein, Steven Wu, **Mingyuan Zhou**, and Hanna Wallach, "Locally private Bayesian inference for count modeling," arXiv:1803.08471, March 2018.
3. Ehsan Hajiramezanali, Siamak Zamani Dadaneh, Paul de Figueiredo, Sing-Hoi Sze, **Mingyuan Zhou**, and Xiaoning Qian, "Differential expression analysis of dynamical sequencing count data with a gamma Markov chain," arXiv:1803.02527, March 2018
4. **Mingyuan Zhou**, "Softplus regressions and convex polytopes," arXiv:1608.06383, Aug. 2016.

Refereed Journal Publications

5. Siamak Zamani Dadaneh, **Mingyuan Zhou**, and Xiaoning Qian, "Bayesian negative binomial regression for differential expression with confounding factors," doi.org/10.1093/bioinformatics/bty330, to appear in *Bioinformatics*, 2018$^+$.
6. Siamak Zamani Dadaneh, **Mingyuan Zhou**, and Xiaoning Qian, "Covariate-dependent negative binomial factor analysis of RNA sequencing data," *Bioinformatics*, vol. 34, pp. i61-i69, July 2018.
7. Quan Zhang and **Mingyuan Zhou**, "Permuted and augmented stick-breaking Bayesian multinomial regression," *Journal of Machine Learning Research*, vol. 18, pp. 1-33, Apr. 2018.

8. Fangzheng Xie, **Mingyuan Zhou**, and Yanxun Xu, "BayCount: A Bayesian decomposition method for inferring tumor heterogeneity using RNA-Seq counts," https://doi.org/10.1101/218511, *to appear in Annals of Applied Statistics*, 2017$^+$.
9. **Mingyuan Zhou**, "Nonparametric Bayesian negative binomial factor analysis," arXiv:1604.07464, https://projecteuclid.org/euclid.ba/1510801993, to appear in *Bayesian Analysis*, 2017$^+$.
10. Siamak Zamani Dadaneh, Xiaoning Qian, and **Mingyuan Zhou**, "BNP-Seq: Bayesian nonparametric differential expression analysis of sequencing count data," *Journal of the American Statistical Association (Applications and Case Studies)*, vol. 113, no. 521, pp. 81-94, 2018.
11. Yulai Cong, Bo Chen, and **Mingyuan Zhou**, "Fast simulation of hyperplane-truncated multivariate normal distributions," *Bayesian Analysis*, vol. 12, pp. 1017-1037, 2017.
12. **Mingyuan Zhou**, Stefano Favaro, and Stephen G Walker, "Frequency of frequencies distributions and size dependent exchangeable random partitions," *Journal of the American Statistical Association (Theory and Methods)*, vol. 112, no. 520, pp. 1623-1635, 2017.
13. **Mingyuan Zhou**, Yulai Cong, and Bo Chen, "Augmentable gamma belief networks," *Journal of Machine Learning Research*, vol. 17, pp. 1-44, Sept. 2016.
14. **Mingyuan Zhou**, Oscar Hernan Madrid Padilla, and James G. Scott, "Priors for random count matrices derived from a family of negative binomial processes," *Journal of the American Statistical Association (Theory and Methods)*, vol. 111, pp. 1144-1156, 2016.
15. Gungor Polatkan, **Mingyuan Zhou**, Lawrence Carin, David Blei, and Ingrid Daubechies, "A Bayesian nonparametric approach to image super-resolution," *IEEE Trans. Pattern Analysis and Machine Intelligence*, vol. 37, pp. 346-358, Feb. 2015.
16. **Mingyuan Zhou** and Lawrence Carin, "Negative binomial process count and mixture modeling," *IEEE Trans. Pattern Analysis and Machine Intelligence*, vol. 37, pp. 307-320, Feb. 2015.
17. D. Carlson, J. Vogelstein, Q. Wu, W. Lian, **M. Zhou**, C. R. Stoetzner, D. Kipke, D. Weber, D. Dunson and L. Carin, "Multichannel electrophysiological spike sorting via joint dictionary learning and mixture modeling," *IEEE Trans. Biomedical Engineering*, vol. 61, pp. 41-54, Jan. 2014.
18. Zhengming Xing, **Mingyuan Zhou**, Alexey Castrodad, Guillermo Sapiro, and Lawrence Carin, "Dictionary learning for noisy and incomplete hyperspectral images," *SIAM Journal on Imaging Sciences*, vol. 5, pp. 33-56, Jan. 2012.
19. **Mingyuan Zhou**, Haojun Chen, John Paisley, Lu Ren, Lingbo Li, Zhengming Xing, David Dunson, Guillermo Sapiro, and Lawrence Carin, "Nonparametric Bayesian dictionary learning for analysis of noisy and incomplete images," *IEEE Trans. Image Processing*, vol. 21, pp. 130-144, Jan. 2012.
20. Chengshi Zheng, **Mingyuan Zhou**, and Xiaodong Li, "On the relationship of non-parametric methods for coherence function estimation," *Signal Processing*, vol. 88, pp. 2863-2867, Nov. 2008.
21. **Mingyuan Zhou**, Jialu Chen, and Xiaodong Li, "A time/frequency-domain unified delayless partitioned block frequency-domain adaptive filter," *IEEE Signal Processing Letters*, vol. 14, pp. 976-979, Dec. 2007.
22. **Mingyuan Zhou** and Xiaojun Qiu, "An error path delay compensated delayless subband adaptive filter architecture," *Signal Processing*, vol. 87, pp. 2640-2648, Nov. 2007.

