

Peter Müller

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EDUCATION

Ph.D. Department of Statistics, Purdue University, West Lafayette, Indiana;
8/91 Thesis – Numerical Integration in Bayesian Statistics;
Advisor – Prof. J. O. Berger.

M.S. Computer Science and Business; Mathematics and Physics Education,
10/88; 6/85 Technical University and University of Vienna, Austria.

ACADEMIC POSITIONS

2017 – present UT Austin, Dept. of Statistics and Data Science; chair (ad interim)

2011 – present U. Texas at Austin, Dept. of Mathematics and Dept. of Statistics
and Data Science; Professor;
McCombes School of Business; courtesy appointment.

2012 – present U. Texas, M.D. Anderson Cancer Center, Dept. of Biostatistics;
Adjunct Professor.

2007 – 2011 U. Texas, M.D. Anderson Cancer Center, Dept. of Biostatistics;
Robert R. Herring Distinguished Professor in Clinical Research.

2001 – 2007 U. Texas, M.D. Anderson Cancer Center, Dept. of Biostatistics;
Professor.

2001 – 2012 Rice University, Dept. of Statistics; Adjunct Professor.
1991 – 2002 ISDS, Duke University; Associate Professor (1998 – 2002), Assistant
Professor (1991–1998).

Visiting Scholar:

Summer 1990 & 93 Inst. für Statistik und Ökonometrie, Univ. Basel, Switzerland.
Summer 1995 & 96 Universidad Politecnica de Madrid, Spain.
March 1996 Universidad Simon Bolivar, Caracas, Venezuela.
Summer 1997 Consiglio Nazionale delle Ricerche, CNR-IAMI, Milano, Italy.
Summer 1999 Universidad Catolica, Santiago, Chile.
Fall 2010 Technische Universität Dortmund, Germany.
Fall 2016 University of Oslo, Norway

Graduate Assistant: Teaching assistant; Thesis related research; Statistical consulting;
Fall 1986 – Fall 1991 Department of Statistics, Purdue University.

HONORS

Fellow of the Institute of Mathematical Statistics, Fellow of the American Statistical Association, Fellow of the International Society for Bayesian Analysis, President of the International Society for Bayesian Analysis (2010), Chair of the Section on Bayesian Statistical Science, American Statistical Association (2016), Robert R. Herring Distinguished Professorship in Clinical Research (2007–2011).

Mitchell Prize for outstanding applied Bayesian paper (2016).

Zellner Medal (2018).

RESEARCH INTERESTS

Bayesian analysis and decision making: Markov chain Monte Carlo methods simulation based optimal design, sequential design, dynamic models, clinical trial design. .

Nonparametric Bayes: semiparametric mixture models, mixture of Dirichlet process models, random partitions, clustering.

Modeling: dependent gene expression, longitudinal data models, pharmacokinetic/pharmacodynamic models, case-control studies, hierarchical models.

PUBLISHED PAPERS

Refereed Papers

1. Zhou, T., Daniels, M, and Müller, P. (2019) A Nonparametric Bayesian Approach to Dropout in Longitudinal Studies with Auxiliary Covariates, *Journal of Computational and Graphical Statistics*, in press.
2. Ciara Nugent, Wentian Guo, Peter Müller, and Yuan Ji (2019), “Bayesian Approaches to Subgroup Analysis and Related Adaptive Clinical Trial Design.” *JCO Precision Oncology*, in press.
3. Ni, Y., Müller, P., and Ji, Y. (2019) ”Bayesian Double Feature Allocation for Phenotyping with Electronic Health Records.” *Journal of the American Statistical Association*, in press.
4. Ni, Y., Müller, P., Diesendruck, M., Williamson, S., Zhu, Y., and Ji, Y. (2019) ”Scalable Bayesian Nonparametric Clustering and Classification,” *Journal of Computational and Graphical Statistics*, in press.
5. Pagani Zanini, C., Müller, P., Ji, Y., and Quintana, F. (2019), “A Bayesian Random Partition Model for Sequential Refinement and Coagulation,” *Biometrics*, in press.
6. Zhou, T., Ji, Y., and Müller, P. (2018), “TreeClone: Reconstruction of Tumor Subclone Phylogeny Based on Mutation Pairs using Next Generation Sequencing Data”, *Annals of Applied Statistics*, in press.
7. Zhou, T., Müller, P., Sengupta, S. and Ji, Y. (2019), “PairClone: A Bayesian Subclone Caller Based on Mutation Pairs,” *Journal of the Royal Statistical Society, Series C*, 68, 705725.
8. Xu, Y., Müller, P., Tsimberidou, A.M. and Berry, D. (2018), “A Nonparametric Bayesian Basket Trial Design,” *Biometrical Journal*, in press.

9. Zuanetti, D., Müller, P., Zhu, Y., Yang, S. and Ji, Y. (2019), Bayesian nonparametric clustering for large data sets, *Statistics and Computing*, 29, 203-215.
10. Yang Ni, Yuan Ji and Peter Müller (2018). “Reciprocal Graphical Models for Integrative Gene Regulatory Network Analysis”, *Bayesian Analysis*, 13, 1095-1110.
11. Zuanetti, D., Müller, P., Zhu, Y., Yang, S., and Ji Y. (2018), “Clustering Distributions with the Marginalized Nested Dirichlet Process”, *Biometrics*, 74, 584-594.
12. Müller, P., Quintana, F., and Page, G. (2018), Nonparametric Bayesian Inference in Applications, *Statistical Methods and Applications*, 27, 175–206.
13. Ni, Y., Müller, P., Lin, W., and Ji, Y. (2018), ”Bayesian Graphical Models for Computational Network Biology.” *BMC Bioinformatics*, 19, 59–69.
14. Ni, Y., Müller, P., Zhu, Y. and Ji, Y. (2018), Heterogeneous Reciprocal Graphical Models, *Biometrics*, 74, 606-615
15. Schnell, P., Müller, P., Tang, Q. and Carlin, B. (2018). Multiplicity-Adjusted Semi-parametric Benefiting Subgroup Identification in Clinical Trials, *Clinical Trials*, 15, 75–86.
16. Hu, Z., Lancaster, J.N., Ehrlich, L.I.R. and Müller, P. (2018). Detecting T Cell Activation Using a Varying Dimension Bayesian Model, *Journal of Applied Statistics*, 45, 697–713,
17. Shpak, M., Ni, Y., Lu, J. and Müller, P. (2017), Variance in estimated pairwise genetic distance under high versus low coverage sequencing: The contribution of linkage disequilibrium, *Theoretical Population Biology*, 117, 51-63.
18. Thall, P., Müller, P., Xu, Y, and Guindani, M. (2017). “Bayesian Nonparametric Statistics: A New Toolkit for Discovery in Cancer Research”, *Pharmaceutical Statistics*, 16, 414–423.
19. Müller, P., Xu, Y. and Jara, A. (2017). A Short Tutorial on Bayesian Nonparametrics, *Journal of Statistical Research*, 48-50 (2), 1-19.
20. Mitra, R., Müller, P. and Ji, Y. (2017). Bayesian Multiplicity Control for Multiple Graphs, *Canadian Journal of Statistics*, 45, 44–61.
21. Sivaganesan, S, Müller, P, Huang, B. (2017). Subgroup finding via Bayesian additive regression trees, *Statistics in Medicine*, 36, 2391-2403.
22. Sivaganesan, S., Liu, J., Laud, P.W. and Müller, P. (2017). A Bayesian subgroup analysis using collections of ANOVA models, *Biometrical Journal*, 59, 746-766.
23. Morita, S. and Müller, P. (2017). Bayesian Population Finding with Biomarkers in a Randomized Clinical Trial, *Biometrics*, 73, 1355–1365. PMID: PMC5582025
24. P. Schnell, Q. Tang, Peter Müller and B. Carlin (2017). Subgroup inference for multiple treatments and multiple endpoints in an Alzheimers disease treatment trial, *Annals of Applied Statistics*, 11, 949–966.

25. Jo, S., Lee, J., Müller, P., Quintana, F. and Trippa, L. (2017), “Dependent Species Sampling Models for Spatial Density Estimation”, *Bayesian Analysis*, 12, 379-406.
26. Xu Y, Thall P, Müller P, and Mehran R, A Bayesian Nonparametric Utility-Based Design for Comparing Treatments to Resolve Air Leaks After Lung Surgery (2017), *Bayesian Analysis*, 12, 639-652.
27. Müller, P., Xu, Y. and Thall, P. (2016). Clinical Trial Design as a Decision Problem, *Applied Stochastic Models in Business and Industry*, 33, 296 – 301.
28. Lee, J., Müller, P., Sengupta, S., Gulukota, K. and Ji, Y. (2016), “Bayesian Inference for Intra-Tumor Heterogeneity in Mutations and Copy Number Variation”, *J. Royal Stat. Society C*, 65: 547 – 563. NIHMS #788717
29. Lee, J., Thall, P. F., Ji, Y. and Müller, P. (2016), A Decision-Theoretic Phase I-II Design for Ordinal Outcomes in Two Cycles. *Biostatistics*, 17, pp. 304–319, PMC #4834949
30. Xu Y, Müller P, and Telesca D, (2016), Bayesian Inference for Latent Biologic Structure with Determinantal Point Processes, *Biometrics*, 72, 955-964, NIHMS #757534
31. Zhu, Y. Hernandez, L.H., Müller, P., Dong, Y., Hirschfeld, S. and Forman, M.R. (2016), “Predictive models for characterizing disparities in exclusive breastfeeding performance in a multi-ethnic population in the US,” *Maternal and Child Health Journal*, 20(2), 398-407.
32. Xu Y, Trippa L, Mueller P, Ji Y. (2016), “Subgroup-Based Adaptive (SUBA) Designs for Multi-Arm Biomarker Trials,” *Statistics in Biosciences*, 8, 159–180, doi=10.1007/s12561-014-9117-1.
33. Xu Y, Müller P, Thall PF and Wahed AS, (2016). “Bayesian Nonparametric Estimation for Dynamic Treatment Regimes with Sequential Transition Times,” *Journal of the American Statistical Association*, 111, 921-950. NIHMS 788724
34. Mitra, R., Müller, P. and Ji, Y. (2016) “Bayesian Graphical Models for Differential Pathways”, *Bayesian Analysis*, 11, 99-124.
35. Lee, JH, Thall, PF, Ji Y, Mueller, P. (2015), “Bayesian Dose-Finding in Two Treatment Cycles Based on the Joint Utility of Efficacy and Toxicity”, *Journal of American Statistical Association*, 110, 711-722. PMID:26366026
36. Lee, J., Müller, P., Ji, Y. and Gulukota, K. (2015) “A Bayesian Feature Allocation Model for Tumor Heterogeneity.” *Annals of Applied Statistics*, 9, 621-639.
37. Lee, J., Ji, Y., Liang, S., Cai, G. and Mueller, P. (2015), “Bayesian Hierarchical Model for Differential Gene Expression Using RNA-seq Data.” *Statistics in Biosciences*, 7, 48–67.
38. Quintana, F., Müller, P and Papoila, A.L. (2015), “Cluster-Specific Variable Selection for Product Partition Models” *Scandinavian Journal of Statistics*, 42(4), 1065–1077.
39. Yajima, M., Telesca, D., Ji, Y., and Müller, P. (2015), “Detecting differential patterns of interaction in molecular pathways.” *Biostatistics*, 16(2): 240–251.

