

## 1 Biographical Data

### NAME

Peihua Qiu

### EDUCATION

Time Period	Degree	Major	Institution
Sept 93 - Dec 96	Ph.D.	Statistics	University of Wisconsin-Madison
Jan 92 - Aug 93	M.S.	Statistics	University of Georgia
Aug 86 - July 89	M.S.	Statistics	Fudan University, P.R. China
Aug 82 - July 86	B.S.	Mathematics	Fudan University, P.R. China

### EMPLOYMENT

Time Period	Job Title	Institution
July 13 -	Professor and Chair	University of Florida, Biostatistics
Aug 07 - June 13	Full Professor	University of Minnesota, Statistics
Aug 02 - Aug 07	Associate Professor	University of Minnesota, Statistics
Aug 98 - Aug 02	Assistant Professor	University of Minnesota, Statistics
Nov 96 - Aug 98	Consulting Manager	Ohio State University, Biostatistics Center

### SHORT RESEARCH VISITS

Time Period	Job Title	Institution
01/20/12-03/05/12	Visiting Fellow	University of Melbourne, Australia
08/14/11-08/27/11	Visiting Fellow	University of Texas at Houston
05/25/08-06/25/08	Visiting Fellow	Nankai University, China
07/15/06-07/25/06	Visiting Fellow	National Taiwan University, Taiwan
06/13/05-06/19/05	Visiting Fellow	Universite catholique de Louvain, Belgium
09/01/04-11/30/04	Visiting Fellow	Australian National University, Australia
01/05/04-01/15/04	Visiting Fellow	Universite catholique de Louvain, Belgium
08/20/03-09/01/03	Visiting Fellow	Universite catholique de Louvain, Belgium
05/23/02-06/20/02	Visiting Fellow	Australian National University, Australia

## 2 Scholarship/Creative Activity

### RESEARCH MONOGRAPH

1. Qiu, P. (2005), *Image Processing and Jump Regression Analysis*, New York: John Wiley & Sons (Inaugural Ziegel prize winner, sponsored by *Technometrics*, 2007).
2. Qiu, P. (2013), *Introduction to Statistical Process Control*, London: Chapman & Hall/CRC.

### **REFEREED BOOK CHAPTERS**

3. Qiu, P. (2011), “Jump Regression Analysis,” In *International Encyclopedia of Statistical Sciences* (Miodrag Lovric ed.), 702–704, Springer.
4. Potegal, M., and Qiu, P. (2010), “Anger in children’s tantrums: a new quantitative, behaviorally based model,” In *International Handbook of Anger* (Eds, M. Potegal, G. Stemmler, and C. Spielberger), pp. 193–217, New York: Springer.
5. Qiu, P. (2009), “Image restoration,” In *Wiley Interdisciplinary Reviews: Computational Statistics*, **1**, 110–113, John Wiley & Sons.
6. Hawkins, D.M., Qiu, P., and Zamba, K.D. (2008), “Change-point methods,” *Encyclopedia of Statistics in Quality and Reliability*, John Wiley & Sons.
7. Hsu, J.C., Qiu, P., Hin, L.Y., Mutti, D.O., and Zadnik, K. (2004), “Multiple comparisons with the best ROC curve”, In *IMS Lecture Notes 47, New Developments in Multiple Comparison Procedures* (Y. Benjamini, S. Sarkar, and F. Bretz, eds), 65–75.
8. Qiu, P. (2000), “Some recent developments on edge detection and image reconstruction based on local smoothing and nonparametric regression,” in book *Recent Research Developments in Pattern Recognition*, Vol. 1, 41–49.

### **EDITED CONFERENCE PROCEEDINGS**

9. *Proceedings of the 2nd International Congress on Image and Signal Processing (CISP09)*, vol. 1–9 (Editors: Qiu, P., Yiu, C., Zhang, H., and Wen, X.), New York: IEEE, Inc.
10. *Proceedings of the 4th International Congress on Image and Signal Processing (CISP11)*, vol. 1–5 (Editors: Qiu, P., Xiang, Y., Ding, Y., Li, D., and Wang, L.), New York: IEEE, Inc.

### **PAPERS PUBLISHED IN REFEREED JOURNALS**

11. Qiu, P., and Xiang, D., “Statistical Process Screening System: An Approach For Dynamically Identifying Irregular Individuals,” *Technometrics*, (accepted).
12. He, J., Qiu, P., Park, K.Y., Xu, Q., and Potegal, M. (2013), “Anger and Distress Emotion Clusters in Young Chinese Childrens Responses to Toy Removal as Determined from Behavioral Time Course,” *International Journal of Behavioral Development*, (accepted).
13. Mukherjee, P.S., and Qiu, P. (2013), “Efficient Bias Correction For MRI Image Denoising,” *Statistics in Medicine*, **32**, 2079–2096.

14. Qiu, P., and Xing, C. (2013), “Feature Based Image Registration Using Non-Degenerate Pixels,” *Signal Processing*, **93**, 706–720.
15. Qiu, P., and Xing, C. (2013), “On Nonparametric Image Registration,” *Technometrics*, **55** 174–188.
16. Xiang, D., Qiu, P., and Pu, X. (2013), “Local polynomial regression analysis of multivariate longitudinal data,” *Statistica Sinica*, **23**, 769–789.
17. Li, Z., Qiu, P., Chatterjee, S., and Wang, Z. (2013), “Using P-Values To Design Statistical Process Control Charts,” *Statistical Papers*, **54**, 523–539.
18. Liu, X., Zhu, X., Qiu, P., and Chen, W. (2012), “A correlation-matrix-based hierarchical clustering method for functional connectivity analysis,” *Journal of Neuroscience Methods*, **211**, 94–102.
19. Qiu, P., and Mukherjee, P.S. (2012), “Edge structure preserving 3-D image denoising by local surface approximation,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **34**, 1457–1468.
20. Qiu, P., and Li, Z. (2011), “On Nonparametric Statistical Process Control Of Univariate Processes,” *Technometrics*, **53**, 390–405.
21. Qiu, P., and Li, Z. (2011), “Distribution-Free Monitoring of Univariate Processes,” *Statistics and Probability Letters*, **81**, 1833–1840.
22. Xing, C., and Qiu, P. (2011), “Intensity Based Image Registration By Nonparametric Smoothing,” *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **33**, 2081–2092.
23. Mukherjee, P.S., and Qiu, P. (2011), “3-D Image Denoising By Local Smoothing and Nonparametric Regression,” *Technometrics*, **53**, 196–208.
24. Qiu, P., and Mukherjee, P.S. (2010), “Edge structure preserving image denoising,” *Signal Processing*, **90**, 2851–2862.
25. Huang, X., and Qiu, P. (2010), “Blind Deconvolution For Jump-Preserving Curve Estimation,” *Mathematical Problems in Engineering*, **2010**, Article ID 350849, 1–9.
26. Qiu, P., and Zou, C. (2010), “Control Chart For Monitoring Nonparametric Profiles With Arbitrary Design,” *Statistica Sinica*, **20**, 1655–1682.
27. Qiu, P., Zou, C., and Wang, Z. (2010), “Nonparametric profile monitoring by mixed effects modeling (with discussions),” *Technometrics*, **52**, 265–277.
28. Qiu, P., Zou, C., and Wang, Z. (2010), “Nonparametric profile monitoring by mixed effects modeling - Rejoinder,” *Technometrics*, **52**, 288–293.
29. Cheng, M., Qiu, P., Tan, X., and Tu, D. (2009), “Nonparametric Confidence Intervals for the Crossing Point of Two Hazard Functions,” *Lifetime Data Analysis*, **15**, 441–454.
30. Zhang, B., Su, Z., and Qiu, P. (2009), “On Jump Detection In Regression Curves Using Local Polynomial Kernel Estimation,” *Pakistan Journal of Statistics*, **25**, 505–528. (Note: This is an invited submission to celebrate the 25th anniversary of the journal.)