Refereed Conference Publications

23. **Mingyuan Zhou**, "Parsimonious Bayesian deep networks," to appear in *Neural Information Processing Systems (**NIPS** 2018)*, Montreal, Canada, Dec. 2018. (Acceptance Rate: **21%**)
24. Quan Zhang and **Mingyuan Zhou**, "Nonparametric Bayesian Lomax delegate racing for survival analysis with competing risks," to appear in *Neural Information Processing Systems (**NIPS** 2018)*, Montreal, Canada, Dec. 2018. (Acceptance Rate: **21%**)

25. He Zhao, Lan Du, Wray Buntine, and **Mingyuan Zhou**, "Dirichlet belief networks as structured topic prior," to appear in *Neural Information Processing Systems (**NIPS** 2018)*, Montreal, Canada, Dec. 2018. (Acceptance Rate: **21%**)
26. Dandan Guo, Bo Chen, Hao Zhang, and **Mingyuan Zhou**, "Deep Poisson gamma dynamical systems," to appear in *Neural Information Processing Systems (**NIPS** 2018)*, Montreal, Canada, Dec. 2018. (Acceptance Rate: **21%**)
27. Ehsan Hajiramezanali, Siamak Zamani Dadaneh, Alireza Karbalayghareh, **Mingyuan Zhou**, and Xiaoning Qian, "Bayesian multi-domain learning for cancer subtype discovery from next-generation sequencing count data," to appear in *Neural Information Processing Systems (**NIPS** 2018)*, Montreal, Canada, Dec. 2018. (Acceptance Rate: **21%**)
28. Bo Han, Jiangchao Yao, Gang Niu, **Mingyuan Zhou**, Ivor Tsang, Ya Zhang, Masashi Sugiyama, "Masking: A new perspective of noisy supervision," to appear in *Neural Information Processing Systems (**NIPS** 2018)*, Montreal, Canada, Dec. 2018. (Acceptance Rate: **21%**)
29. Ayan Acharya, Joydeep Ghosh, and **Mingyuan Zhou**, "A dual Markov chain topic model for dynamic environments," *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD** 2018)*, London, UK, Aug. 2018. (Acceptance Rate: **10.9%**, Long Presentation, Research Track)
30. Mingzhang Yin and **Mingyuan Zhou**, "Semi-implicit variational inference," *International Conference on Machine Learning (**ICML** 2018)*, Stockholm, Sweden, July 2018. (Long Contributed Talk, Acceptance Rate: **8.6%**)
31. He Zhao, Lan Du, Wray Buntine, and **Mingyuan Zhou**, "Inter and intra topic structure learning with word embeddings," *International Conference on Machine Learning (**ICML** 2018)*, Stockholm, Sweden, July 2018. (Acceptance Rate: **25%**)
32. Hao Zhang, Bo Chen, Dandan Guo, and **Mingyuan Zhou**, "WHAI: Weibull hybrid autoencoding inference for deep topic modeling," *International Conference on Learning Representations (**ICLR** 2018)*, Vancouver, Canada, May 2018. (Acceptance Rate: **34%**)
33. Rahi Kalantari, Joydeep Ghosh, and **Mingyuan Zhou**, "Nonparametric Bayesian sparse graph linear dynamical systems," *Artificial Intelligence and Statistics (**AISTATS** 2018)*, Lanzarote, Canary Islands, Spain, April 2018. (Acceptance Rate: **33%**)
34. Chaojie Wang, Bo Chen, and **Mingyuan Zhou**, "Multimodal Poisson gamma belief network," *AAAI Conference on Artificial Intelligence (**AAAI** 2018)*, New Orleans, LA, Feb. 2018. (Acceptance Rate: **25%**)
35. Yulai Cong, Bo Chen, Hongwei Liu, and **Mingyuan Zhou**, "Deep latent Dirichlet allocation with topic-layer-adaptive stochastic gradient Riemannian MCMC," *International Conference on Machine Learning (**ICML** 2017)*, Sydney, Australia, Aug. 2017. (Acceptance Rate: **25%**)
36. Aaron Schein, **Mingyuan Zhou**, and Hanna Wallach, "Poisson–gamma dynamical systems," *Neural Information Processing Systems (**NIPS** 2016)*, Barcelona, Spain, Dec. 2016. (Acceptance Rate: **2.0%**, Oral Presentation)
37. Aaron Schein, **Mingyuan Zhou**, David M. Blei, and Hanna Wallach, "Bayesian Poisson Tucker decomposition for learning the structure of international relations," *International Conference on Machine Learning (**ICML** 2016)*, New York City, NY, June 2015. (Acceptance Rate: **24%**)
38. **Mingyuan Zhou**, Yulai Cong, and Bo Chen, "The Poisson gamma belief network," *Neural Information Processing Systems (**NIPS** 2015)*, Montreal, CA, Dec. 2015. (Acceptance Rate: **22%**)
39. A. Acharya, D. Teffer, J. Henderson, M. Tyler, **M. Zhou**, and J. Ghosh, "Gamma process Poisson factorization for joint modeling of network and documents," *European Conference on Machine Learning (**ECML** 2015)*, Porto, Portugal, Sept. 2015.
40. **Mingyuan Zhou**, "Nonparametric Bayesian matrix factorization for assortative networks," *European Signal Processing Conference (**EUSIPCO**)*, Sept. 2015. (Invited special session paper)