40. Xu Y, Müller P, Yuan Y, Gulukota K and Ji Y, (2015). “MAD Bayes for Tumor Heterogeneity – Feature Allocation with Exponential Family Sampling.” *Journal of the American Statistical Association*, 110, 503-514, PMID:26170513
41. Zhu, Y., Xu, Y., Helseth, D. L., Gulukota, K., Yang, S., Pesce, L., Mitra, R., Müller, P., Sengupta, S., Guo, S., Silverstein, J., Foster, I., Parsad, N., White, K., and Ji, Y. (2015). “Zodiac: A Comprehensive Depiction of Genetic Interactions in Cancer by Integrating TCGA Data” *Journal of the National Cancer Institute*, 107 (8), doi:10.1093/jnci/djv129.
42. Mitra R, Mueller P, Qiu P, Ji Y, (2014), “Bayesian Hierarchical Models for Protein Networks in Single Cell Mass Cytometry”, *Cancer Informatics*, 13(Suppl 4), 79-89.
43. Mueller P, Mitra R, and Ji Y, (2014), “Bayesian Graphical Models for Epigenomic Heterogeneity”. *Calcutta Statistical Association Bulletin*, 65, 257–260.
44. Mitra R, Muller P, Ji Y, Zhu Y, Mills G, Lu Y. (2014), “A Bayesian Hierarchical Model for Inference Across Related RPPA Experiments”, *Journal of Applied Statistics*, 41, 2483-2492.
45. Müller, P, Quintana, Rosner, G.L. and Maitland, M.L. (2014), “Bayesian Inference for Longitudinal Data with Nonparametric Treatment Effects” *Biostatistics*, 15, 341-52, PMID: PMC3944972
46. Guindani, M., Sepulveda, N., Paulino, C.D. and Müller, P. (2014), “A Bayesian Semi-parametric Approach for the Differential Analysis of Sequence Counts Data.” *Applied Statistics*, 63, 385–404, PMID: PMC4017673.
47. Herrmann, S. and Schwender, H. and Ickstadt, K. and Müller, P. (2014), “A Bayesian changepoint analysis of ChIP-Seq data of Lamin B” *Biochimica et Biophysica Acta (BBA)-Proteins and Proteomics*, 1844, 138-144
48. Müller, P. and Mitra, R. (2013) “Bayesian nonparametrics – how and why,” *Bayesian Analysis*, 8, 269-302.
49. Mitra, R., Müller, P. and Ji, Y. (2013) “Propriety conditions for the Bayesian autologistic model.” *Journal of Statistical Theory and Practice*, 7, 248–258.
50. Mitra, R., Müller, P., Liang, S. Xu, Y. and Y. Ji (2013) “Towards Breaking the Histone Code - Bayesian Graphical Models for Histone Modifications”, *Circ. Cardiovasc Genet.*, 6; 419-426.
51. Zhu, Y., Hernandez, L.M., Mueller, P., Dong, Y., and Forman, M. (2013), “Data collection and preprocessing in studies on humans: what is not taught in statistics classes?”, *American Statistician*, 67(4):235-241.
52. Lee, J., Mueller, P, Zhu, Y. and Ji, Y. (2013) “A Nonparametric Bayesian Model for Local Clustering.” *Journal of the American Statistics Association*, 108, 775 – 788, PMID:PMC3821783.
53. Xu, Y., Lee, J., Yuan, Y., Mitra, R., Shoudan, L., Müller, P. and Ji, Y. (2013) “Non-parametric Bayesian Bi-Clustering for ChIP-Seq Count Data.” *Bayesian Analysis*, 8(4); 759–780.

54. Jiang, F., Lee, J.J., and Müller, P. (2013) “A Bayesian decision-theoretic sequential–response adaptive randomization design,” *Statistics in Medicine*, 32, 1975–1994. DOI: 10.1002/sim.5735. PMID: 23315678 [PubMed - in process]
55. Cruz-Marcelo, A., Rosner, G.L., Müller, P. and Stewart, C.F. (2013), “Effect on Prediction when Modeling Covariates in Bayesian Nonparametric Models,” *Journal of Statistical Theory and Practice*, 7, 204 – 218.
56. Lee, J., Quintana, F., Müller, P. and Trippa, L. (2013), “Defining Predictive Probability Functions for Species Sampling Models,” *Statistical Science*, 28, 209-222.
57. Mitra, R., Müller, P., Liang, S., Yue, L, and Ji, Y. (2013), “A Bayesian Graphical Model for Chip-Seq Data on Histone Modifications,” *Journal of the American Statistical Association*, 108, 69-80.
58. León-Novelo, L., Müller, P., Do, K-A., Arap, W., Sun, J. and Pasqualini, R. (2013), “Semi-Parametric Bayesian Inference for Phage Display Data,” *Biometrics*, 69, 174-183, PMID:PMC3840910 DOI: 10.1111/j.1541-0420.2012.01817.x.
59. Rossell, D. and Müller, P. (2013) “Sequential stopping for high-throughput hypothesis testing experiments,” *Biostatistics*, 14, 75-86.
60. Di Lucca, M.A., Guglielmi, A., Müller, P., and Quintana, F. (2013), “Bayesian autoregressive nonparametric models”, *Bayesian Analysis*, 8, 63-88.
61. Trentini F, Ji Y, Iwamoto T, Qi Y, Pusztai L, and Müller, P. (2013) ”Bayesian Mixture Models for Assessment of Gene Differential Behaviour and Prediction of pCR through the Integration of Copy Number and Gene Expression Data.” PLoS ONE, 8(7), e68071. doi:10.1371/journal.pone.0068071
62. León-Novelo, L., Müller, P., Do, K-A., Arap, W., Sun, J. and Pasqualini, R. (2013), “Bayesian Decision Theoretic Multiple Comparison Procedures: An Application to Phage Display Data”, *Biometrical Journal*, 55, 478-489. PMID: PMC3840910.
63. Ji, Y., Mitra, R., Quintana, F., Müller, P., Jara, A., Liu, P., Lu, Y. and Liang, S. (2012), “BM-BC: A Bayesian method of base calling for Solexa sequence data” *BMC Bioinformatics*, 13:S6, doi:10.1186/1471-2105-13-S13-S6
64. Guoshuai Cai, Hua Li, Yue Lu, Xuelin Huang, Juhee Lee, Peter Müller, Yuan Ji and Shoudan Liang (2012), “Accuracy of RNA-Seq and its dependence on sequencing depth,” *BMC Bioinformatics*, 13(Suppl 13):S5 doi:10.1186/1471-2105-13-S13-S5.
65. Telesca, D., Müller, P, Parmigiani, G., and Freedman, R. (2012), “Modeling Dependent Gene Expression”, *Annals of Applied Statistics*, 6, 542-560.
66. Telesca, D., Müller, P, Kornblau, S., Suchard, M., and Ji, Y. (2012), “Modeling Protein Expression and Protein Signaling Pathways”, *Journal of the American Statistical Association*, 107, 1372-1384.
67. Berger, J., Jefferys, W., and Müller, P. (2012), “Bayesian Nonparametric Shrinkage Applied to Cepheid Star Oscillations,” *Statistical Science*, 27, 3-10.

68. Morita, S., Thall, P. and Müller, P. (2012), “Prior Effective Sample Size in Conditionally Independent Hierarchical Models,” *Bayesian Analysis*, 7, 591 - 614.
69. Leon-Novelo, L., Bekele, B.N., Müller, P., Quintana, F. and Wathen, K., (2012), “Borrowing Strength with Non-Exchangeable Priors over Subpopulations”, *Biometrics*, 68 (2), 550-558, PMID 22040065.
70. Nieto-Barajas, L., Müller, P., Ji, Y., Lu, Y. and Mills, G. (2012), “A Time-Series DDP for Functional Proteomics Profiles.” *Biometrics*, 68, 859 – 868.
71. Trippa, L, Rosner, G., and Müller, P. (2012), “Bayesian Enrichment Strategies for Randomized Discontinuation Trials”, with discussion, *Biometrics*, 68, 203–211.
72. Nieto-Barajas, L. and Müller, P. (2012), “Rubbery Polya Tree.” *Scandinavian Journal of Statistics*, 39, 166–184.
73. Lee, J., Ji, Y., Liang, S., Cai, G., and Müller, P. (2011), “On Differential Gene Expression Using RNA-Seq Data”, *Cancer Informatics*, 10, 205-215.
74. Trippa, L, Müller, P. and Johnson, W. (2011), “The Multivariate Beta Process and an Extension of the Polya Tree Model,” *Biometrika*, 98 (1), 17–34, PMID:PMC3744636, doi:10.1093/biomet/asq072
75. Müller, P., Quintana, F, and Rosner, G. (2011), “A product partition model with regression on covariates”, *Journal of Computational and Graphical Statistics*, Mar 2011, 20(1): 260-278, PMC3090756.
76. Sivaganesan, S., Laud, P. and Müller, P. (2011), “A Bayesian Subgroup Analysis with a Zero-Enriched Polya Urn Scheme.” , *Statistics in Medicine*, 30, 312–323, DOI: 10.1002/sim.4108, PMID:21225894
77. Jara, A., Hanson, T., Quintana, F., Müller, P., and Rosner, G. (2011) “DPpackage: Bayesian Non- and Semi-parametric Modelling in R”, *Journal of Statistical Software*, 40 (5), 1-30.
78. Li, Y., Müller, P. and Lin, X. (2011), “Center-Adjusted Inference for a Nonparametric Bayesian Random Effect Distribution.” *Statistica Sinica*, 21 (3), 1201-23, PMID:PMC3870168.
79. Yang, Y., Müller, P. and Rosner, G. (2010) “Semiparametric Bayesian Inference for Repeated Fractional Measurement Data.” *Chilean Journal of Statistics*, 1, 1: 59–74.
80. Harvey, C., Liechty, J., Liechty, M., and Müller, P. (2010), “Portfolio Selection with Higher Moments.” *Quantitative Finance*, 10 (5), 469 – 485.
81. Morita, S., Thall, P. and Müller, P. (2010), Evaluating the Impact of Prior Assumptions in Bayesian Biostatistics *Statistics in Biosciences*, 2(1):1-17, PMID: PMC2910452
82. Chen, Y.,A., Almeida, J.S., Richards, A.J., Müller, P., Carroll, R.J., and Roherer, B. (2010), “A nonparametric approach to detect local correlation in gene expression.” *Journal of Graphical and Computational Statistics*, 19, 552-568.

83. Leon-Novelo, L.G, Zhou, X., Bekele, B., and Müller, P. (2010), “Assessing Toxicities in a Clinical Trial: Bayesian Inference for Ordinal Data Nested within Categories” *Biometrics*, 66, 966-74.
84. Müller, P. and Quintana, F. (2010), “Random Partition Models with Regression on Covariates”, *Journal of Statistical Inference and Planning*, 140 (10), 2801–2808, doi:10.1016/j.jspi.2010.03.002
85. Zhang, S., Müller, P., and Do, K.-A. (2010), “A Bayesian Semiparametric Method for Jointly Modeling a Primary Endpoint and Longitudinal Measurements.” *Biometrics*, 66, 435–443. DOI: 10.1111/j.1541-0420.2009.01276.x (on-line advance publication).
86. Li, Y., Lin, X., and Müller, P. (2010), “Bayesian inference in semiparametric mixed models for longitudinal data,” *Biometrics*, 66 (1), 70-78, DOI: 10.1111/j.1541-0420.2009.01227.x.
87. Guindani, M., Zhang, S. and Müller, P. (2009), “A Bayesian Discovery Procedure,” *Journal of the Royal Statistical Society, Series B*, 71, 905–925.
88. Liechty, M.W., Liechty, J.C., and Müller, P. (2009), “The Shadow Prior”, *Journal of Computational and Graphical Statistics*, 18, 368–383.
89. De Iorio, M., Johnson, W., Müller, P., and Rosner, G. (2009). ”A DDP Model for Survival Regression”, *Biometrics*, 65, 762-71, PMID: PMC2748143
90. Quintana, F., Müller, P., Rosner, G. and Relling, M.V. (2008) “A Semiparametric Bayesian Model for Repeated Repeated Binary Outcomes”, *Applied Statistics*, 57, 419–431.
91. Quintana, F., Müller, P., Rosner, G. and Munsell, M. (2008), “Semi-parametric Bayesian Inference for Multi-Season Baseball Data”, *Bayesian Analysis*, 3, 317-338.
92. Polson, N., Stroud, J., and Müller, P. (2008), “Practical Filtering with Sequential Parameter Learning.” *Journal of the Royal Statistical Society, Series B (Methodological)*, 70, 413-28.
93. Ding, M., Rosner, G., and Müller, P. (2008), “Bayesian Optimal Design for Phase II Screening Trials”. *Biometrics*, 64(3), 886 – 894
94. Inoue, L., Etzioni, R., Morrell, C., and Müller, P. (2008), “Modeling Disease Progression with Longitudinal Markers.” *Journal of the American Statistical Association*, 103, 259-270.
95. Morita, S., Thall, P.F., and Müller, P. (2008), “Determining the Effective Sample Size of a Parametric Prior” *Biometrics*, 64, 595–602, PMID:3081791
96. Navarrete, C., Quintana, F.A. and Müller, P. (2008), “Some Issues on Nonparametric Bayesian Modeling Using Species Sampling Models”, *Statistical Modeling: International Journal*, 8, 3–21.
97. Liz Y. Han, Mavis S. Fletcher, Michael T. Deavers, Diana L. Urbauer, Peter Mueller, Charles N. Landen, Aparna A. Kamat, Yvonne G. Lin, William M. Merritt, Whitney Spannum, David M. Gershenson, Susan K. Lutgendorf, Soldano Ferrone, and Anil K.