31. Zou, C., and Qiu, P. (2009), “Multivariate statistical process control using LASSO,” *JASA*, **104**, 1586–1596.
32. Qiu, P., Yang, R., and Potegal, M. (2009), “Statistical Modeling of the Time Course of Tantrum Anger,” *Annals of Applied Statistics*, **3**, 1013–1034.
33. Joo, J.H., and Qiu, P. (2009), “Jump detection in a regression curve and its derivative,” *Technometrics*, **51**, 289–305.
34. Zou, C., Qiu, P., and Hawkins, D.M. (2009), “Nonparametric control chart for monitoring profiles using the change point formulation,” *Statistics Sinica*, **19**, 1337–1357.
35. Chatterjee, S., and Qiu, P. (2009), “Distribution-Free Statistical Process Control With Bootstrap Cumulative Sum Control Charts,” *Annals of Applied Statistics*, **3**, 349–369
36. Qiu, P., and Sun, J. (2009), “Using conventional edge detectors and post-smoothing for segmentation of spotted microarray images,” *Journal of Computational and Graphical Statistics*, **18**, 147–164.
37. Qiu, P. (2009), “Jump-preserving surface reconstruction from noisy data,” *Annals of the Institute of Statistical Mathematics*, **61**, 715–751.
38. Qiu, P. (2008), “Nonparametric estimation of the point spread function for blind image deblurring,” *Computational Statistics and Data Analysis*, **52**, 4828–4841.
39. Qiu, P. (2008), “Distribution-Free Multivariate Process Control Based On Log-Linear Modeling,” *IIE Transactions*, **40**, 664–677.  
(Note: This paper was featured by an article published in the *Industrial Engineer* magazine, **40**, 2008, 53–54.)
40. Hall, P., Qiu, P., and Rau, C. (2008), “Tracking edges, corners and vertices in an image,” *Scandinavian Journal of Statistics*, **35**, 1–17.
41. Qiu, P., and Sheng, J. (2008), “A Two-Stage Procedure For Comparing Hazard Rate Functions,” *JRSS-B*, **70**, 191–208.
42. Qiu, P., and Sun, J. (2007), “Local smoothing image segmentation for spotted microarray images,” *JASA*, **102**, 1129–1144.
43. Sheng, J., and Qiu, P. (2007), “On p-value calculation for multi-stage additive tests,” *Journal of Statistical Computation and Simulation*, **77**, 1057–1064.
44. Hall, P., and Qiu, P. (2007), “Blind deconvolution and deblurring in image analysis,” *Statistica Sinica*, **17**, 1483–1509.
45. Hall, P., and Qiu, P. (2007), “Nonparametric estimation of a point spread function in multivariate problems,” *Annals of Statistics*, **35**, 1512–1534.
46. Qiu, P., (2007), “Jump surface estimation, edge detection, and image restoration,” *JASA*, **102**, 745–756.

47. Gijbels, I., Lambert, A., and Qiu, P. (2007), "Jump-preserving regression and smoothing using local linear fitting: a compromise," *Annals of the Institute of Statistical Mathematics*, **59**, 235–272.
48. Sun, J., and Qiu, P. (2007), "Jump detection in regression surfaces using both first-order and second-order derivatives," *Journal of Computational and Graphical Statistics*, **16**, 289–311.
49. Liu, K., Qiu, P., and Sheng, J. (2007), "Comparing two crossing hazard rates by Cox proportional hazards modeling," *Statistics in Medicine*, **26**, 375–391.
50. Gijbels, I., Lambert, A., and Qiu, P. (2006), "Edge-Preserving Image Denoising and Estimation of Discontinuous Surfaces," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **28**, 1075–1087.
51. Delaigle, A., Hall, P., and Qiu, P. (2006), "Nonparametric methods for solving the Berkson errors-in-variables problem," *JRSS-B*, Vol. 68, 201–220.
52. Hall, P., and Qiu, P. (2005), "Discrete transform approach to errors-in-variables problems," *Biometrika*, Vol. 92, 135–148.
53. Qiu, P. (2004), "The local piecewisely linear kernel smoothing procedure for fitting jump regression surfaces," *Technometrics* Vol. 46, 87-98.
54. Qiu, P. (2003), "A jump-preserving curve fitting procedure based on local piecewise-linear kernel estimation," *Journal of Nonparametric Statistics*, Vol. 15, 437-453.
55. Hawkins, D., Qiu, P., and Chang, W.K. (2003), "The changepoint model for statistical process control," *Journal of Quality Technology*, Vol. 35, 355-366.
56. Qiu, P., and Hawkins, D. (2003), "A robust multivariate CUSUM procedure for detecting shifts in all directions", *JRSS-D*, Vol. 52, 151-164.
57. Qiu, P. (2002), "Regression modelling of a physiological parameter affected by both intrinsic and extrinsic factors," *Biometrical Journal*, Vol. 44, 887-902.
58. Qiu, P. (2002), "A nonparametric method to detect jumps in regression surface," *Journal of Computational and Graphical Statistics*, Vol. 11, 799-822.
59. Qiu, P. (2002), "Fitting a semiparametric model based on two sources of information," *Australian & New Zealand Journal of Statistics*, Vol. 44(1), 87-97.
60. Qiu, P., and Le, Chap (2001), "ROC curve estimation based on local smoothing," *Journal of Statistical Computation and Simulation*, Vol. 70, 55-69.
61. Qiu, P., and Hawkins, D. (2001), "A rank based multivariate CUSUM procedure", *Technometrics*, Vol. 43, 120-132.
62. Qiu, P., and Tsokos, C.P. (2000), "Accelerated life testing with Box-Cox transformation," *Sankhya (Series A)*, Vol. 62, 223-235.
63. Qiu, P., Moeschberger, M.L., Cooke, G.E., and Goldschmidt-Clermont, P.J. (2000), "Sample size to test for interaction between a specific exposure and a second risk factor in a pair-matched case-control study," *Statistics in Medicine*, Vol. 19, 923-935.