41. **Mingyuan Zhou**, "Infinite edge partition models for overlapping community detection and link prediction," *Journal of Machine Learning Research W&CP,* ***AISTATS***, vol. 38, May. 2015. (Acceptance Rate: **27%**)

42. Ayan Acharya, Joydeep Ghosh, and **Mingyuan Zhou**, "Nonparametric Bayesian factor analysis for dynamic count matrices," *Journal of Machine Learning Research W&CP,* ***AISTATS***, vol. 38, May. 2015. (Acceptance Rate: **27%**)

43. **Mingyuan Zhou**, "Beta-negative binomial process and exchangeable random partitions for mixed-membership modeling," *Neural Information Processing Systems (**NIPS** 2014)*, Montreal, CA, Dec. 2014. (Acceptance Rate: **25%**)

44. **Mingyuan Zhou** and Lawrence Carin, "Augment-and-conquer negative binomial processes," *Neural Information Processing Systems (**NIPS** 2012)*, Lake Tahoe, NV, Dec. 2012. (Acceptance Rate: **4.9%**, Poster Spotlight Oral Presentation)

45. **Mingyuan Zhou**, Lingbo Li, David Dunson, and Lawrence Carin, "Lognormal and gamma mixed negative binomial regression," *International Conference on Machine Learning (**ICML** 2012)*, Edinburgh, Scotland, June 2012. (Acceptance Rate: **27%**, Full Presentation)

46. **Mingyuan Zhou**, Lauren Hannah, David Dunson, and Lawrence Carin, "Beta-negative binomial process and Poisson factor analysis," *Journal of Machine Learning Research W&CP,* ***AISTATS***, vol. 22, pp. 1462-1471, Apr. 2012 (Acceptance Rate: **33%**)

47. Xu Chen, **Mingyuan Zhou** and Lawrence Carin, "The contextual focused topic model," *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (**KDD** 2012)*, Beijing, China, Aug. 2012. (Acceptance Rate: **18%**, Full Paper, Research Track)

48. Lingbo Li, Xianxing Zhang, **Mingyuan Zhou**, and Lawrence Carin, "Nested dictionary learning for hierarchical organization of imagery and text," *Conference on Uncertainty in Artificial Intelligence (**UAI** 2012)*, Catalina Island, CA, Aug. 2012. (Acceptance Rate: **31%**)