- Sood (2008), “HLA class I antigen processing machinery component expression and intratumoral T-cell infiltrate as independent prognostic markers in ovarian carcinoma” *Clinical Cancer Research*, 14(11), 3372-3379, doi: 10.1158/1078-0432.CCR-07-4433.
98. De la Cruz-Mesía, Quintana, F., and Müller, P. (2007), “Semiparametric Bayesian Classification with Longitudinal Markers.” *Applied Statistics*, 56, 119-137.
 99. Zhang, S. Shih, Y.-C., and Müller, P. (2007). ”A Spatially-adjusted Bayesian Additive Regression Tree Model to Merge Two Datasets”, *Bayesian Analysis*, 3, 611-34.
 100. Rossell, D., Müller, P. and Rosner, G. (2007), “Screening Designs for Drug Development.” *Biostatistics*, 8, 595–608.
 101. Müller, P., Quintana, F., and Rosner, G. (2007), “Semiparametric Bayesian Inference for Multilevel Repeated Measurement Data”, *Biometrics*, 63, 280–289.
 102. Müller, P., Berry, D.A., Grieve, A.P., and Krams, M. (2006). “A Bayesian Decision-Theoretic Dose Finding Trial”, *Decision Analysis*, 3, 197-207.
 103. Han, L.Y., Landen, C.N., Kamat, A.A., Lopez, A., Müller, P., Schmandt, R., Gershenson, D.M., and Sood, A.A. (2006). ”Preoperative serum tissue factor (TF) levels are an independent prognostic factor in patients with ovarian carcinoma”, *Journal of Clinical Oncology* 24(5):755-761.
 104. Kamat A.A., Fletcher M.S., Gruman L., Müller P, Lopez A., Landen C.N., Han L., Gershenson, D.M., and Sood A.K. (2006). The clinical relevance of stromal matrix metalloproteinase (MMP) expression in ovarian cancer. *Clinical Cancer Research* 12:1707-1714.
 105. Müller, P., Berry, D., Grieve, A., Smith, M., and Krams, M. (2006). “Simulation-Based Sequential Bayesian Design” *Journal of Statistical Planning and Inference*, 137, 3140–50.
 106. Swartz, M., Kimmel, M., Müller, P., and Amos, C. (2006), “Stochastic Search Gene Suggestion: A Bayesian Hierarchical Model for Gene Mapping,” *Biometrics*, 62, 495–503. *Clinical Cancer Research*
 107. Wang, E., Ngalame, Y., Panelli, M. C., Nguyen-Jackson, H., Deavers, M., Mueller, P., Hu, W., Savary, C. A., Kobayashi, R., Freedman, R. S. and Marincola, F. M. (2005), ”Peritoneal and subperitoneal stroma may facilitate regional spread of ovarian cancer” 11, 113–122, *Clinical Cancer Research*
 108. Do, K-A., Müller, P., and Tang, F. (2005). “A Bayesian Mixture Model for Differential Gene Expression.” *Applied Statistics*, 54 (3), 627-644.
 109. Müller, P., Rosner, G., De Iorio, M., and MacEachern, S. (2005). “A Nonparametric Bayesian Model for Inference in Related Studies.” *Applied Statistics*, 54 (3), 611-626.
 110. Menchero, A., Montes Diez, R., Rios Insua, D. and Müller, P. (2005), “Bayesian analysis of non-linear autoregression models based on neural networks,” *Neural Computation*, 17, 453–485.

111. Kottas, A., Müller, P. and Quintana, F. (2004), “Nonparametric Bayesian modeling for multivariate ordinal data.” *Journal of Computational and Graphical Statistics*, 13, 213-231.
112. Christen, J.A., Müller, P., Wathen, K., and Wolf, J. (2004). “A Bayesian Randomized Clinical Trial: A Decision Theoretic Sequential Design”, *Canadian Journal of Statistics*, 32(4), 387–402.
113. Quintana, F., and Müller, P. (2004). “Optimal Sampling for Repeated Binary Measurements,” *Canadian Journal of Statistics*, 32, 73–84.
114. Müller, P., Sansó, B., and DeIorio, M. (2004). “Optimal Bayesian Design by Inhomogeneous Markov Chain Simulation.” *Journal of the American Statistical Association*, 99(467), 788-798.
115. De Iorio, M., Müller, P., Rosner, G., and Maceachern, S. (2004). “An ANOVA Model for Dependent Random Measures,” *Journal of the American Statistical Association*, 99(465), 205–215.
116. Müller, P., Parmigiani, G., Robert, C., and Rousseau, J. (2004). “Optimal Sample Size for Multiple Testing: the Case of Gene Expression Microarrays.”, *Journal of the American Statistical Association*, 99(468), 990-1001.
117. Müller, P., Quintana, F. and Rosner, G. (2004). “Hierarchical Meta-Analysis over Related Non-parametric Bayesian Models.” *Journal of the Royal Statistical Society, Series B (Methodological)*, 66, 735–749.
118. Müller, P., and Quintana, F. (2004). “Nonparametric Bayesian Data Analysis,” *Statistical Science*, 19, 95–110.
119. Liechty, J., Liechty, M., and Müller, P. (2004). “Bayesian Correlation Estimation,” *Biometrika*, 91, 1–14.
120. Quintana, F., and Müller, P. (2004). “Nonparametric Bayesian Assessment of the Order of Dependence for Binary Sequences.” *Journal of Computational and Graphical Statistics*, 13, 213–231.
121. Stroud, J., Müller, P., and Polson, N. (2003). “Nonlinear State-Space Models with State-Dependent Variance Functions.” *Journal of the American Statistical Association*, 98, 377-386.
122. Freitas Lopes, H., Müller, P., and Rosner, G. (2003). “Meta-Analysis for Longitudinal Data Models using Multivariate Mixture Priors.” *Biometrics*, 59, 66-75.
123. Barnes, T.G., Jefferys, W.H., Berger, J.O., Müller, P. Orr, K., and Rodriguez, R. (2003). “A Bayesian Analysis of the Cepheid Distance Scale.” *Astrophysics Journal*, 592, 539-554.
124. Thall, P., Millikan, R., Müller, P., and Lee, S-J. (2003). “Dose-Finding with two agents in phase I oncology trials.” *Biometrics*, 59 (3), 487.

125. Calder, C., Lavine, M., Müller, P., and Clark, J. (2003). "Incorporating Multiple Sources of Stochasticity into Dynamic Population Models." *Ecology*, 84(6), 1395–1402.
126. Müller, P., Rosner, G., Inoue, L., and Dewhurst, M.W. (2001). "A Bayesian Model for Detecting Changes in Nonlinear Profiles." *Journal of the American Statistical Association*, 96,1215-1222.
127. Stroud, J., Müller, P., and Sanso, B. (2001). "Dynamic Models For Spatio-Temporal Data." *Journal of the Royal Statistical Society, Series B*, 63, 673-689.
128. Stroud, J.R., Müller, P. and Rosner G.L. (2001). "Optimal Sampling Times in Population Pharmacokinetic Studies," *Applied Statistics*, 50, 345-359.
129. Bielza, C., Müller, P., and Rios Insua, D. (1999). "Monte Carlo Methods for Decision Analysis with Applications to Influence Diagrams," *Management Science*, 45 (7), 995-1007.
130. Müller, P. (1999). "Simulation Based Optimal Design," in *Bayesian Statistics 6*, J.O. Berger, J.M. Bernardo, A.P. Dawid and A.F.M. Smith (eds.), pp. 459–474, Oxford University Press.
131. Müller, P., Parmigiani, G., Schildkraut, J. and Tardella, L. (1999). "A Bayesian Hierarchical Approach for Combining Case-control and Prospective Studies," *Biometrics*, 55, 258–266.
132. Müller, P., and Vidakovic, B. (1999). "Bayesian Inference with Wavelets: Density Estimation," *Journal of Computational and Graphical Statistics*, 7, 456-468.
133. Damien, P. and Müller, P. (1998). "A Bayesian Bivariate Failure Time Regression Model", *Computational Statistics and Data Analysis*, 28, 77-85.
134. MacEachern, S.N. and Müller, P. (1998). "Estimating Mixture of Dirichlet Process Models," *Journal of Computational and Graphical Statistics*, 7, 223–239.
135. Müller, P. and Rios Insua, D. (1998). "Issues in Bayesian Analysis of Neural Network Models," *Neural Computation*, 10, 571–592.
136. Müller, P. and Pole, A. (1998). "Monte Carlo posterior integration in GARCH models," *Sankhya, Series B*, 60, 127-144.
137. Palmer, J. and Müller, P. (1998). Bayesian Optimal Design in Population Models of Hematologic Data. *Statistics in Medicine* 17, 1613-1622.
138. Cargnoni, C., Müller, P., and West, M. (1997). "Bayesian Forecasting of Multinomial Time Series Through Conditionally Gaussian Dynamic Models," *Journal of the American Statistical Association*, 92, 640-647.
139. Müller, P. and Roeder, K. (1997). "A Bayesian Semiparametric Model for Case-Control Studies With Errors in Variables," *Biometrika*, 84, 523-537.

140. Müller, P. and Rosner, G. (1997). “A Bayesian population model with hierarchical mixture priors applied to blood count data,” *Journal of the American Statistical Association*, **92**, 1279-1292.
141. Müller, P., West, M. and MacEachern, S. (1997). “Bayesian Models for Non-Linear Auto-Regressions,” *Journal for Time Series Analysis*, **18**, 593–614.
142. Rosner, G. and Müller, P. (1997). “Bayesian population pharmacokinetics and pharmacodynamic analyses using mixture models”, *Journal of Pharmacokinetics and Biopharmaceutics*, **25** (2), 209-233.
143. Terborgh, J., Cesar Flores, N., Müller, P., and Davenport, L. (1997), “Estimating the ages of successional stands of tropical trees from growth increments,” *Journal of Tropical Ecology*, **14**, 833-856.
144. Müller, P., Erkanli, A., and West, M. (1996). “Bayesian curve fitting using multivariate normal mixtures,” *Biometrika*, **83**, 67-79.
145. Müller, P. and Parmigiani, G. (1995). “Optimal design via curve fitting of Monte Carlo experiments,” *Journal of the American Statistical Association*, **90**, 1322-1330.
146. Rosner, G. and Müller, P. (1994). “Pharmacodynamic Analysis of Hematologic Profiles” *Journal of Pharmacokinetics and Biopharmaceutics*, **22**, 499-524.