64. Zadnik, K., Mutti, D.O., Friedman, N.E., Qualley, P.A., Jones, L.A., Qiu, P., Kim, H., Hsu, J.C., and Moeschberger, M.L. (1999), "Prediction of the onset of juvenile myopia," *Investigative Ophthalmology & Visual Science*, Vol. 40, 1936-1943.
65. Zadnik, K., Mutti, D.O., K., Kim, H., Jones, L.A., Qiu, P., and Moeschberger, M.L. (1999), "Tonic accommodation in children," *Investigative Ophthalmology & Visual Science*, Vol. 40, 1050-1060.
66. Qiu, P., Chappell, R., Obermeyer, W., and Benca, R. (1999), "Modelling daily and subdaily cycles in rat sleep data," *Biometrics*, Vol. 55, 930-935.
67. Qiu, P. (1998), "Discontinuous regression surfaces fitting," *The Annals of Statistics*, Vol. 26, 2218-2245.
68. Qiu, P., and Yandell, B. (1998), "A local polynomial jump detection algorithm in nonparametric regression," *Technometrics*, Vol. 40, 141-152.
69. Qiu, P., and Yandell, B. (1997), "Jump detection in regression surface", *Journal of Computational and Graphical Statistics*, Vol. 6, 332-354.
70. Qiu, P. (1997), "Nonparametric estimation of the jump regression surface," *Sankhya (Series A)*, Vol. 59, 268-294.
71. Qiu, P., and Bhandarkar, S.M. (1996), "An edge detection technique using local smoothing and statistical hypothesis testing," *Pattern Recognition Letters*, Vol. 17, 849-872.
72. Qiu, P. (1994), "Estimation of the number of jumps of the jump regression functions," *Communications in Statistics-Theory and Methods*, Vol. 23, 2141-2155.
73. Qiu, P. (1993), "Strongly consistent estimates of two classes of jump regression functions," *Chinese Journal of Applied Probability and Statistics*, Vol. 9, 116-122.
74. Qiu, P., and Shi, X.Q. (1993), "Generalized statistical function method," *Acta Mathematica Scientia*, Vol. 13, 421-429.
75. Qiu, P. (1991), "Estimation of a kind of jump regression functions," *Systems Science and Mathematical Sciences*, Vol. 4, 1-13.
76. Qiu, P., Asano, Ch., and Li, X. (1991), "Estimation of jump regression functions," *Bulletin of Informatics and Cybernetics*, Vol. 24, 197-212.
77. Qiu, P., and Liu, K. (1990), "A new branch of statistics-smoothing spline method," *Chinese Journal of Applied Probability and Statistics*, Vol. 6, 96-107.

#### **PAPERS PUBLISHED IN CONFERENCE PROCEEDINGS**

(NOTE: Items with \* are peer reviewed)

78. \*Qiu, P., and Mukherjee, P.S. (2011), "Edge structure preserving 3-D image denoising," In *Applications of Mathematics and Computer Engineering* (A. Zemliak and N. Mastorakis ed.), pp. 111-116, WSEAS Press.

79. \*Qiu, P., and Xing, C. (2010), “Intensity based nonparametric image registration,” *Proceedings of the 2010 ACM SIGMM International Conference on Multimedia Information Retrieval*, pp. 221–225, Philadelphia, PA.
80. \*Qiu, P., and Nguyen, T. (2008), “On image registration in magnetic resonance imaging,” *IEEE Proceedings of the 2008 International Conference on BioMedical Engineering and Informatics*, 753–757.
81. Qiu, P. (2005), Discussion about the three presentations of the invited session “Image reconstruction, edge detection and feature-tracking,” *Bulletins of the ISI 55th session*, CD-ROM.
82. Qiu, P. (1999), “Comparisons of several local smoothing jump detectors in one-dimensional nonparametric regression,” *The 1999 ASA Proceedings of the Statistical Computing Section*, 150–155.
83. Qiu, P., and Yandell, B. (1996), “Discontinuity detection in regression surface” *The 1996 ASA Proceedings of the Statistical Computing Section*, 85–90.
84. Qiu, P. (1990), “Jump regression function and forecasting,” *Proceedings of the 4th Annual Conference of the Japanese Society of Computational Statistics*, 13–16, Fukuoka, Japan.

#### **MANUSCRIPTS UNDER REVIEW BY REFEREED JOURNALS**

85. Kang, Y., and Qiu, P., “Jump Detection In Blurred Regression Surfaces,” (tentatively accepted by *Technometrics*).
86. Kang, Y., and Qiu, P., “Blind Image Deblurring Using Jump Regression Analysis,” (submitted to *JRSS-B*).
87. Kang, Y., Mukherjee, P.S., and Qiu, P., “Efficient Blind Image Deblurring Using Nonparametric Regression And Local Pixel Clustering,” (submitted to *IEEE-TIP*).
88. Mukherjee, P.S., and Qiu, P., “Image Denoising by a Local Clustering Framework,” (submitted to *JCGS*).
89. Li, Z., and Qiu, P., “Statistical Process Control Using Dynamic Sampling,” (Revised for *Technometrics*).
90. Park, K.Y., and Qiu, P., “Comparing Crossing Hazard Rate Functions By Joint Modeling Survival And Longitudinal Data,” (submitted to *JRSS-B*).
91. Park, K.Y., and Qiu, P., “Model Selection and Diagnostics For Joint Modeling Of Survival And Longitudinal Data With Crossing Hazard Rate Functions,” (submitted to *Statistics in Medicine*).
92. Qiu, P., and Xiang, D., “Multivariate Dynamic Screening System For Identifying Irregular Longitudinal Patterns,” (submitted to *JASA-ACS*).
93. Qiu, P., and Zhang, J., “On Phase II SPC In Cases When Normality Is Invalid,” (submitted to *QREI*).

## EDITORIALS AND BOOK REVIEWS

1. Qiu, P. (2012), Review of *Microarray Image Analysis: An Algorithmic Approach* by Karl Fraser, Zidong Wang, and Xiaohui Liu, 2010, *Technometrics*, Vol. 54, page 199.
2. Qiu, P., Xiang, Y., Ding, Y., Li, D., and Wang, L. (2011), “Preface,” *Proceedings of the 4th International Congress on Image and Signal Processing*, New York: IEEE, Inc.
3. Qiu, P., C. Yiu, and L. Wang (2011), “Guest editorial: special issue on new trends in multimedia processing,” *Multimedia Tools and Applications*, Vol. 52(1), 1–4.
4. Qiu, P., C. Yiu, H. Zhang, and X. Wen (2009), “Preface,” *Proceedings of the 2nd International Congress on Image and Signal Processing*, New York: IEEE, Inc.
5. Qiu, P. (2008), Review of *Fuzzy Modeling and Fuzzy Control* by Huaguang Zhang and Derong Liu, Birkhäuser, 2006, *Technometrics*, Vol. 50, 408–409.
6. Qiu, P. (2005), Review of *Generalized Least Squares* by Takeaki Kariya and Hiroshi Kurata, John Wiley, 2004, *Technometrics*, Vol. 47, page 519.
7. Qiu, P. (2005), Review of *The Statistical Evaluation of Medical Tests for Classification and Prediction* by Margaret Sullivan Pepe, Oxford University Press, 2003, *JASA*, **100**, 2005, page 705.
8. Qiu, P. (2002), Review of *Statistical Analysis of Microstructures in Materials Science* by Joachim Ohser and Frank Mücklich, John Wiley & Sons, 2000, *Technometrics*, Vol. 44, page 86.
9. Qiu, P. (2000), Review of *Multivariate Image Analysis* by Paul Geladi and Hans Grahn, John Wiley & Sons, 1996, *Technometrics*, Vol. 42, 211–212.