49. Lingbo Li, **Mingyuan Zhou**, Guillermo Sapiro, and Lawrence Carin, "On the integration of topic modeling and dictionary learning," *International Conference on Machine Learning (**ICML** 2011)*, Bellevue, WA, June 2011. (Acceptance Rate: **26%**)

50. **Mingyuan Zhou**, Hongxia Yang, Guillermo Sapiro, David Dunson, and Lawrence Carin, "Dependent hierarchical beta process for image interpolation and denoising," *Journal of Machine Learning Research W&CP,* ***AISTATS***, vol. 15, pp. 883-891, Apr. 2011. (Acceptance Rate: **8.1%**, Oral Presentation)

51. **Mingyuan Zhou**, Haojun Chen, John Paisley, Lu Ren, Guillermo Sapiro, and Lawrence Carin, "Non-Parametric Bayesian dictionary learning for sparse image representations," *Neural Information Processing Systems (**NIPS** 2009)*, Vancouver, B.C., Canada, Dec. 2009. (Acceptance Rate: **2.0%**, Oral Presentation)

Other Refereed Publications

52. Lingbo Li, Jorge Silva, **Mingyuan Zhou**, and Lawrence Carin, "Online Bayesian dictionary learning for large datasets," *International Conference on Acoustics, Speech and Signal Processing (ICASSP2012)*, Kyoto, Japan, Mar. 2012.

53. **Mingyuan Zhou** , Hongxia Yang, Guillermo Sapiro, David Dunson, and Lawrence Carin, "Landmark-dependent hierarchical beta process for robust sparse factor analysis," *ICML2011 Structured Sparsity Workshop*, Bellevue, WA, June 2011.

54. **Mingyuan Zhou**, Hongxia Yang, Guillermo Sapiro, David Dunson, and Lawrence Carin, "Covariate-dependent dictionary learning and sparse coding," *International Conference on Acoustics, Speech and Signal Processing (ICASSP2011)*, Prague, Czech Republic, May 2011 [Invited paper and oral presentation].

55. Lingbo Li, **Mingyuan Zhou**, Eric Wang, and Lawrence Carin, "Joint dictionary learning and topic modeling for image clustering," in *Proc. International Conference on Acoustics, Speech and Signal Processing (ICASSP2011)*, Prague, Czech Republic, May 2011.
56. **Mingyuan Zhou**, Chunping Wang, Minhua Chen, John Paisley, David Dunson, and Lawrence Carin, "Nonparametric Bayesian matrix completion," in *Proc. IEEE Sensor Array and Multichannel Signal Processing Workshop (SAM2010)*, Israel, Oct. 2010.
57. John Paisley, **Mingyuan Zhou**, Guillermo Sapiro, and Lawrence Carin, "Nonparametric image interpolation and dictionary learning using spatially-dependent Dirichlet and beta process priors," in *Proc. International Conference on Image Processing (ICIP2010)*, Hong Kong, Sept. 2010.
58. **Mingyuan Zhou**, John Paisley, and Lawrence Carin, "Nonparametric learning of dictionaries for sparse representation of sensor signals," in *Proc. 3rd IEEE Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP2009)*, Aruba, Dec. 2009.
59. **Mingyuan Zhou** and Xiaodong Li, "A variable step-size for frequency-domain acoustic echo cancellation," in *Proc. 2007 IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA'07)*, New Paltz, NY, Oct. 2007, pp. 303-306.
60. Chengshi Zheng, **Mingyuan Zhou**, and Xiaodong Li, "A modified *A Priori* SNR estimator based on the united speech presence probabilities (in Chinese),", *Journal of Electronics & Information Technology*, 2008.
61. **Mingyuan Zhou** and Xiaodong Li, "A magnitude-squared coherence based acoustic echo suppression algorithm (in Chinese)," in *Proc. 2007 Chinese Audio Engineering Society Conference*, Changsha, China, Oct. 2007.
62. **Mingyuan Zhou** and Xiaodong Li, "Acoustic echo suppression for Bluetooth earphone (in Chinese)," Technical Report, 2007.
63. **Mingyuan Zhou** and Xiaodong Li, "Step-size control for the multidelay block frequency-domain adaptive filter algorithm (in Chinese)," in *Proc. 2007 Chinese Young Researchers' Conference on Acoustics (CYCA'07)*, Wuhan, China, Sept. 2007.
64. **Mingyuan Zhou** and Xiaodong Li, "*A Priori* SNR estimation based on the density distribution of *A Posterior* SNR (in Chinese)," in *Proc. 2006 National Conference on Acoustics*, Xiamen, China, Oct. 2006.
65. **Mingyuan Zhou** and Xiaojun Qiu, "The construction of analysis filters in delayless subband adaptive filter (in Chinese)," in *Proc. 2005 Chinese Young Researchers' Conference on Acoustics (CYCA'05)*, Hangzhou, China, Apr. 2005. (**Best Paper Award)**