Not Refereed Writings and Proceedings

147. Ni, Y., Müller, P., Shpak M., and Ji, Y. (2019) ”Parallel-Tempered Feature Allocation for Large-scale Tumor Heterogeneity with Deep Sequencing Data.” in *Pharmaceutical Statistics: MBSW 39*, Springer Proceedings in Mathematics & Statistics, Springer-Verlag.
148. Tsimberidou, A.M., Müller, P. and Schilsky, R.L. (2018) “Clinical Trials in the Year 2025,” in *Oncology Clinical Trials, Second Edition: Successful Design, Conduct, and Analysis*, Kelly, W.K. and Halabi, S. (eds.), Demos Medical Publishing (Springer-Verlag), pp. 516-526.
149. Müller, P. (2019). “Nonparametric Bayesian Mixture Models”, in *Handbook of Mixtures*, Frühwirth-Schnatter, S., Robert, C. and Celeux, G. (eds.), CRC-Press, chapter 6.
150. Ji, Y., Sengupta, S., Lee, J., Müller, P., and Gulutoka, K. (2015). “Estimating latent cell subpopulations with Bayesian feature allocation models.” in *Nonparametric Bayesian Methods in Biostatistics and Bioinformatics*, Mitra, R. and Müller, P. (eds), Springer-Verlag, pp. 77-95.
151. Jo, S., Lee, J., Page, G., Quintana, F., Trippa, L. and Müller, P. (2015). “Spatial Species Sampling and Product Partition Models”. in *Nonparametric Bayesian Methods in Biostatistics and Bioinformatics*, Mitra, R. and Müller, P. (eds), Springer-Verlag, pp. 359-375.
152. Lee, J., Müller, P., Zhu, Y. and Ji, Y. (2015) “A Nonparametric Bayesian Model for Nested Clustering” *Statistical Planning and Analysis in Proteomics*, Jung K (eds), Springer-Verlag, pp. 129-141.

153. Lee, J., Müller, P., Sengupta, S., Gulukota, K., and Ji, Y. (2014). “Bayesian Feature Allocation Models for Tumor Heterogeneity,” in *Statistical Analysis for High-Dimensional Data - The Abel Symposium 2014*, Frigessi, A., Bühlmann, P., Glad, I., Langaas, M., Richardson, S. and Vannucci, M. (eds.), Springer-Verlag, pp. 211-232.
154. Sengupta, S., Guluokta, K., Lee, J., Müller, P., and Ji, Y. (2015) “Bayclone: Bayesian Nonparametric Inference of Tumor Subclones Using NGS Data.” In *Proceedings of The Pacific Symposium on Biocomputing (PSB) 2015*, 467-78, PMID:25592605
155. Yanxun Xu, Yuan Ji, and Peter Müller (2015). “Biomarker-Driven Adaptive Design”. in *Nonparametric Bayesian Methods in Biostatistics and Bioinformatics*, Mitra, R. and Müller, P. (eds), Springer-Verlag, pp. 311-326.
156. Müller, P. (2013), “Bayesian Models in Biostatistics and Medicine”, in *Bayesian Theory and Applications*, P. Damien, P. Dellaportas, N. Polson and D. Stephens (eds), p. 557–575, Oxford University Press.
157. Laud, P., Sivaganesan, S. and Müller, P. (2013), “Subgroup Analysis, in P. Damien, P. Dellaportas, N. Polson and D. Stephens (eds), p. 576–592, Oxford University Press.
158. Mitra, R., Müller, P., Ji, Y. (2013), “Bayesian Model-Based Approaches for Solexa Sequencing Data,” in *Advances in Statistical Bioinformatics: Models and Integrative Inference for High-Throughput Data*, Do, K.A., Qin, Z. and Vannucci, M. (editors), Cambridge University Press, pp. 126-137.
159. Ji Y, Trentini F, Müller P. (2013), “A Bayesian framework for integrating copy number and gene expression data,” in *Advances in Statistical Bioinformatics: Models and Integrative Inference for High-Throughput Data*, Do, K.A., Qin, Z. and Vannucci, M. (editors), Cambridge University Press, pp. 331-349
160. Mitra R, Müller P*, Ji Y, Mills G, Lu Y. 2012, “Sparse Bayesian Graphical Models for RPPA Time Course Data.” In *2012 IEEE International Workshop on Genomic Signal Processing and Statistics*.
161. Xu Y, Zhang J, Yuan Y, Mitra R, Müller P, Ji Y. 2012, “A Bayesian Graphical Model for Integrative Analysis of TCGA Data.” In *2012 IEEE International Workshop on Genomic Signal Processing and Statistics*.
162. Müller, P., Do, K.-A., Bandyopadhyay, R., and Baggerly, K. (2011), “A Bayesian mixture model for protein biomarker discovery”. In *Bayesian Modeling in Bioinformatics*, Dey, D.K. , Ghosh, S., and Mallick, B. (Eds), Chapman & Hall / CRC press, pp. 343–364.
163. Liechty, M.W., Liechty, J.C., and Müller, P. (2010), ”MCMC for constrained parameter and sample spaces”, in *Frontiers of Statistical Decision Making and Bayesian Analysis*, M.-H. Chen, D.K. Dey, P. Mueller, D. Sun and K. Ye (eds.), pp. 538–546.
164. Müller, P, Sivaganesan, S. and Laud, P.W. (2010), ”A Bayes Rule for Subgroup Reporting”, in *Frontiers of Statistical Decision Making and Bayesian Analysis*, M.-H. Chen, D.K. Dey, P. Mueller, D. Sun and K. Ye (eds.), pp. 277 – 284.

165. Lopes, H.F., Ravishanker, N., and Müller, P. (2008), “Bayesian Computational Methods in Biomedical Research”, in *Computational Methods in Biomedical Research* (eds. R. Khattree and D.N. Naik), Marcel Dekker/Francis & Taylor, pp. 211-260.
166. Malec, D. and Müller, P. (2008). “A Bayesian Semi-Parametric Model for Small Area Estimation.” in *Festschrift in Honor of J.K. Ghosh* (eds. S. Ghoshal and B. Clarke), IMS, 223–236.
167. Müller, P. and Quintana, F. (2008), “More Nonparametric Bayesian Models for Biostatistics”, in *Bayesian Nonparametrics*, Hjort, N., Holmes, C., Müller, P. and Walker, S. (eds.), Cambridge University Press, pp. 274–291.
168. Müller, P., Parmigiani, G., and Rice, K. (2007), “FDR and Bayesian Multiple Comparisons Rules” in *Bayesian Statistics 8*, J.M. Bernardo, S. Bayarri, J.O. Berger, , A.P. Dawid, D. Heckerman, A.F.M. Smith, and M. West (eds.), Oxford University Press, pp. 349-370.
169. Guindani, M., Do, K.-A., Müller, P., and Morris, J. (2006), “Bayesian Mixture Models for Gene Expression and Protein Profiles” in *Bayesian Inference for Gene Expression and Proteomics*, Do, K.-A., Müller, P., and Vannucci, M. (eds.), Cambridge University Press, pp. 238–253.
170. Müller, P., Robert, C., and Rousseau, J. (2006), “Sample Size Choice for Microarray Experiments”, in *Bayesian Inference for Gene Expression and Proteomics*, Do, K.-A., Müller, P., and Vannucci, M. (eds.), Cambridge University Press, pp. 425-437.
171. Müller, P., and Rosner, G. (2006), “Semi-Parametric Bayesian Models for Population Pharmacokinetics and Pharmacodynamics.” in *Bayesian Statistics and Its Applications*, edited by S.K. Upadhyay, Umesh Singh and Dipak K. Dey, Anamaya Publishers, New Delhi.
172. National Research Council Committee on Human Health Risks of Trichloroethylene. (2006) “Assessing Human Health Risks of Trichloroethylene: Key Scientific Issues.” Washington, DC: National Academies Press.
173. Parke, T., Krams, M., Müller, P., and Berry, D. (2006), “Efficient Dose-Response Finding Strategies for Acute Neuroemergency Treatments”, in *Handbook of Neuroemergency Clinical Trials*, eds. W.M. Alves and B.E. Skolnick, Chapter 9, Elsevier, San Diego.
174. Rosner, G., Müller, P., Lunagomez, S., and Thompson, P. (2005), “Pharmacokinetics in Clinical Oncology: Statistical Issues.” In *Handbook of Statistics in Clinical Oncology; Second Edition, Revised and Expanded*, Crowley, J., Hoering, A. (ed.), CRC Press, pp. 53 – 69.
175. Rosner, G., Müller, P., Tang, F., Madden, T., and Andersson, B. (2004), “Dose Individualization for High-Dose Anti-Cancer Chemotherapy.” In *Advanced Methods of Pharmacokinetics and Pharmacodynamic Systems Analysis, Volume III*, D’Argenio, D.Z., Ed., Kluwer Academic Publishers, New York.
176. Müller, P. (2005) “Optimal Design: Simulation Approaches,” in *Handbook of Statistics*. D.K. Dey and C.R. Rao (eds.) Volume 25, Elsevier, pp. 509–518.

177. Polson, N., Stroud, J., and Müller, P. (2004) “Practical Filtering for Stochastic Volatility Models,” in *State Space and Unobserved Component Models* (Harvey, A., Koopman, S.J., and Shephard, N. eds.), Cambridge University Press, 236–247.
178. Berger, J., Jefferys, W.H., Müller, P. and Barnes, T.G. (2003). “Bayesian Model Selection and Analysis for Cepheid Star Oscillations,” in *Statistical Challenges in Astronomy*, Feigelson, E. D. and Babu, G. J. (eds.), New York: Springer-Verlag, pp. 71–88.
179. De Iorio, M., Müller, P., Rosner, G. L., and MacEachern, S. N., (2002). “ANOVA DDP models: A review,” in D. D. Denison, M. H. Hansen, C. C. Holmes, B. Mallick and B. Yu (eds), *Nonlinear Estimation and Classification*, Springer-Verlag, p. 467.
180. Jefferys, W.H., Barnes, T.G., Rodrigues, R., Berger, J.O., and Müller, P. (2001). “Model Selection for Cepheid Star Oscillations,” in *Bayesian Methods: Selected Papers from Sixth World Meeting of the International Society for Bayesian Analysis (ISBA)*.
181. Müller, P. (2001). “Markov Chain Monte Carlo Methods,” in *International Encyclopedia of the Social & Behavioral Sciences*. Pergamon, Oxford. N.J. Smelser and P.B. Baltes eds. pp. 9236-9240.
182. Berry, D.A., Müller, P. Grieve, A.P, Smith, M., Parke, T., Blazek, R., Mitchard, N., and Krams, M. (2000). “Adaptive Bayesian Designs for Dose-Ranging Drug Trials,” in *Case Studies in Bayesian Statistics V*, pp. 99-182 (C. Gatsonis, R. E. Kass, B. Carlin, A. Carriquiry, A. Gelman, I. Verdinelli, and M. West, eds.), Springer-Verlag, New York.
183. MacEachern, S. and Müller, P. (2000). “Efficient MCMC Schemes for Robust Model Extensions using Encompassing Dirichlet Process Mixture Models,” in *Robust Bayesian Analysis*, F. Ruggeri and D. Rios Insua (eds.), Springer-Verlag.
184. Müller, P. and Vidakovic, B. (1999). “MCMC Methods in Wavelet Shrinkage: Non-Equally Spaced Regression, Density and Spectral Density Estimation,” in *Bayesian Inference in Wavelet-Based Models* (P. Müller and B. Vidakovic, eds.), pp. 187–202, Springer-Verlag, New York.
185. Palmer, J.L. and Müller, P. (1999). “Population Models for Hematologic Data”, in *Case Studies in Bayesian Statistics IV*, (C. Gatsonis, R. E. Kass, B. Carlin, A. Carriquiry, A. Gelman, I. Verdinelli, and M. West, eds.), pp. 355–366, Springer-Verlag, New York.
186. Parmigiani, G., Berry, D., Iversen, E., Müller, P., Schildkraut, J. and Winer, E.P. (1999). “Modeling Risk of breast cancer and decisions about genetic testing,” in *Case Studies in Bayesian Statistics IV*, (C. Gatsonis, R. E. Kass, B. Carlin, A. Carriquiry, A. Gelman, I. Verdinelli, and M. West, eds.), pp. 133–204, Springer-Verlag, New York.
187. Sansó, B. and Müller, P. (1999). “Redesigning a Network of Rainfall Stations,” in *Case Studies in Bayesian Statistics IV*, (C. Gatsonis, R. E. Kass, B. Carlin, A. Carriquiry, A. Gelman, I. Verdinelli, and M. West, eds.), pp. 383–394, Springer-Verlag, New York.