## CONFERENCE PRESENTATIONS

1. Qiu, P. (2012), “Intensity Based Nonparametric Image Registration,” **plenary talk**, 4th International Conference on Computational Intelligence and Software Engineering (CiSE 2012), December 14–16, 2012, Wuhan, China.
2. Qiu, P. (2012), “Statistical Process Screening System: An Approach For Identifying Irregular Individuals,” **invited talk**, 2012 INFORMS annual meeting, October 14–17, 2012, Phoenix, AZ.
3. Qiu, P. (2012), “On Nonparametric Statistical Process Control of Univariate Processes,” *Technometrics* **invited talk with discussions**, 2012 INFORMS annual meeting, October 14–17, 2012, Phoenix, AZ.
4. Qiu, P. (2012), “Comments on the current image processing research,” **invited panelist**, September 9–12, 2012, Opening Workshop, Massive Datasets Program, SAMSI, NC.
5. Qiu, P. (2012), “On nonparametric image registration,” **invited talk**, IFNA World Congress 2012, June 25–July 1, 2012, University of Athens, Athens, Greece.



6. Qiu, P. (2011), "On Nonparametric Statistical Processes Control," **plenary talk**, International Conference on Quality and Reliability Engineering, December 20-22, 2011, Bangalore, India.
7. Qiu, P. (2011), "On Nonparametric Statistical Process Control Of Univariate Processes," **invited talk**, The First International Symposium on System Informatics and Engineering, July 11-13, 2011, Qingdao, China.
8. Qiu, P. (2011), "Intensity Based Nonparametric Image Registration," **invited talk**, IMS-China International Conference on Statistics and Probability, July 8-11, 2011, Xi'An, China.
9. Qiu, P. (2011), "Comparison of Two Hazard Rate Functions," **invited talk**, ICSA 2011 Applied Statistics Symposium, June 26-29, New York.
10. Qiu, P. (2011), "On Nonparametric Statistical Process Control Of Univariate Processes," **invited talk**, 2011 Joint Research Conference on Statistics, June 22-24, 2011, Chicago.
11. Qiu, P. (2011), "3-D Image Denoising By Local Smoothing And Nonparametric Regression," **invited talk**, 2011 IISA Conference on Probability, Statistics, and Data Analysis, April 21-24, 2011, Raleigh, NC, USA.
12. Qiu, P. (2011), "Local Surface Approximation for Edge Structure Preserving 3-D Image Denoising," **plenary talk**, January 29-31, 2011, 5th WSEAS International Conference on COMPUTER ENGINEERING and APPLICATIONS (CEA '11), Puerto Morelos, Mexico.
13. Qiu, P. (2010), "Jump Regression Analysis and Image Processing," **plenary talk**, September 13- 17, 2010, Annual Meeting of the German Statistical Society, Nurnberg, Germany.
14. Qiu, P. (2010), "Nonparametric Profile Monitoring By Mixed Effects Modeling," **featured presentation with discussions**, *Technometrics* invited session, Joint Summer Meeting, July 31 - August 6, 2010, Vancouver, Canada.
15. Qiu, P. (2010), "Intensity Based Nonparametric Image Registration," **invited talk**, July 19-20, 2010, Workshop for the Summer School, The Morningside Center of Mathematics, Chinese Academy of Science (CAS), Beijing, China.
16. Qiu, P. (2010), "Comparison of Two Hazard Rate Functions," **invited talk**, July 17-18, 2010, First Joint Biostatistics Symposium, Renming University, Beijing, China.
17. Qiu, P. (2010), "Distribution-Free Statistical Process Control Of Univariate Processes," **invited talk**, July 2-4, 2010, The international conference on Statistical Analysis of Complex Data (SACD), Yunnan University, Kunming, China.
18. Qiu, P. (2010), "Distribution-Free Statistical Process Control Of Univariate Processes," **invited talk**, May 25-27, 2010, 2010 Joint Research Conference on Statistics, National Institute of Standards and Technology (NIST), Gaithersburg, MD.
19. Qiu, P. (2010), "Intensity Based Nonparametric Image Registration," **invited talk**, March 29-31, 2010, ACM SIGMM International Conference on Multimedia Information Retrieval (MIR), Philadelphia, PA.

20. Qiu, P. (2009), “Jump Regression Analysis and Image Processing,” **special invited talk (50 minutes)**, December 5-7, 2009, The Winter 2009 Canadian Mathematical Society meeting, Windsor, Canada.
21. Qiu, P. (2009), “Intensity Based Nonparametric Image Registration,” **invited talk**, August 1-6, 2009, Joint Summer Meeting, Washington, DC.
22. Qiu, P. (2009), “Nonparametric profile monitoring,” **topic contributed talk**, 1st International Conference on the Interface between Statistics and Engineering, July 13-15, 2009, Beijing, China.
23. Qiu, P. (2009), “Nonparametric profile monitoring,” **invited talk**, IMS-China International Conference on Statistics and Probability, July 3-6, 2009, Weihai, China.
24. Qiu, P. (2009), “Blind Image Deblurring Using Nonparametric Regression,” **invited talk**, May 15-16, 2009, Symposium on “New Directions in Asymptotic Statistics”, University of Georgia, Athens, Georgia, USA.
25. Qiu, P. (2008), “On Image Registration In Magnetic Resonance Imaging,” **invited talk**, May 27-30, 2008, International Conference on BioMedical Engineering and Informatics, Sanya, Hainan, China.
26. Qiu, P. (2008), “Local smoothing segmentation for spotted microarray images,” **invited talk**, June 11-13, 2008, IMS-China International Conference on Statistics and Probability, Hangzhou, China.
27. Qiu, P. (2007), “Nonparametric Estimation Of The Point Spread Function For Blind Image Deblurring,” **invited talk**, June 10-13, 35th Annual Meeting of the Statistical Society of Canada, Memorial University of Newfoundland, St. Johns, Canada.
28. Qiu, P. (2007), “A Two-Stage Procedure For Comparing Hazard Rate Functions,” **topic contributed talk**, July 29 - August 2, 2007, Joint Summer Meeting, Salt Lake City, Utah.
29. Qiu, P. (2006), “Distribution-free multivariate process control based on log-linear modeling,” 2006 Joint Summer Meeting, **topic contributed talk**, August 6-10, 2006, Seattle, Washington.
30. Qiu, P. (2006), “Nonparametric multivariate statistical process control,” 2006 International Conference on Design of Experiments and Its Applications, **invited talk**, July 9-13, 2006, Nankai University, Tianjing, China.
31. Qiu, P. (2006), “Jump-preserving curve estimation by local linear kernel smoothing,” 2006 ICSA Applied Statistics Symposium, **invited talk**, June 14-17, 2006, University of Connecticut Storrs campus.
32. Gijbels, I., Lambert, A., and Qiu, P. (2005), “Estimation of discontinuous curves and surfaces: edge-preserving and smoothing,” International Seminar on Nonparametric Inference, **invited talk**, A Coruna, Spain, July 13–15, 2005.
33. Gijbels, I., Lambert, A., and Qiu, P. (2005), “Estimation of Discontinuous Curves and Surfaces: Edge-Preserving and Smoothing,” 2005 Joint Summer Meeting, **invited talk**, August 7-11, Minneapolis, Minnesota.