Teaching

Fall 2018, STA371G Statistics and Modeling, two sections

Spring 2018, STA380 Bayesian Methods for Machine Learning, graduate-level course

- Instructor rating: 4.8/5.0
- Course rating: 4.4/5.0

Fall 2017, STA371G Statistics and Modeling, two sections

- Instructor ratings: 4.3/5.0, 4.0/5.0
- Course ratings: 4.1/5.0, 3.8/5.0

Spring 2017, STA371G Statistics and Modeling, two sections

- Instructor ratings: 3.9/5.0, 4.0/5.0
- Course ratings: 3.5/5.0, 3.7/5.0

Spring 2016, STA371G Statistics and Modeling, three sections

- Instructor ratings: 4.3/5.0, 4.5/5.0, 4.1/5.0

– Course ratings: 4.1/5.0, 4.1/5.0, 3.8/5.0

Spring 2015, STA371G Statistics and Modeling, three sections

– Instructor ratings: 4.1/5.0, 4.2/5.0, 3.9/5.0

– Course ratings: 3.8/5.0, 3.9/5.0, 3.8/5.0

Spring 2014, STA371G Statistics and Modeling, two sections

– Instructor ratings: 3.9/5.0, 3.6/5.0

– Course ratings: 3.6/5.0, 3.4/5.0

Duke-Tsinghua Machine Learning Summer School: Deep Learning for Big Data, Kunshan, China, Aug. 2016.

Machine Learning Summer School, Austin, TX, Jan. 2015.

Honors and Awards

- CBA Foundations Research Excellence Award for Assistant Professors, April 2018
- NSF@ISBA junior travel support, ISBA World Meeting 2016
- Best Student Poster Award in NIPS 2015 Workshop: Networks in the Social and Information Sciences
- NIPS travel award, 2012, 2009.
- ECE Ph.D. Student Fellowship, Duke University, 2008.
- Excellent Student Award in the 2006-2007 Academic Year, Chinese Academy of Sciences, 2007.
- Best Undergraduate Thesis Award 2nd Prize, Education Department of Jiangsu Province, 2005.
- Best Paper Award for the 2005 Chinese Young Researchers' Conference on Acoustics, Acoustical Society of China, 2005.
- National Undergraduate Electronic Design Contest – 2004 Embedded System Design Invitational Contest (Intel Cup) 3rd Prize, Higher Education Department of Ministry of Education and Personnel Department of Ministry of Information Industry, 2004.
- Excellent Undergraduate Student Award, Nanjing University, 2004.
- Excellent Student in the 2002-2003 Academic Year, Nanjing University, 2003.
- Robert Mundell Scholarship (highest award), Nanjing University, 2004.
- Renmin Scholarship, 1st Prize, Nanjing University, 2003.
- Renmin Scholarship, 2nd Prize, Nanjing University, 2002.

External Funding Support

NSF grant #1812699 is funded by the Information Integration and Informatics (III) Program

– Title: III: Small: Collaborative Research: Combinatorial Collaborative Clustering for Simultaneous Patient Stratification and Biomarker Identification

– PI: Mingyuan Zhou, Co-PI: Xiaoning Qian

– The PI will receive $249,999 for three years (08/15/2018 to 07/31/2021)

Professional Activities

Area Chair/Senior Program Committee Member:

– ICLR 2019 (Area Chair)

– AAAI 2019 (Senior Program Committee Member)

– NIPS 2018 (Area Chair), NIPS 2017 (Area Chair)

Reviewer/Program Committee Member:

– ICLR 2018

– NIPS 2016, 2015, 2014, 2013, 2012

- ICML 2018 (Outstanding Reviewer), 2017, 2016, 2015, 2014, 2013, 2012
- AISTATS 2018, 2017, 2016, 2015, 2014
- IJCAI 2016, 2015 (Machine Learning Track)
- Journal of the American Statistical Association
- Journal of Machine Learning Research
- Annals of Applied Statistics
- Bayesian Analysis
- Machine Learning
- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Signal Processing
- IEEE Transactions on Image Processing
- IEEE Transactions on Knowledge and Data Engineering
- Journal of Selected Topics in Signal Processing
- SIAM Journal on Imaging Sciences
- Production and Operations Management
- IEEE Transactions on Circuits and Systems for Video Technology
- IEEE Geoscience and Remote Sensing Letters
- IEEE Signal Processing Letters
- Journal of Visual Communication and Image Representation
- Sankhya A, the Indian Journal of Statistics

Professional Organizations:

- ISBA Section on Bayesian Nonparametrics, Treasurer (2018-2019)
- Member of the 2017 ISBA Mitchell Prize Committee

Departmental Committees:

- IROM statistics-track Ph.D. coordinator, since October 2017
- 2017 Spring Semester Statistics Seminar, Organizer
- Judge for IROM 2016 doctoral seminar competition, October 2016
- 2016 Fall Semester Statistics Seminar, Organizer
- 2014 Spring Semester Statistics Seminar, Organizer

Ph.D. Committees Chaired:

- Quan Zhang, IROM PhD student, in progress
- Mingzhang Yin, PhD student in Department of Statistics and Data Sciences, in progress
- Carlos Pagani Zanini (co-chaired with Dr. Peter Müller), PhD student in Department of Statistics and Data Sciences, in progress
- Maurice Diesendruck (co-chaired with Dr. Sinead Williamson), PhD student in Department of Statistics and Data Sciences, in progress

Ph.D. Committee Member:

- In McCombs:
  * Xiaofan Li, IROM PhD student, in progress
  * Xinyin Hao, PhD student in Department of Marketing, in progress

    - Lan Liang, PhD student in Department of Marketing, graduated in 2017, Assistant Professor in University of Colorado Denver
  - In SDS:
    - Evan Ott, PhD student in Department of Statistics and Data Sciences, in progress
    - Li (Kelly) Kang, PhD student in Department of Statistics and Data Sciences, in progress
    - Mengjie Wang, PhD student in Department of Statistics and Data Sciences, in progress
    - Novin Ghaffari, PhD student in Department of Statistics and Data Sciences, in progress
    - Guy W. Cole, PhD student in Department of Statistics and Data Sciences, in progress
    - Oscar Hernan Madrid Padilla, PhD in Department of Statistics and Data Sciences, graduated in 2017, Postdoc in UC-Berkeley
  - Outside UT:
    - Aaron Schein, PhD student at University of Massachusetts Amherst, in progress
    - Siamak Zamani Dadaneh, PhD student at Texas A&M University, in progress

Invited/Contributed Talks:

- "ARM: Augment-REINFORCE-merge gradient for discrete latent variable models," invited talk in Institut de Recherche en Informatique de Toulouse, hosted by Prof. Cédric Févotte, Toulouse, France, July 2018.
- "Variational Bayesian methods beyond parametric and continuous assumptions," invited talk in the Workshop on Bayesian Nonparametrics for Signal and Image Processing, Organized by Pierre Chainais, Nicolas Dobigeon, Audrey Giremus, and Franois Caron, Bordeaux, France, July 2018.
- "Semi-implicit variational inference," invited talk in The 2018 ICSA Applied Statistics Symposium, New Brunswick, New Jersey, June 2018.
- "Semi-implicit variational inference," invited talk in Department of Biostatistics, School of Public Health, University of Michigan, hosted by Prof. Jian Kang, Ann Arbor, MI, Mar. 2018.
- "Semi-implicit variational inference," IROM Department Brown-Bag Seminar, University of Texas at Austin, Austin, TX, Feb 2018.
- "Some recent advances in Bayesian deep learning," invited talk in Marketing Department Research Seminar Series, University of Texas at Austin, Austin, TX, Nov. 2017.
- "Permuted and augmented stick-breaking multinomial regression," invited talk in 2017 INFORMS Marketing Science Conference, University of Southern California, Los Angeles, CA, June 2017.
- "Infinite convolutional of expert logistic regression," invited talk in ICSA 2016, ISBA invited session on "Theory and Applications of Bayesian Nonparametrics," Shanghai, Dec. 2016.
- "Permuted and augmented stick-breaking multinomial regression," invited talk in Latent Variables Conference 2016, session "Objective Bayes Analysis in Latent Variables Models," University of South Carolina, Columbia, SC, Oct. 2016.
- Invited instructor in "Duke-Tsinghua Machine Learning Summer School: Deep Learning for Big Data," Kunshan, China, Aug. 2016.
- "Gamma belief networks (deep latent Dirichlet allocation)," invited talk in International Society for Bayesian Analysis (ISBA) 2016 World Meeting, Sardinia, Italy, June 2016.
- "Gamma belief networks," School of Electronic Engineering, Xidian University, hosted by Prof. Bo Chen, Xi'an, China, Dec. 2015.
- "Gamma belief networks," Department of Computer Science and Technology, Tsinghua University, hosted by Professor Jun Zhu, Beijing, China, Dec. 2015.
- "Gamma belief networks," Institute of Acoustics, Chinese Academy of Sciences, hosted by Professors Xiaodong Li and Chengshi Zheng, Beijing, China, Dec. 2015.