188. Vidakovic, B. and Müller, P. (1999). “An Introduction to Wavelets,” in *Bayesian Inference in Wavelet-Based Models* (P. Müller and B. Vidakovic, eds.), pp. 1–18, Springer-Verlag, New York.
189. Müller, P. and Rosner, G. (1998), “Semi-parametric PK/PD Models,” in *Practical Nonparametric and Semiparametric Bayesian Statistics*, Dey, D., Müller, P. and Sinha, D. (eds.), pp. 323-338, Springer-Verlag, New York,
190. Müller, P. and Palmer, J. L. (1998). “Optimal Design in Longitudinal Data Models,” in *Applied Decision Analysis*, F.J. Girón and M.L. Martínez (eds.), pp. 123-131, Kluwer, Boston.
191. Rios Insua, D. and Müller, P. (1998). “Feedforward neural networks for nonparametric regression,” in *Practical Nonparametric and Semiparametric Bayesian Statistics*, Dey, D., Müller, P. and Sinha, D. (eds.), pp. 181-194, Springer-Verlag, New York.
192. Rios Insua, D, Salewicz, A., Müller, P. and Bielza, C. (1997). “Bayesian methods in reservoir operations: the Zambezi river case,” in *The Practice of Bayesian Analysis*, S. French, J. Smith, (eds.), pp. 107–130, Wiley, New York.
193. Bielza, C., Müller, P., Ríos Insua, D. (1997). Markov chain Monte Carlo methods for decision analysis, 6th International Workshop on Artificial Intelligence and Statistics, 31–38.
194. Bielza, C., Clyde, M., Müller, P., Parmigiani, G., Ríos Insua, D. (1996). Optimal design by preposterior simulation on an augmented probability model, First European Conference on Highly Structured Stochastic Systems, 109–111.
195. Clyde, M., Müller, P. and Parmigiani, G. (1996). “Inference and Design Strategies for a Hierarchical Logistic Regression Model,” in *Bayesian Biostatistics*, Berry D.A. and Stangl, D. (eds.), pp. 297-320, Marcel Dekker, New York.
196. Müller, P. and Parmigiani, G. (1996). “Numerical evaluation of information theoretic measures,” in *Bayesian Statistics and Econometrics: Essays in Honor of A. Zellner*, Berry D.A., Chaloner K.M., and Geweke J.F. (eds.), pp. 397-406, Wiley, New York.
197. Müller, P. and Rios Insua, D. (1996). “Posterior simulation for feed forward neural network models,” in *COMPSTAT, Proceedings in Computational Statistics* (A. Prat ed.), pp. 385-390, Physica-Verlag, Heidelberg.
198. Clyde, M., Müller, P. and Parmigiani, G. (1995). “Optimal Design for Heart Defibrillators,” in *Case Studies in Bayesian Statistics, II*, C. Gatsonis, J. Hodges, R. E. Kass, N. Singpurwalla (eds.), pp. 278-292, Springer-Verlag, New York.
199. Rosner, G. and Müller, P. (1995). “Modeling multiple pharmacodynamic endpoints,” in *Advanced Methods of Pharmacokinetic and Pharmacodynamic Systems Analysis*, Volume 2, (D.Z. D’Argenio, ed.), pp. 45-60. Plenum Press, New York.
200. Parmigiani, G. and Müller, P. (1994). “Simulation Approach to One-Stage and Sequential Optimal Design Problems,” in *MODA 4 - Advances in Model-Oriented Data Analysis*, Kitsos, C.P. and Müller, W.G. (eds.), pp. 37-48. Physica-Verlag, Heidelberg.

201. Polasek, W. and Müller, P. (1994). “Gibbs Sampling for ARCH models in finance,” in *MODA 4 - Advances in Model-Oriented Data Analysis*, Kitsos, C.P. and Müller, W.G. (eds.), pp. 251–260, Physica-Verlag, Heidelberg.
202. West, M., Müller, P., and Escobar, M.D. (1994). “Hierarchical priors and mixture models, with application in regression and density estimation,” in *Aspects of Uncertainty: A tribute to D. V. Lindley*, A.F.M. Smith and P. Freeman, (eds.), pp. 363–386, Wiley, New York.
203. Erkanli, A., Stangl, D.K., and Müller, P. (1993). “A Bayesian analysis of ordinal data using mixtures,” *ASA Proceedings of the Section on Bayesian Statistical Science*, 51–56.
204. Müller, P. (1992). “Posterior integration in dynamic models,” *Computing Science and Statistics* 24, 318–324.
205. Müller, P. (1991). “Monte Carlo integration in general dynamic models,” *Contemporary Mathematics* 115, 145–164.

Discussions

206. Paulon, G., Trippa, L., Müller, P. (2018). Comment on “Bayesian cluster analysis: point estimation and credible balls”. *Bayesian Analysis* 13(2), 590–593
207. Müller, P. and Ni, Y. (2017), Discussion of “Sparse Graphs Using Exchangeable Random Measures” by Francois Caron and Emily B. Fox, *Journal of the Royal Statistical Society, Series B*, 79, 1355–56.
208. Müller, P. (2015), Introduction to “On a class of σ -stable Poisson–Kingman models and an effective marginalized sampler” by S. Favaro, M. Lomeli, Y. W. Teh, *Statistics and Computing*, 25, 65–66.
209. Müller, P. and Quintana, F. (2014), Discussion of “A Bayesian Nonparametric Modeling Framework for Developmental Toxicity Studies” by K. Fronczyk and A. Kottas, *Journal of the American Statistical Association*, 109, 889.
210. Müller, P. (2011), “Discussion of Sampling schemes for generalized DP random effects models”, *Statistical Methods and Applications*, 20, 299–301.
211. Müller, P. (2011), Discussion of Tom Loredo, “Rotating Stars and Revolving Planets: Bayesian Exploration of the Pulsating Sky” in *Bayesian Statistics 9*, J. M. Bernardo, M. J. Bayarri, J. O. Berger, A. P. Dawid, D. Heckerman, A. F. M. Smith and M. West (eds). Oxford University Press, p. 392.
212. Quintana, F. and Müller, P. (2009), Discussion of “Hierarchical Bayesian Modeling of Hitting Performance in Baseball”, *Bayesian Analysis*, 4, 212.
213. Müller, P. and Nieto Barajas, L.E. (2008), Discussion of “The Nested Dirichlet Process” by Rodríguez, Dunson and Gelfand, 103, 1146–1147.
214. Müller, P. and Rosner, G. (2008), “Discussion of Simple, Defensible Sample Sizes Based on Cost Efficiency, by P. Bacchetti, C.E. McCulloch, and M.R. Segal,” *Biometrics*, 64, 587–589.

215. Müller, P. (1999), Discussion of T.S. Shively, R. Kohn and S. Wood, “Variable Selection and Function Estimation in Additive Nonparametric Regression Using a Data-Based Prior,” *Journal of the American Statistical Association*, 94, 803.
216. Müller, P. (1997), Discussion of Diggle, P. and Al Wasel, I., “Spectral Analysis of Replicated Biomedical Time Series,” *Applied Statistics*, 46, 64–65.
217. Müller, P. (1997), Discussion of Dupuis, J.A. and Robert, C., “Bayesian variable selection in qualitative models”, in *Proceedings of the Workshop on Model Selection*, Università di Cagliari, Cagliari.
218. Müller, P. (1996), Discussion of Polson, N. G., “Convergence of Markov Chain Monte Carlo Algorithms,” in *Bayesian Statistics 5*, Bernardo, J. M., Berger, J. O., Dawid, A. P. and Smith A. F. M., (eds.), pp. 297-322, University Press, Oxford.

OTHER PAPERS

219. Polson, N., Stroud, J., and Müller, P. (2001). “Affine State Dependent Variance Models,” <http://faculty.chicagobooth.edu/nicholas.polson/research/papers/at-sm2.pdf>.
220. Clyde, M., Müller, P., and Parmigiani, G. (1995), “Exploring Expected Utility Surfaces by Markov Chains,” Discussion paper 95-39, ISDS, Duke University.
221. MacEachern, S. and Müller, P. (1994). “Efficient estimation of mixture of Dirichlet process models,” Discussion paper 94-38, ISDS, Duke University.
222. Müller, P. (1991). “A Bayesian vector ARCH model for exchange rate data,” Discussion paper 9109, Institut für Statistik und Ökonometrie, University of Basel.
223. Müller, P. (1991). “Numerical integration in general dynamic models.”
224. Müller, P. (1991). “A generic approach to posterior integration and Bayesian sampling,” Technical Report 91-09, Statistics Department, Purdue University.
225. Müller, P. (1989). “Optimal mix of accept/reject and importance sampling,” Technical Report, Stochastic Modeling and Simulation Series 89-12, Department of Industrial Engineering, Purdue University.

BOOKS

226. Amaral Turkman, M. A., Paulino, C. D. and Müller, P. (2019), *Computational Bayesian Statistics – An Introduction*, IMS/ISBA Texbook Series, Cambridge University Press.
227. Müller, P., Quintana, F., Jara, A., and Hanson, T. (2015), *Bayesian Nonparametric Data Analysis*, Springer Series in Statistics, Springer-Verlag.
228. Müller, P. and Rodriguez, A., (2012) *Nonparametric Bayesian Inference*, IMS Lecture Notes.
229. Berry, S., Carlin, B., Lee, J. and Müller, P. (2010) *Bayesian Adaptive Methods for Clinical Trials*, Chapman & Hall.

BOOKS (edited volumes)

230. Mitra, R. and Müller, P. (2015) *Nonparametric Bayesian Methods in Biostatistics and Bioinformatics*, Springer-Verlag, New York.
231. Chen, M.-H., Dey, D.K., Müller, P, Sun, D. and Ye, K. (eds.) (2010), *Frontiers of Statistical Decision Making and Bayesian Analysis*, Springer-Verlag, New York.
232. Hjort, N., Holmes, C., Müller, P. and Walker, S. (eds.), (2010) *Bayesian Nonparametrics*, Cambridge University Press.
233. Do, K.-A., Vannucci, M., and Müller, P. (eds.) (2006). *Bayesian Inference for Gene Expression and Proteomics*, Cambridge University Press.
234. Müller, P. and Vidakovic, B. (eds.) (1999). *Bayesian Inference in Wavelet-Based Models*, Springer-Verlag, New York.
235. Dey, D., Müller, P. and Sinha, D. (eds.) (1998). *Practical Nonparametric and Semiparametric Bayesian Statistics*, Springer-Verlag, New York.

SOFTWARE

All programs are available (directly or linked) at <http://odin.mdacc.tmc.edu/~pm/prog.html>.

Drug screening: Screening designs for drug development (R package *seqdesphII*).