34. Qiu, P., and Hall, P. (2005), “Direct Methods for Determining a Point-Spread Function in Image Analysis, Without the Benefit of a Model,” joint meeting sponsored by Institute of Mathematical Statistics (IMS) and Chinese Society of Probability and Statistics (CSPS), **invited talk**, July 9-12, 2005, Peking University, Beijing, China.
35. Qiu, P. (2005), “Nonparametric estimation of the point spread function for image deblurring,” 2005 ICSA Applied Statistics Symposium, **invited talk**, June 12-15, 2005, Washington DC.
36. Qiu, P. (2005), **invited discussant** of the invited session “Image reconstruction, edge detection and feature-tracking”, The 55th Session of the International Statistical Institute, April 5-12, 2005, Sydney, Australia.
37. Lambert, A., Gijbels, I., and Qiu, P. (2005), “Jump-preserving regression and smoothing using local linear fitting: a compromise,” The 55th Session of the International Statistical Institute, **invited talk**, April 5-12, 2005, Sydney, Australia.
38. Lambert, A., Gijbels, I., and Qiu, P. (2004), “Jump-preserving regression and smoothing using local linear fitting: a compromise,” The 6th World Congress of the Bernoulli Society for Mathematical Statistics and Probability, **contributed talk**, July 26-31, 2004, Barcelona, Spain.
39. Qiu, P., and Sun, J. (2004), “Image segmentation for cDNA microarray data based on local polynomial kernel smoothing,” 2004 ENAR Spring Meeting, **invited talk**, March 28-31, Pittsburgh, PA.
40. Qiu, P., and Chatterjee, S. (2003), “Nonparametric Statistical Process Control With Bootstrap Cumulative Sum Control Charts,” 47th Annual Fall Technical Conference, **invited talk**, October 16-17, El Paso, Texas.
41. Qiu, P. (2003), “Multivariate SPC Based On Log-Linear Modeling,” 2003 Spring Research Conference on Statistics in Industry and Technology, **invited talk**, June 4-6, University of Dayton, OH.
42. Hawkins, D., Qiu, P., and Kang, C.W. (2002), “The change-point model for statistical process control”, 2002 Spring Research Conference on Statistics in Industry and Technology, **invited talk**, May 20-22, University of Michigan.
43. Qiu, P., and Hawkins, D. (2001), “A rank based multivariate CUSUM,” 45th Annual Fall Technical Conference, *Technometrics* **invited talk**, October 18-19, Toronto, Canada.
44. Hawkins, D., and Qiu, P. (2001), “Some issues and developments in multivariate SPC,” ASA Quality and Productivity Conference, **invited talk**, May 23-25, Austin.
45. Qiu, P. (1999), “Comparisons of several local smoothing jump detectors in one-dimensional nonparametric regression,” The Joint Statistical Meeting, **contributed talk**, August 8-12, 1999, Baltimore, Maryland.
46. Hsu, J., Qiu, P., Hin, L., Mutti, D., and Zadnik, K. (1999), “Comparing the accuracy of medical diagnostic devices to select the best,” International Biometric Society German Regional Conference, **invited talk**, March 16-19, 1999, Dortmund, Germany.

47. Qiu, P., and Hawkins, D. (1999), “Rank based multivariate CUSUM”, 1999 Spring Research Conference on Statistics in Industry and Technology, **contributed talk**, June 2-4, 1999, Minneapolis, Minnesota.
48. Douglas, J., and Qiu, P. (1997), “A Markov chain Monte Carlo approach to marginal likelihood inference in item response models,” **contributed talk**, July 1997, Psychometric Society Annual Meeting, Gatlinburg.
49. Douglas, J., and Qiu, P. (1996), “A general model and estimation algorithm for factor analysis of categorical data,” **invited talk**, November 1996, Department of Statistics, University of Illinois, Champaign-Urbana.
50. Qiu, P., and Yandell, B. (1996), “Discontinuity detection in regression surface” The Joint Statistical Meeting, **contributed talk**, August 4-8, 1996, Chicago, Illinois.
51. Qiu, P. (1992), “Jump regression surfaces fitting”, AMS-IMS-SIAM Summer Research Conference on Change-Point Problems, **invited talk**, July 11-17, 1992, Mt. Holyoke, MA.
52. Qiu, P. (1991), “Jump regression function estimation,” 48th session of the International Statistical Institute, **invited talk**, September 9-18, 1991, Cairo, Egypt.
53. Qiu, P. (1990), “Jump regression function and forecasting,” The 4th Annual Conference of the Japanese Society of Computational Statistics, **invited talk**, May 17-18, 1990, Fukuoka, Japan.

### INVITED SEMINARS

54. Qiu, P. (2013), “Statistical Process Screening System: An Approach For Identifying Irregular Longitudinal behavior,” March 27, 2013, Department of Industrial and Operations Engineering, University of Michigan, Ann Arbor, MI.
55. Qiu, P. (2012), “Comparison of Two Crossing Hazard Rate Functions,” December 16, 2012, School of Mathematics and Statistics, Wuhan University, Wuhan, China.
56. Qiu, P. (2012), “Statistical Process Screening System: An Approach For Identifying Irregular Individuals,” November 14, 2012, School of Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, GA.
57. Qiu, P. (2012), “Comparison of Two Crossing Hazard Rate Functions,” October 22, 2012, College of Public Health and Health Professions, University of Florida, FL.
58. Qiu, P. (2012), “Jump Regression Analysis and Image Processing,” SAMSI image processing working group, WebEx talk, October 29, 2012, SAMSI, NC.
59. Qiu, P. (2012), “Comparison of two crossing hazard rate functions,” February 28, 2012, Department of Mathematics and Statistics, University of Melbourne, Melbourne, Australia.
60. Qiu, P. (2012), “Jump regression analysis and image processing,” February 21, 2012, Centre for Quantum Computation and Intelligent Systems, University of Technology at Sydney, Sydney, Australia.