– "The Poisson gamma belief network," invited talk in the 9th International Conference on Computational and Financial Econometrics (CFE 2015), University of London, UK, Dec. 2015.
– "Infinite vocabulary naive Bayes classifiers," invited talk in Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, Nov. 2015.
– "The Poisson gamma belief network," invited talk in The Collegio Carlo Alberto, Torino, Italy, Sept. 2015.
– "Nonparametric Bayesian matrix factorization for assortative networks," invited talk in 23rd European Signal Processing Conference, Nice, France, Sept. 2015.
– "Priors for random count matrices with random or fixed row sums," invited talk in 10th Conference on Bayesian Nonparametrics, Raleigh, NC, June 2015.
– "Priors for random count matrices derived from a family of negative binomial processes," invited talk in Conference of Texas Statisticians (COTS), Austin, TX, Apr. 2015.
– "Parametric Bayesian models," Machine Learning Summer School, Austin, TX, Jan. 2015.
– "Priors for random count matrices derived from a family of negative binomial processes," invited talk in ERCIM, Pisa, Italy, Dec. 2014.
– "Count-mixture modeling and exchangeable random partitions," Random Structures Seminar, Department of Mathematics, The University of Texas at Austin, Nov. 2013.
– "Nonparametric Bayesian dictionary learning and count & mixture modeling," IBM T. J. Watson Research Center, Yorktown Heights, NY, Dec. 2012.
– "Augment-and-conquer negative binomial processes," NIPS 2012, Lake Tahoe, NV, Dec. 2012.
– "Nonparametric Bayesian count and mixture modeling," University of Southern California, hosted by Prof. Fei Sha, Los Angeles, CA, Oct. 2012.
– "Nonparametric Bayesian latent variable models," MERL - Mitsubishi Electric Research Laboratories, hosted by Dr. Dehong Liu, Cambridge, MA, July 2012.
– "Lognormal and gamma mixed negative binomial regression," ICML 2012, Edinburgh, Scotland, June 2012.
– "Efficient Bayesian inference for the negative binomial distribution," Duke ECE Graduate Research Workshop, Jan. 2012.
– "On the integration of topic modeling and dictionary learning," 8th Workshop on Bayesian Nonparametrics, June 2011, Veracruz, Mexico.
– "Covariate-dependent dictionary learning and sparse coding," ICASSP 2011, Prague, Czech Republic, May 2011.
– "Dependent hierarchical beta process for image interpolation and denoising," SampTA 2011, Singapore, May 2011.
– " Non-parametric Bayesian dictionary learning with landmark-dependent hierarchical beta Process," The Learning Workshop, Ft. Lauderdale, FL, Apr. 2011.
– "Dependent hierarchical beta process for image interpolation and denoising," AISTATS 2011, Ft. Lauderdale, FL, Apr. 2011.
– "Bayesian dictionary learning," Duke DISP Computational Imaging Seminar Series, Mar. 2011
– "Non-parametric Bayesian dictionary learning for sparse image representations," NIPS 2009, Dec. 2009, Vancouver, B.C., Canada.
– "Non-parametric Bayesian dictionary learning for sparse image representation and user rating matrix completion," University of California, Los Angeles, hosted by Prof. Stanley Osher, Los Angeles, CA, Nov. 2009.

Work Experience:

– 2010, summer Intern at IBM T. J. Watson Research Center, Hawthorne, New York, working with Doctors Lexing Xie, Gang Hua and Apostol (Paul) Natsev.