Microarray group comparison: A semiparametric Bayesian mixture model for differential gene expression.

Semiparametric mixture models: Bayesian inference for Dirichlet process mixture of normal models (R package *mdp*).

Dependent random probability measures: Hierarchical DP mixture of normals (R package *hdpmn*)

Dependent DP models: ANOVA DDP model (R package *ddpanova*).

Special purpose software: several additional software packages that implement specific examples in published papers.

GRANTS

Major Grants

Current:

NIH/NCI, "Bayesian Inference for Tumor Heterogeneity with Next-Generation Sequencing Data", co-P.I. (Yuan JI, P.I.)

Completed:

"Bayesian approaches for missingness and causality in cancer and behavior studies," NIH/NCI, co-investigator (with M. Daniels, P.I.)

“Statistical Methods and Software for More Efficient, Ethical, and Affordable Clinical Trials”, NIH/NCI, coinvestigator (with B. Carlin), 2012-2014.

“Bayesian models for cancer prognosis by integrating diverse types of data”, NIH/NCI, co-P.I. (with Y. Ji), 2009-2013.

“Population PK/PD: Statistical Issues,” NIH/NCI, co-P.I. (with G. Rosner), 2007-2013.

“Continuous Drug Screening: Simulation Based Sequential Design,” NIH/BISTI, P.I. (with G. Rosner), 2003-2006.

Gynecologic Cancer NIH/SPORE (Specialized Programs of Research Excellence), P50 CA098259, 2002-2007, PI Biostatistics Core.

“Population Pharmacokinetics/Dynamics: Statistical Issues,” NIH, co-PI (with G. Rosner, P.I), 2001-2006, \$398,850.

“Statistical Methodology for Spatial Modeling and Interpolation of Air and Deposition Pollutants,” with M. Fuentes (P.I.), EPA, 2000-2002, \$469,978.

“Multi-Scale Modeling and Simulation in Scientific Inference: Hierarchical Methods for Parameter Estimation in Porous Flow,” With J. Trangenstein, D. Higdon, A. Datta-Gupta (P.I.’s) and other collaborators, NSF, KD (Knowledge and distributed intelligence) program, 1999-2002, \$ 2,300,000 (\$ 800,000 at ISDS).

“Bayesian preposterior simulation”, NSF/DMS (DMS-9704934), Principal investigator, \$146,000, 1997-2001.

“Population Pharmacokinetics/Dynamics: Statistical Issues,” NIH (1R01CA75981-01), Principal investigator (with G. Rosner), \$253,000, 1998-2001.

“Bayesian Regression in Nonlinear AR, Neural Networks, Wavelet Representations and Longitudinal Data Models”, NSF/DMS (DMS-9404151), Principal investigator, \$65,000, 1994–96.

”Mathematical Sciences Computing Research Environments,” SCREMS grant, NSF/DMS (DMS-9305699), Collaborating investigator (3 out of 5 subprojects), \$88,978, 1993–95.

NIH: “Functional Data Analysis” co-investigator 10%, (P.I. J. Morris, Biostatistics)

Minor Grants (*all completed*)

NSF, “Travel Support for the Objective Bayes Workshop, 2017.

NIH, “Travel Support for the 10th ISBA World Meeting on Bayesian Statistics”, 2010.

NSF/DMS, “Travel Support for the 10th ISBA World Meeting on Bayesian Statistics”, 2010.

NSF/DMS, “Travel Support for the 9th ISBA World Meeting on Bayesian Statistics”, 2008.

NIH/NCI R01: ”HOX genes in ovarian neoplasia”, co-investigator 5%, (PI: H. Naora, Gyn. Oncology).

”Fourth International Workshop on Objective Prior Methodology,” NSF/DMS-0245166. Travel support grant, P.I., 2003.

“Simulation based sequential design: Species Diversity”, NSF/INT, P.I. (with A. Christen, Guanajuato), pending.

“International: Bayesian preposterior simulation – Partially Exchangeable Binary Sequences,”

- NSF/INT, P.I. (with F. Quintana, Santiago), \$4,312.
- “ICTNEO: A Decision Support System for Jaundice Management in Newborn Babies,” FIS (Spanish equivalent of NIH), consultant, 1997/98.
- “A New Methodology for Hydropower Resources Management,” Iberdrola Foundation (Spain), consultant, 1996/97.
- “Meta analysis over related case-control studies”, Duke University Research Council Grant, 1996/97, \$2500.
- Estancias temporales de científicos y tecnólogos extranjeros en España (Visiting grants for foreign researchers in Spain). With S. Rios Insua, UPM Madrid, Pts. 1,920,000 (= \$12,000), 1995.
- “Computational Procedures for Optimal Design of Experiments under Uncertainty” Duke University Research Council, Seed grant, co-principal investigator (with G. Parmigiani, co-principal investigator), 1993/94, \$2200.

DELIVERED TALKS

Invited Talks at Conferences and Workshops (2010 – present)

- “Bayesian Categorical Matrix Factorization via Double Feature Allocation,” Keynote, RSS International Conference, Belfast, U.K., September 2019.
- “Bayesian models for precision oncology clinical trials,” topic contributed, JSM, Denver, CO, August 2019.
- “A Bayesian Nonparametric Utility-Based Design for Comparing Treatments to Resolve Air Leaks After Lung Surgery,” invited, The 6th International Symposium on Biopharmaceutical Statistics, Kyoto, Japan, August 2019.
- “BNP for inference with semi-competing risks,” invited, O’Bayes 2019: Objective Bayes Methodology Conference, U. of Warwick, Coventy, U.K., July 2019.
- “Nonparametric Bayesian Inference,” tutorial, Bayesian Causal Inference Workshop OSU, Columbus, OH, June 2019.
- “Bayesian Categorical Matrix Factorization via Double Feature Allocation,” invited, ASA, Columbus chapter, Columbus, OH, June 2019.
- “Reciprocal Graphical Models for Integrative Gene Regulatory Network Analysis,” invited, ENAR, Philadelphia, PA, March 2019.
- “Bayesian Categorical Matrix Factorization via Double Feature Allocation,” invited, Midas 2019: Novel Statistical Methods for Complex Data, Viña delMar, Chile, March 2019.
- “Bayesian Feature Allocation Models for Tumor Heterogeneity,” invited, VII Workshop on Probabilistic and Statistical Methods,” São Carlos, Brazil, February 2019.
- “Scalable Bayesian Nonparametric Clustering and Classification,” Bayesian Statistics in the Big Data Era, CIRM, Marseille, France, November 2018.
- “Bayesian population finding using counter-factual modeling of responses,” invited talk, JSM 2018, Vancouver, Canada, July 2018.
- “Bayesian Feature Allocation Models for Tumor Heterogeneity,” EAC-ISBA2018, The 3rd Eastern Asia Meeting on Bayesian Statistics, invited talk, Seoul, Korea, July 2018.

“The future of Bayesian clinical trial design,” III Galician-Portuguese Meeting of Biometry Keynote, Aveiro, Portugal, July 2018.

“Prior Choices for Reciprocal Graphical Models,” ISBA World Meeting, invited talk, Edinburgh, U.K., June 2018.

“Scalable Bayesian Nonparametric Clustering and Classification for EHR data,” invited talk, 9th International Purdue Symposium on Statistics, West Lafayette, IN, June 2018.

“A Nonparametric Bayesian Basket Trial Design,” The 2nd Oncostat Annual Symposium, invited talk, Chicago, IL, May 2018.

“Bayesian population finding using counterfactual’ modeling of responses,” invited talk, Atlantic Causal Inference Conference, CMU, Pittsburgh, May 2018.

“The future of Bayesian clinical trial design,” Statistical Methods for Post Genomic Data analysis, Keynote, Montpellier, France, January 2018.

“A Bayesian Nonparametric Utility-Based Design for Comparing Treatments to Resolve Air Leaks After Lung Surgery,” invited talk, CEN-ISBS, Joint Conference on Biometrics & Biopharmaceutical Statistics, Vienna, Austria, August 2017.

“A Nonparametric Bayesian Basket Trial Design,” invited, 38th Annual Conference of the International Society for Clinical Biostatistics, Vigo, Spain, July 2017.

“A Nonparametric Bayesian Basket Trial Design,” invited talk, IMS, Singapore, July 2017.

“A Bayesian Nonparametric Utility-Based Design for Comparing Treatments to Resolve Air Leaks After Lung Surgery,” invited talk, 11th Conference on Bayesian Nonparametrics, Paris, France, June 2017.

Bayesian Inference for Latent Biologic Structure with Determinantal Point Processes (DPP), BISP (Bayesian Inference for Stochastic Processes), Milano, Italy, June 2017.

A Population-Finding Design with Covariate-Dependent Random Partitions (in Spanish), Congreso Bayesiano de América Latina (COBAL), Guanajuato, Mexico, June 2017.

Reciprocal Graphical Models for Integrative Gene Regulatory Network Analysis, Graybill 2017 conference, Fort Collins, CO, June 2017.

A Bayesian Nonparametric Approach for Semi-Competing Risk, 2017 Conference on Lifetime Data Science, Storrs, CT, May 2017.

The Future of Bayesian Clinical Trial Design, Symposium on Dose Selection for Cancer Treatment Drugs, Stanford, CA, May 2017.

Heterogeneous Reciprocal Graphs for TCGA Cancer Biomarkers, 40th Annual Midwest Biopharmaceutical Statistics Workshop, Muncie, IN, May 2017.

Bayesian Inference for Latent Biologic Structure with Determinantal Point Processes (DPP), ENAR, Washington, DC, March 2017.

Dynamic treatment regimes - Nonparametric Bayes for causal inference, Korean Statistics Society, keynote talk, Daejeon, South Korea, November 2016.

Bayesian Multiplicity Control for Multiple Graphs, JSM, Chicago, IL, August 2016.

Modeling and inference with feature allocation models (keynote), BayesM, Firenze, Italy, June 2016.

Comparing Graphs, ISBA World Meeting, Cagliari, Italy, June 2016.

Modeling and inference with feature allocation models, MCMSki, Lenzerheide, Switzerland, January 2016.

Dynamic treatment regimes - Nonparametric Bayes for causal inference, StatFoo conference, Google, Mountainview, CA, October 2015.

Bayesian Inference for Latent Biologic Structure with Determinantal Point Processes (DPP), plenary talk, Congresso SPE2015 Sociedade Portuguesa de Estatística, Faro, Portugal, October 2015.

Feature allocation models for tumor heterogeneity, Joint Statistical Meeting, Seattle, WA, August 2015.

Nonparametric Bayesian survival regression with variable dimension covariate vector, keynote speaker, Workshop on Flexible Models for Longitudinal and Survival Data with Applications in Biostatistics, Warwick, U.K., July 2015.

Dynamic treatment regimes - Nonparametric Bayes for causal inference, Novartis Biostatistics Workshop, Shanghai, China, July 2015.

Subgroup Reporting using Nonparametric Bayesian Inference, ISBS-DIA Joint Symposium on Biopharmaceutical Statistics, Beijing, China, June 2015.

A Population-Finding Design with Nonparametric Bayesian Response Model, Workshop on Design and Analysis of Experiments in Healthcare, Isaac Newton Institute, Cambridge, U.K., July 2015.

BNP Inference for Dynamic Treatment Regimes, 10th Workshop on Nonparametric Bayesian inference, Raleigh, NC, June 2015.

Subgroup Reporting using Nonparametric Bayesian Inference, New England Statistics Symposium, Storrs, CT, April 2015.

Subgroup Reporting using Nonparametric Bayesian Inference, Conference of Texas Statisticians, UT Austin, TX, April 2015.

A Bayes rule for subgroup reporting – Bayesian adaptive enrichment designs, ENAR, Miami, FL, March 2015.

Nonparametric Bayesian regression, XIV Escola de Modelos de Regressão, Campinas, Brazil, March 2015.