61. Qiu, P. (2011), "Jump regression analysis and image processing," November 3, 2011, School of Mathematics and Statistical Sciences, Arizona State University, Tempe, AZ.
62. Qiu, P. (2011), six one-hour lectures on jump regression analysis, image processing, and statistical process control," July 1-6, 2011, School of Statistics and Finance, East China Normal University, Shanghai, China.
63. Qiu, P. (2011), "Some research problems in image processing," July 13, 2011, School of Computer Science and Technology, Qingdao Technological University, Qingdao, China.
64. Qiu, P. (2010), "Jump Regression Analysis and Image Processing," June 26, 2010, Department of Mathematics, Southeastern University, Nanjing, China.
65. Qiu, P. (2010), "Distribution-Free Statistical Process Control Of Univariate Processes," June 22, 2010, School of Statistics and Finance, East China Normal University, Shanghai, China.
66. Qiu, P. (2009), "Comparison of two hazard rate functions," July 17, 2009, Institute of Applied Mathematics, Chinese Academy of Sciences, Beijing, China.
67. Qiu, P. (2009), "Local smoothing segmentation of spotted microarray images," July 16, 2009, Institute of Automation, Chinese Academy of Sciences, Beijing, China.
68. Qiu, P. (2009), "Local smoothing segmentation of spotted microarray images," July 7, 2009, Department of Electric Engineering, Fudan University, Shanghai, China.
69. Qiu, P. (2009), "Blind image deblurring using jump regression analysis," April 30, 2009, School of Mathematics, University of Minnesota.
70. Qiu, P. (2009), "Introduction to some research problems in statistics," February 6, 2009, seminar course, School of Statistics, University of Minnesota.
71. Qiu, P. (2009), "Statistical Modeling of the Time Course of Tantrum Anger," January 15, 2009, Department of Statistics, University of Georgia.
72. Qiu, P. (2008), "Comparison of two hazard rate functions," November 12, 2008, Department of Statistics, University of Pennsylvania.
73. Qiu, P. (2008), a series of six invited lectures were given at The Department of Statistics, Shanghai University of Finance and Economics, China, during June 17–19, 2008. The topics of the lectures are on jump regression analysis and statistical process control.
74. Qiu, P. (2008), "On some recent research topics in image processing and statistical process control," June 9, 2008, Department of Statistics, Nankai University, China.
75. Qiu, P. (2008), "Comparison of Two Possibly Crossing Hazard Rate Functions," April 17, 2008, School of Statistics, University of Minnesota.
76. Qiu, P. (2008), "Local smoothing segmentation of spotted microarray images," March 20, 2008, Statistical Engineering Division, National Institute of Standards and Technology, Gaithersburg, Maryland.

77. Qiu, P. (2008), "Segmentation of spotted microarray images for generating gene expression data," January 16, 2008, Department of Biostatistics, University of North Carolina at Chapel Hill.
78. Qiu, P. (2007), "A two-stage procedure for comparing hazard rate functions," October 25, 2007, Department of Statistics, The Pennsylvania State University.
79. Qiu, P., and Chatterjee, S. (2006), "Nonparametric Statistical Process Control With Bootstrap Cumulative Sum Control Charts," July 19, 2006, Institute of Statistics, National Tsing-Hua University, Taiwan.
80. Qiu, P. (2004), "Jump surface estimation and image restoration," November 25, 2004, Mathematical Sciences Institute, Australian National University, Canberra, ACT 0200, Australia.
81. Qiu, P. (2004), "Segmentation Of cDNA Microarray Images By Local Smoothing," October 26, 2004, Canberra branch, Statistical Society of Australia, Canberra, ACT 0200, Australia.
82. Qiu, P. (2004), "Jump Surface Estimation By Local Smoothing With Applications In Image Processing," April 22-23, 2004, Department of Statistics, Ohio State University, Columbus, Ohio.
83. Qiu, P. (2002), "Image Reconstruction By Local Smoothing Techniques", October 30-31, 2002, Department of Statistics, Texas A&M University.
84. Qiu, P., and Hawkins, D. (2002), "A distribution-free multivariate cusum procedure," June 13, 2002, Center for Mathematics and Its Applications, Australian National University, Canberra, Australia.
85. Qiu, P. (2001), "Nonparametric jump regression analysis and image processing," November 5, 2001, Department of Statistics, University of Chicago.
86. Qiu, P. (2000), a series of three invited lectures were given at The Institute of Systems Science, Academia Sinica, Beijing, P.R. China in May 2000. The titles were: 1. "Nonparametric estimation of jump regression functions"; 2. "ROC curve fitting And multiple comparisons"; 3. "Statistical model building for a rat sleep dataset".
87. Qiu, P. (2000), "Statistical model building for a rat sleep dataset," April 13, 2000, School of Statistics, University of Minnesota.
88. Qiu, P. (1999), "Sample size to test for interaction between a specific exposure and a second risk factor in a pair-matched case-control study," May 4, 1999, Division of Biostatistics, University of Minnesota.
89. Qiu, P. (1998), "Nonparametric estimation of jump regression functions", February 3, 1998, School of Statistics, University of Minnesota.
90. Qiu, P. (1998), "Jump regression analysis and image processing," February 10, 1998, Division of Statistics, Washington State University, Pullman, Washington.
91. Qiu, P. (1998), "Nonparametric ROC curve estimation," May 4, 1998, School of Public Health, The Ohio State University.

92. Qiu, P. (1996), “Modelling daily and subdaily cycles in rat sleep data,” October 8, 1996, Biostatistics Center, The Ohio State University.
93. Qiu, P., Chappell, R., Obermeyer, W., and Benca, R. (1996), “Model building for rat sleep data,” October 4, 1996, Department of Biostatistics, University of Wisconsin-Madison.
94. Qiu, P. (1991), “Estimation of jump regression functions,” November 21, 1991, Department of Statistics, University of Georgia.
95. Qiu, P. (1990), “Some recent research in jump regression analysis,” May 20, 1990, Institute of Engineering Sciences, Kyushu University, Japan.