A Bayesian Feature Allocation Model for Tumor Heterogeneity, III Forum Mineiro de Estatística e Probabilidade, UFMG, Belo Horizonte, Brasil, August 2014.

A Bayesian Feature Allocation Model for Tumor Heterogeneity (in Spanish), III Jornada Internacional de Probabilidad y Estadística, Pontificia Univ. Católica del Perú, Lima, Peru, August 2014.

Nonparametric Bayesian Data Analysis, JSM 2014, Boston, MA, August 2014.

Nonparametric Bayesian Data Analysis, Foundations lecture, ISBA World Meeting, Cancun, Mexico, July 2014.

Tutorial: Bayesian Inference and Multiplicity Control 2014 International Workshop on Controlling Multiplicity in Statistical Analysis, Shanghai, China, June 2014.

Two Adaptive Enrichment Designs with Covariate-Dependent Random Partitions, 2014 International Workshop on Controlling Multiplicity in Statistical Analysis, Shanghai, China, June 2014.

Modeling tumor heterogeneity, Plenary talk, SRCOS 2014 Summer Research Conference, Galveston, TX, June 2014.

A Bayesian Feature Allocation Model for Tumor Heterogeneity Abel Symposium 2014, Lofoten, Norway, May 2014.

Bayesian Subgroup finding by Stochastic Optimization, SIAM Conference on Uncertainty Quantification, Savannah, GA, April 2014.

A Bayesian Feature Allocation Model for Tumor Heterogeneity, ENAR, Baltimore, MD, March 2014.

A Bayesian Feature Allocation Model for Tumor Heterogeneity, Big Data in Biomedicine, Warwick, U.K., February 2014.

A Bayes Rule for Subgroup Reporting – Adaptive Enrichment Designs, Bayesian Biostatistics and Bioinformatics Conference Houston, TX, February 2014.

A Nonparametric Bayesian Approach to Subgroup Analysis, MCMSki, Chamonix, France, January 2014.

Subgroup Reporting using Nonparametric Bayesian Inference, ERCIM 2013, London, December 2013.

A Nonparametric Bayesian Model for Local Clustering with Application to Proteomics, San Antonio Area Chapter of the ASA, San Antonio, TX, November 2013.

A Nonparametric Bayesian Model for Local Clustering with Application to Proteomics, 3rd Workshop on Bayesian Inference for Latent Gaussian Models, Reykjavik, Iceland, September 2013.

Estimation for Bayesian adaptive designs, ASA/FDA Workshop, Washington DC, September 2013.

A nonparametric Bayesian model for a clinical trial design for targeted agents, European Meeting of Statistics, Budapest, July 2013.

Flexible BNP Regression in Bayesian Biostat, 9th Workshop on Bayesian Nonparametrics, Leiden, June 2013.

A Bayesian clinical trial design for targeted agents in metastatic cancer, 7th Workshop in Simulation, Rimini, Italy, May 2013.

Bayesian Graphical Models for Differential Pathways, ENAR, Washington DC, March 2013.

Towards Breaking the Histone Code – Bayesian Graphical Models for Histone Modifications, ISBA Regional Meeting, Varanasi, India, January 2013.

Towards Breaking the Histone Code – Bayesian Graphical Models for Histone Modifications, Eighth International Triennial Calcutta Symposium, Calcutta, India, December 2012.

A Nonparametric Bayesian Model for Local Clustering, The Impact of Statistical Thinking in Economics and Life Sciences (workshop), Bocconi University, Milano, Italy, September 2012.

A Nonparametric Bayesian Model for Local Clustering, Bayesian Nonparametrics, ICERM, Brown University, September 2012.

A Time-Series DDP for Functional Proteomics Profiles, 8th World COngress in Probability and Statistics, Istanbul, Turkey, July 2012.

A Bayesian Graphical Model for ChIP-Seq Data on Histone Modifications, ISBA World Meeting, Kyoto, Japan, June 2012.

A Nonparametric Bayesian Model for Local Clustering, Biometric Society (WNAR), Fort Collins, CO, June 2012.

A Bayesian Graphical Model for ChIP-Seq Data on Histone Modifications, Biometric Society (ENAR), Washington DC, March 2012.

A Bayes Rule for Subgroup Reporting, 5th Annual Bayesian Biostatistics Conference, M.D. Anderson Cancer Center, Houston, TX, January 2012.

Diseños adaptativos para ensayos clínicos: oportunidades y desafíos para los métodos Bayesianos, III Latin Americal Meeting on Bayesian Statistics (COBAL), Pucon, Chile, October 2011.

Bayesian decision theoretic MCP: application to phage display data, 7th International Conference on Multiple Comparison Procedures, Washington, DC, September 2011.

Sequential stopping for high-throughput experiments, Optimal design for mixed effects non-linear and generalised linear models, Isaac Newton Institute, U.K., August 2011.

Bayesian decision theoretic multiplicity control – an applicatoin to phage display data, Hierarchical Models and Markov Chain Monte Carlo, Crete, Greece, June 2011.

Random Partition Models – BNP and Random Clustering, 8th Workshop on Bayesian Nonparametrics, Veracruz, Mexico, June 2011.

A Dependent Polya Tree Model: Bayesian Nonparametric Survival Regression, 8th ICSA International Conference: Frontiers of Interdisciplinary and Methodological Statistical Research, Guangzho, China, December 2010.

A Bayesian Discovery Procedure, Adaptive Deisgns and multiple testing procedures workshop, Vienna, Austria, September 2010.

A Nonparametric Bayesian Approach to Biomarker Discovery, Joint Statistical Meetings, Vancouver, Canada, August 2010.

Nonparametric Bayes for population PK/PD, Workshop on semiparametric Bayesian inference: applications in pharmacokinetics and pharmacodynamics, SAMSI, RTP, NC, July 2010.

Modeling dependent gene expression, Annual ICSA Applied Statistics Symposium, Indianapolis, IN, June 2010.

Modeling Dependent Gene Expression, Workshop on Model Unvertainty, CRISM, Warwick, UK, May 2010.

Bayesian Clustering with Regression, Conference on Nonparametric Statistics and Statistical Learning, Columbus, OH, May 2010.

Borrowing strength with non-exchangeable priors over subpopulations, ENAR, New Orleans, March 2010.

Covariate-Dependent Bayesian Clustering – PPMx, Workshop on Mixture Estimation and Applications, ICMS, Edinburgh, UK, March 2010.

107 invited talks at conferences and workshops, 1989–2009.

Invited Departmental Seminars (2010 – present)

Bayesian Categorical Matrix Factorization via Double Feature Allocation, Sandia National Labs, Albuquerque, NM, Oct. 2018.

Nonparametric Bayesian data analysis, Texas State Univ., San Marcos, TX, Sept. 2018.

The future of Bayesian clinical trial design, Northern Illinois University, DeKalb, IL, Sept. 2018.

Bayesian Categorical Matrix Factorization via Double Feature Allocation, Northern Illinois University, DeKalb, IL, Sept. 2018.

El futuro del diseño de ensayos clínicos desde el enfoque bayesiano (in Spanish), Pontificia Universidad Católica del Perú, Lima, Peru, Aug. 2018.

Bayesian Feature Allocation Models for Tumor Heterogeneity, Texas A&M, College Station, TX, February 2018.

Bayesian Feature Allocation Models for Tumor Heterogeneity, Harvard U., Boston, MA, January 2018.

Reciprocal Graphical Models for Integrative Gene Regulatory Network Analysis, U. Washington, Seattle, WA, October 2017.

Reciprocal Graphical Models for Integrative Gene Regulatory Network Analysis, Virginia Tech, Blacksburg, VA, September 2017.

Reciprocal Graphical Models for Integrative Gene Regulatory Network Analysis, Johns Hopkins University, Baltimore, MD, April 2017.

Bayesian Inference for Latent Biologic Structure with Determinantal Point Processes (DPP), Pennsylvania State University, March 2017.

Dynamic treatment regimes - Nonparametric Bayes for causal inference, Vanderbilt University, Nashville, December 2016.

Reciprocal Graphical Models for Integrative Gene Regulatory Network Analysis, Seoul National University, Seoul, Korea, November 2016.

Reciprocal Graphical Models for Integrative Gene Regulatory Network Analysis, PhD/Post Doc workshop at Kjaekken, University in Oslo, September 2016.

Nonparametric Bayes & Biostatistics, University in Oslo, November 2016.

Bayesian Inference for Latent Biologic Structure with Determinantal Point Processes, UC Irvine, May 2016.

Dynamic treatment regimes - Nonparametric Bayes for causal inference, UNC Chapel Hill, NC, March 2016.

A Bayesian Feature Allocation Model for Tumor Heterogeneity, U. Connecticut, Storrs, CT, April 2015.

A Bayesian Feature Allocation Model for Tumor Heterogeneity, NIH/NICHD, Rockville, MD, November 2014.

A Bayesian Feature Allocation Model for Tumor Heterogeneity, Yale University, New Haven, CT, October 2014.

A Bayesian Feature Allocation Model for Tumor Heterogeneity, Emory University, September 2014.

A Bayes rule for subgroup reporting with an application in a population finding design, Grand Rounds talk, UTSW/Parkland Hospital, Dallas, TX, June 2014.

A Bayes Rule for Subgroup Reporting – Adaptive Enrichment Designs, University of Chicago, May 2014.

A Bayesian Feature Allocation Model for Tumor Heterogeneity, Univ. of South Carolina, Columbia, SC, March 2014.

Bayesian Subgroup finding by Stochastic Optimization, Univ. of South Carolina, Columbia, SC, March 2014.

A Bayes rule for subgroup reporting – Bayesian adaptive enrichment designs, Johns Hopkins University, Baltimore, MD, November 2013

A Nonparametric Bayesian Model for Local Clustering with Application to Proteomics, Purdue University, West Lafayette, IN, October 2013.

A Nonparametric Bayesian Model for Local Clustering, U. Torino, Italy, July 2013.

Bayesian Dose-Finding in Two Treatment Cycles Based On the Joint Utility of Efficacy and Toxicity, Novartis, Basel, June 2013.

A Nonparametric Bayesian Model for Local Clustering with Application to Proteomics, April 2013.

A Nonparametric Bayesian Model for Local Clustering, University of Oslo, Norway, March 2013.

A Nonparametric Bayesian Model for Local Clustering, McGill University, Canada, November 2012.

Nonparametric Bayesian Inference, University of Northern Illinois, October 2012.

A Nonparametric Bayesian Model for Local Clustering, Duke University, October 2012.

A Bayes Rule for Subgroup Reporting, Brigham Young University, March 2012.

Bayesian Clustering with Regression, U. of Illinois, Urbana-Champaign, February 2012.

Semiparametric Bayesian inference for phage display experiments, PUC, Santiago, Chile, May 2011.

Bayesian Approaches to Multiple Testing, Humboldt Universität Berlin, Germany, October 2010.

Bayesian Clustering with Regression, Technische Universität Dortmund, Germany, November 2010.

Innovative Planung von Klinischen Studien, Technische Universität Dortmund, Germany, November 2010.

A Dependent Polya Tree Model: Bayesian Nonparametric Survival Regression, Bristol University, June 2010.

Bayesian Clustering with Regression, Johns Hopkins University, March 2010.

A Dependent Polya Tree Model: Bayesian Nonparametric Survival Regression, UT Austin, March 2010.

Modeling Dependent Gene Expression, Bocconi University, Milano, Italy, March 2010.

A Dependent Polya Tree Model: Bayesian Nonparametric Survival Regression, UC Berkeley, January 2010.

93 invited departmental seminars, 1995-2010.

Contributed Talks and Posters at Conferences and Workshops (2001 – present)

Nonparametric Bayes for causal inference - Dynamic treatment regimes, 11th International Workshop Objective Bayes Methodology, Valencia, Spain, June 2015.

A Bayesian Subgroup Analysis with a Zero-Enriched Polya Urn Scheme, ROeS (Austrian Swiss Region of the Biometric Society), Linz, Austria, September 2009.

Borrowing strength with non-exchangeable priors across subpopulations, Biometric Society/EMR, Istanbul, May 2009.

Semiparametric Bayesian Inference for Multilevel Repeated Measurement Data, Congreso Bayesiano de América Latina COBAL2, Los Cabos, Mexico, February 2005.

Borrowing Strength: Incorporating Information from Early Phase Cancer Clinical Studies into the Analysis of Large, Phase III Cancer Clinical Trials. Case Studies in Bayesian Stats Workshop VI, Pittsburgh, 2001.

17 contributed talks and posters, 1989–2001.

Other Talks (2013 – present)

A Nonparametric Bayesian Model for Local Clustering with Application to Proteomics, UT Austin Undergraduate Mathematics Society, October 2013.

Statistics In Clinical Trial Design, Saturday Morning Math Group, UT Austin, February 2013.

CONFERENCE AND WORKSHOP ORGANIZATION

2007 – present.

Scientific committee: Bayesian causal inference workshop, Ohio State University (2019); Congreso Bayesiano de América Latina (COBAL), Lima, Peru (2019); Bayesian nonparametric inference, Oxford, U.K. (2019); O'Bayes, Austin, TX (2017); Bayesian nonparametric inference: dependence structures and their applications, BIRS, Oaxaca, Mexico (2017); Shortcourses (ISBA World Meeting), Cagliari, Italy (2016); Bayesian Biostatistics 2014, Zurich, Switzerland (2014); Bayesian Biostatistics and Bioinformatics Conference Houston (2014); Conference on Bayesian nonparametrics, Amsterdam, Netherlands (2013); ISBA 2012 World Meeting on Bayesian Statistics, Kyoto, Japan (2012); Bayesian nonparametric inference, Veracruz, Mexico (2011); Design of Experiments in Healthcare, Isaac Newton Institute, Cambridge, U.K. (2011); MCMSki, Salt Lake City, Utah (2011); Frontiers of Statistical Decision Making and Bayesian Analysis, San Antonio, TX (2010); ISBA 2010 World Meeting on Bayesian Statistics, Valencia, Spain (2010); Semiparametric Bayesian Inference: Applications in Pharmacokinetics and Pharmacodynamics, SAMSI, Durham, NC (2010);

Bayesian nonparametric inference, Torino, Italy (2009); MCMSki, Bormio, Italy (2008); Encontro Brasileiro de Estatística Bayesiana, Maresias, SP, Brazil (2008); 8th ISBA World Meeting on Bayesian Analysis, Hamilton Island, Australia (2008); Bayesian Nonparametric Regression, Isaac Newton Institute, Cambridge, U.K. (2007); Bayesian inference in stochastic processes, Valencia, Spain (2007).

Organizing Committee: O'Bayes, Austin, TX (2017); Bayesian nonparametric inference: dependence structures and their applications, BIRS, Oaxaca, Mexico (2017); Design of Experiments in Healthcare, Isaac Newton Institute, Cambridge, U.K. (2011); Frontiers of Statistical Decision Making and Bayesian Analysis, San Antonio, TX (2010); Semiparametric Bayesian Inference: Applications in Pharmacokinetics and Pharmacodynamics, SAMSI, Durham, NC (2010); Bayesian Nonparametric Regression, Isaac Newton Institute, Cambridge, U.K. (2007).

EDITORIAL SERVICE

Associate editor for *Journal of the American Statistical Association* (2002-2005; 2012-2017), *Biometrics* (2001-2004), *Statistical Science* (2005 – current), *Sankhyā* (2009 – current).

Guest editor for *Bayesian Analysis*, *Statistical Modeling: International Journal*, *Statistics and Computing*, *Biometrical Journal*.

Frequent referee for other statistics journals.

OTHER EXTRAMURAL SERVICE

Chair, 2018, ISBA/BNP, chair-elect 2017, past-chair 2019.

Secretary, ISBA/BioPharm (International Society for Bayesian Analysis, Section on Biostatistics and Pharmaceutical Statistics), 2012-14.

President, ISBA (International Society for Bayesian Analysis), 2010, President-Elect 2009, Past-President 2011.

Treasurer, ISBA (International Society for Bayesian Analysis), 2002-2004. Program vice-chair, 2007-2008.

Program Chair, ASA/SBSS (American Statistical Association, Section on Bayesian Statistical Science), 2004.

Board of directors, ISBA, 2005-2007.

Service on NIH and NSF review panels: member NIH/BMRD (2006-2010); ad-hoc member in various study groups.

National Research Council, Committee on Human Health Risks of Trichlorethylene, 2005.

DEPARTMENTAL & UNIVERSITY SERVICE

2011–present, major service.

Chair, ad interim, Department of Statistics and Data Science, 2017-present.

Promotion and Tenure committee, CNS, 2017-2018.

College Curriculum Committee, CNS, 2013-2015.

Recruitment committee, chair, SDS, 2011-13.

GRADUATE STUDENTS

1991–present: Committee member on 4 M.Sc. committees and 20 Ph.D. committees. Advisor to three M.Sc. students and seven Ph.D. students.

Ph.D. students supervised:

Carlos Pagani Zanini, Ph.D. student, UT Austin, current.

Giorgio Paulon, Ph.D. student, UT Austin, current.

Ciara Nugent, Ph.D. student, UT Austin, current.

Daiane Zuanetti, Ph.D. student, mentor for thesis research, UFSCar, Sao Carlos, 2016.

Tianjian Zhou, Ph.D. student, UT Austin, 2017, “Bayesian Nonparametric Models for Biomedical Data Analysis”, currently Northshore Hospital, Chicago, IL.

Lorenzo Trippa, Ph.D. student, “Nonparametric Bayesian inference”, mentor for thesis research, U. Bocconi, Milano, 2009, currently Dana Faber Cancer Center, Boston, MA.

Luis Gonzalo Leon Novelo, Ph.D., 2009. “Random probability measures under order constraints.”, currently UT SPH, Houston, TX.

Rossell, D., Ph.D. student, “Optimal sequential design,” 2006, currently U. Warwick, U.K.

Zhang, Q., Ph.D., “Bayesian joint modeling of longitudinal and survival data,” 2005.

Yang, Y., Ph.D., “Repeated fractional data models,” 2004, currently, FDA.

Zhou, X., Ph.D. student, “Longitudinal ordinal data,” 2005.

M. Liechty, Ph.D., “Modeling variance-covariance matrices,” 2003, currently Drexel University, PA.

M. Liu, M.Sc., “Option Pricing with Neural Networks,” 1995.

S. Liu, M.Sc., “Variable selection in a logistic regression model”, May 1998.

H. Wang, M.Sc., “Bayesian Neural Networks in Sociology”, August 1999.

H. Lopes, Ph.D., “Bayesian Analysis in Latent Factor and Longitudinal Models,” joint advisor with M. West, June 2000, currently Insper, Sao Paulo, Brazil.

External reader/committee member for Ph.D. students:

Sharmita Kar, Benares Hindu University, 2003.

Roberto Casarin, University of Venice, 2004.

Stefanos Giakoumatos, Athens University of Economics and Business, 2004.

Billy Amzal, Université Paris-Dauphine, 2005.

Manuela Buzoianu, Carnegie Mellon University, 2005.

Esther Salazar, UFRJ, 2008.

Postdoctoral fellows mentored:

Yanxun Xu, 2013 – 2015, currently JHU, MD.

Juhee Lee, 2010 – 2013, currently, UCSC, CA.

Riten Mitra, 2010 – 2013, currently U. Louisville, KY.
Lorenzo Trippa, 2009, currently Dana Faber Cancer Center, MA.
Donatello Telesca, 2007-2009, currently UCLA, CA.
Michele Guindani, 2005-2007, currently UT MD Anderson, Houston, TX.
Song Zhang, 2005-2007, now at UT Southwest Medical Center.
Roberto Carta, 2002-2004, now at University of Central Florida, Orlando, FL.
Feng Tang, 2002-2004, now at Medtronic, Minneapolis, MN.
Raquel Montes, visiting postdoc summer 2002, now at URJC, Madrid.

COURSES TAUGHT

Introductory courses in probability and statistics at undergraduate level: for social science majors; for mathematics majors; for engineering majors.

Advanced mathematical statistics for graduate students (Textbook – Gelman, Carlin, Stern and Rubin).

Applied probability models and uses in statistical analysis.

Nonparametric Bayesian Inference

Experimental design for non-statistics graduate students (Textbook – Montgomery).

Scientific computing (Textbooks – Thisted, Tanner).

Monte Carlo simulation in statistics

Linear models

Special topics courses: Model mixtures and mixture models; Model comparisons and default methods (independent study); Bayesian optimal design (independent study); Bayesian econometrics (independent study); Time series (independent study, undergraduate); Simulation in statistics (in German), at the University of Basel; Markov chain Monte Carlo simulation, at CNR-IAMI, Milano.

Short courses:

Non-parametric Bayesian data analysis (in Spanish, Universidad Simon Bolivar, Caracas, Venezuela, 2001)

Bayesian clinical trial design (Joint Statistical Meeting, Minneapolis, MN, 2005)

Markov chain Monte Carlo simulation (in Spanish, Foro Nacional, Guanajuato, Mexico, 2005)

Bayesian Decision Problems in Biostatistics and Clinical Trials (Applied Bayesian Summer School, Trento, Italy, June 2008).

Nonparametric Bayesian inference, Universidade de Lisboa (January 2010)

Bayesian Adaptive Methods for Clinical Trials, International Conference on Health Policy Statistics, Washington, DC, 2010.

Bayesian clinical trial design (Frontiers of Statistical Decision Making and Bayesian Analysis, San Antonio, TX, 2010).

Nonparametric Bayesian inference, CBMS regional conference, UCSC, Santa Cruz, CA, August 2010.

Nonparametric Bayesian Inference, ASA/SBSS Webinar, March 2013.

Bayesian Biostatistics, University of Zürich, Zürich, Switzerland, June 2013.

Nonparametric Bayesian Inference, Uncertainty Quantification Summer School USC, Los Angeles, CA, August 2013.

Nonparametric Bayesian Inference, 3rd Workshop on Bayesian Inference for Latent Gaussian Models, Reykjavik, Iceland, September 2013.

Nonparametric Bayesian data analysis, ENAR, Baltimore, MD, March 2014.

Bayesian Biostatistics (in Spanish), Latinamerican School of Bayesian Statistics, Chetumal, Mexico, July 2014

Nonparametric Bayesian data analysis, UFMG, Belo Horizonte, Brasil, August 2014.

Nonparametric Bayesian data analysis, JSM, Boston, MA, August 2014.

Nonparametric Bayesian models, Machine Learning Summer School, UT Austin, TX, January 2015.

Bayesian biostatistics – subgroup analysis and design of clinical trials, New England Statistics Symposium, Storrs, CT, April 2015.

Adaptive Methods in Modern Clinical Trials, JSM, Chicago, IL, August 2016.

Frequentist and Bayesian adaptive Methods in Modern Clinical Trials, JSM, Baltimore, MD, August 2017.

Practical Considerations for Bayesian and Frequentist Adaptive Clinical Trials, JSM, Vancouver, Canada, July 2018.

Estadística Bayesiana no paramétrica (in Spanish), Pontificia Univ. Católica del Perú, Lima, Peru, August 2018.

Inferencia estadística desde una perspectiva Bayesiana no paramétrica, (in Spanish), Pontificia Univ. Católica del Perú, Lima, Peru, August 2018.

Practical Considerations for Bayesian and Frequentist Adaptive Clinical Trials, JSM, Denver, CO, July 2019.