### 3 Teaching

#### INSTRUCTOR OF THE FOLLOWING COURSES AT UMN

Course Number	Course Level	Date
stat1001	undergraduate	Spring02
stat3011	undergraduate	Fall98, Fall99, Fall99, Fall06, Spring09, Fall09
Stat3012-3022	undergraduate	Winter99, Spring99, Spring00, Fall00, Spring02, Fall02, Spring03, Summer03, Spring10
stat3091	undergraduate	Winter99
Stat5021	graduate	Summer01, Summer02
Stat5031	graduate	Spring11
stat5101	graduate	Fall00
stat5102	graduate	Spring01
stat5401/8401	graduate	Spring07, Spring08
stat5421/8421	graduate	Spring01, Fall03, Fall05, Fall07, Fall10
Stat8051-8061	graduate	Fall02, Fall03, Fall10, Fall12
Stat8053	graduate	Fall07
Stat8931	graduate	Spring04, Spring06, Spring07, Spring10, Fall12

#### GRADUATE STUDENTS ADVISED AT UMN

1. Xiaoshan Zhang (MS 2001), project title: “Measurements of observer agreement”.
2. Rong Yang (Ph.D 2005), thesis title: “Statistical modeling of multivariate longitudinal binary data”.
3. Jingran Sun (Ph.D 2005), thesis title: “Edge detection, image segmentation and their applications in microarray image analysis”.
4. Saveth Ho (MS 2006), project title: “Analysis of three anger datasets”.
5. Jun Sheng (Ph.D 2006), thesis title: “Comparison of two crossing hazard rates”.

6. Jinmei Qi (MS 2007), project title: “Exploratory analysis of circadian rhythm in tantrum frequency and tantrum duration”
7. Jong-Hoon Joo (Ph.D 2008), thesis title: “Jump/Roof/Valley Detection in Regression Curves and Surfaces”
8. Shengjie Zheng (MS 2009), project title: “Comparison of Two Early Breast Cancer Treatments”
9. Wei Liu (Ph.D 2010), thesis title: “Some Charting Methodologies in MSPC”
10. Xiao Liu (MS 2010). project title: “Using a correlation-matrix-based hierarchical clustering method to extract spontaneous BOLD fluctuation patterns”
11. Partha Sarathi Mukherjee (Ph.D 2011), thesis title: “Edge-structure preserving 2-D and 3-D image denoising by jump surface estimation”
12. Xiaopei Wang (MS 2011), project title: “A Dynamic Approach for Finding a Parametric Transformation in Regression”
13. Chen Xing (Ph.D 2012), thesis title: “Image Registration by Non-Degenerate Pixel Detection”
14. Jingnan Zhang (MS 2013), project title: “On Phase II SPC In Cases When Normality Is Invalid”
15. Songxuan Shen (MS 2013), project title: “A Dynamic Parametric Method For Regression Transformations”
16. Yicheng Kang (Ph.D 2013), thesis title: “Edge Detection and Image Restoration of Blurred Noisy Images Using Jump Regression Analysis”
17. Ka Young Park (Ph.D 2013), thesis title: “Comparing Crossing Hazard Rate Functions By Joint Modeling Survival And Longitudinal Data”
18. Jing Liu (MS 2013), project title: “A Review of Two-Dimensional Medical Image Registration Methods”

## VISITORS

1. Changliang Zou, Ph.D. student, Department of Statistics, Nankai University, China. November 25, 2007 – September 25, 2008. Sponsored by an NSF grant for US – China research collaborations.
2. Xingfang Huang, Ph.D. student, Department of Applied Mathematics, Xian Jiaotong University, China, September 1, 2008 – August 31, 2010. Sponsored by China Scholarship Council for joint Ph.D. programs.
3. Zhonghua Li, Ph.D. student, Department of Statistics, Nankai University, China. September 1, 2009 – August 31, 2010. Sponsored by China Scholarship Council for joint Ph.D. programs.



4. Dongdong Xiang, Ph.D. student, Department of Statistics, East China Normal University, China. September 1, 2011 – August 31, 2012. Sponsored by China Scholarship Council for joint Ph.D. programs.
5. Xueli Sung, Associate Professor, Department of Mathematics and Information and Science, Chang'an University, Xi'an, China, November 1, 2011 – October 31, 2012. Sponsored by China Scholarship Council for young researchers.
6. Qi Wang, Lecturer, Department of Mathematics, Northeastern University, Shenyang, China, April 1, 2012 – September 31, 2012. Sponsored by “Northeastern University sponsored overseas study program”.
7. Jiujun Zhang, Associate Professor, Department of Mathematics, Liaoning University, Shenyang, China, January 8, 2013 – January 7, 2014. Sponsored by China Scholarship Council for young researchers.

## 4 Service

### ACADEMIC SERVICE

- Editorial Services
  1. Editor-elect, 2013; editor, 2014-2016, *Technometrics*
  2. Associate Editor, *Journal of the American Statistical Association – Applications and Case Studies*, 2006-2012.
  3. Associate Editor, *Technometrics*, 2007-2012.
  4. Associate Editor, *Biometrics*, 2011-2012.
  5. Associate Editor, *Statistical Papers*, 2011-2012.
  6. Guest Co-Editor, *Multimedia Tools and Applications*, 2011, Special Issue on New Trends in Multimedia Processing, Vol. 52, Issue 1.
  7. Guest Co-Editor, *Quality and Reliability Engineering International*, 2013, Special Issue on Nonparametric Statistical Process Control.
- Services for ASA
  1. Committee on Publications (2013 - 2016)
- Services for ASQ
  1. Journal Editor Committee (2013 - 2016)
- Services for IMS
  1. Committee on Nominations (2011-)
  2. IMS local accommodation committee chair, Joint Summer Meeting, August 7-11, 2005, Minneapolis, MN.

- Meeting organizers, panels, chairs of sessions, etc.:
  1. Program co-chair
    - (a) 2009 International Congress on Image and Signal Processing, October 17-19, 2009, Tianjin, China.
    - (b) 2011 International Congress on Image and Signal Processing, October 13-15, 2011, Shanghai, China.
  2. Program committee member
    - (a) International Conference on Statistical Analysis of Complex Data, July 1-3, 2010, Kunming, China.
    - (b) 2011 International Conference on Applied and Engineering Mathematics, October 28-30, 2011, Shanghai, China.
    - (c) 2011 International Conference on Computational Biology and Bioinformatics, October 28-30, 2011, Shanghai, China.
    - (d) International Conference on Pattern Recognition Applications and Methods, February 6-8, 2012, Algarve, Portugal.
    - (e) The 4th International Conference on Computational Intelligence and Software Engineering (CiSE 2012), December 14-16, 2012, China.
    - (f) The 2nd International Conference on Pattern Recognition Applications and Methods, February 15-18, 2013, Barcelona, Spain.
  3. Organizers of 20 invited sessions in various conferences.
  4. Chairs of many sessions in various conferences.
  5. Invited panelist of a panel discussion organized by the Twin Cities Chapter of ASA, February 10, 2005.
  6. NSF panelist, 2008.
  7. Jury for evaluating promotion materials for Chinese Academy of Sciences.
  8. Jury for evaluating promotion materials for Yarmouk University of Jordan.
  9. Outside reviewers of some faculty promotion cases for universities in USA and UK.
  10. Outside reviewers or committee members of Ph.D students from Australia (once), Belgium (once), Egypt (once), India (once), and China (twice).
- Referee for the following journals/agencies
  - Journals:

*American Statistician; Annals of Applied Statistics; Annals of the Institute of Statistical Mathematics; Annals of Statistics; Applied Mathematics and Computation; Applied Stochastic Models in Business and Industry; Bioinformatics; Biometrics; BMC Medical Research Methodology; Communications in Statistics - Simulation and Computation; Communications in Statistics - Theory and Methods; Computational Statistics and Data Analysis; Computer Methods and Programs in Biomedicine; Computers and Mathematics with Applications; Environmental and Ecological Statistics; IEEE Transactions on Geoscience and Remote Sensing; IEEE Transactions on Image Processing; IEEE Transactions on Multimedia; IEEE Transactions on NanoBioscience;*

*IEEE Transactions on Neural Networks; IEEE Transactions on Pattern Analysis and Machine Intelligence; IEEE Transactions on Signal Processing; IEEE Transactions on Systems, Man, and Cybernetics; IIE Transactions; IMS volume for the 3rd Lehmann Symposium; Information Sciences; Inverse Problems; Journal of American Statistical Association; Journal of Applied Statistics; Journal of Computational and Graphical Statistics; Journal of Hydrology; Journal of the Korean Statistical Society; Journal of Multivariate Analysis; Journal of Nonparametric Statistics; Journal of the Operational Research Society; Journal of Quality Technology; JRSS-A; JRSS-B; Journal of Statistical Computation and Simulation; Journal of Statistical Planning and Inference; Lifetime Data Analysis; Mathematical Problems in Engineering; Multimedia Tools and Applications; NeuroImage; Probability Theory and Related Fields; Quality and Reliability Engineering International; Sankhya (Series A); Scandinavian Journal of Statistics; Science in China (Series A); SIAM Journal on Imaging Sciences; Signal Processing; Statistica Sinica; Statistical Analysis and Data Mining; Statistical Papers; Statistics and Computing; Statistics and Its Interface; Statistics and Probability Letters; Statistics in Medicine; Stochastic Environmental Research and Risk Assessment; Technometrics; The Open Medical Informatics Journal.*

– Grant proposals review:

NSF; National Security Agency; Alzheimer’s Association; Research Grant Council of Hong Kong; National Sciences and Engineering Research Council of Canada; Romanian National Research Council.

– Book proposals review:

John Wiley & Sons; Springer; Pearson Arts & Sciences.

## **UNIVERSITY SERVICE**

• Department service:

1. Curriculum committee (2006-2007)
2. Faculty search committee (2005-2006, 2007-2008 Chair)
3. Graduate admissions committee (1998-2004)
4. Ph.D. exam committee (2009-1010, 2010-2011 Chair)
5. Personnel Committee (2007-2009)
6. Research computing committee (2001-2002)
7. Seminar coordinator (2005-2006)

• College of Liberal Arts service:

1. CLA InfoTechnology Committee (2002-2003)
2. CLA Faculty Research Awards Committee (2010-2011)

• University service:

1. General Research Advisory Committee, UMN Graduate School (2008-2009)

- Other service:
  1. Biostatistics faculty search committee (2002-2003)

## 5 Grants, Contracts and Awards

### GRANTS

1. Principal Investigator, “Intensity-Based Image Registration and 3-D Image Denoising,” National Science Foundation, DMS-1007506, amount: \$150,000, grant period: August 1, 2010 - July 31, 2013.
2. Co-Principal Investigator, “Quantifying children’s emotions with the emotion intensity-linkage function model,” NIH, PI: Professor Michael Potegal, Department of Pediatrics, University of Minnesota Medical School, amount: \$906,668, grant period: September 30, 2008 - July 31, 2011, (3.36 months/year effort plus a 50% RA in statistics for three years).
3. Principal Investigator, “Statistical Analysis of Image Restoration and Its Applications in Magnetic Resonance Imaging,” National Science Foundation, DMS-0706082, amount: \$140,000, grant period: July 1, 2007 - June 30, 2011.
4. Principal Investigator, US – China research collaborations, National Science Foundation, DMS-0721204, amount: 39,996 USD (from US NSF) plus 30,000 Chinese Yuan (from Chinese NSF), grant period: August 1, 2007 - July 31, 2008.
5. Principal Investigator, “Image Segmentation for cDNA Microarray Data and Jump Preserving Surface Estimation,” National Science Foundation, DMS-0406020, amount: \$50,000, grant period: August 1, 2004 - July 30, 2007.
6. Co-Principal Investigator, “Flushing-related forehead temperature as a measure of anger intensity,” Minnesota Medical Foundation, amount: \$5,000, grant period: 09/01/05-08/31/06. (Note: This grant is mainly for buying some devices to perform the study supported by the UMN Grant-in-Aid grant listed in the next item.)
7. Co-Principal Investigator, “Flushing-related forehead temperature as a measure of anger intensity,” Grant-in-Aid of Research, Artistry and Scholarship, University of Minnesota, amount: \$29,922, grant period: January 1, 2005 – June 30, 2006. (Note: This grant is mainly for supporting a one-year 50% RA in statistics.)
8. Co-Principal Investigator, “Quantifying the time course of tantrum anger,” NIH, R21, PI: Professor Michael Potegal, Department of Pediatrics, University of Minnesota Medical School, amount: \$370,557, grant period: July 1, 2004 - June 30, 2006, (25% effort plus a one-year 50% RA in statistics).
9. Principal Investigator, “Image reconstruction by local smoothing techniques,” National Security Agency, amount: \$38,899, grant period: March 5, 2004 - March 4, 2006.
10. Travel grant, Summer 2003, \$500, Office of International Programs, University of Minnesota.

11. Principal Investigator, “Two-dimensional jump regression analysis,” Grant-in-Aid of Research, Artistry and Scholarship, University of Minnesota, amount: \$15,908, grant period: July 1, 2000 - June 30, 2002.
12. Co-Investigator, Design and Analysis Core, Transdisciplinary Tobacco Use Research Center (TTURC), National Cancer Institute, amount: \$9,227,445, grant period: September 30, 1999 - September 29, 2004, (20% effort for the first year).

### **AWARDS, HONORS and RECOGNITIONS**

1. Keynote speaker, 2nd International Symposium on System Informatics and Engineering, July 8-9, 2013, Xi’an, China.
2. *Technometrics* invited speaker with discussions, 2012 INFORMS annual meeting, October 14-17, 2012, Phoenix, AZ.
3. Plenary speaker, The 4th International Conference on Computational Intelligence and Software Engineering (CiSE 2012), December 14-16, 2012, Wuhan, China.
4. Plenary speaker, International Conference on Quality and Reliability Engineering, December 20-22, 2011, Bangalore, India.
5. Plenary speaker, 5th WSEAS International Conference on COMPUTER ENGINEERING and APPLICATIONS (CEA ’11), January 29-31, 2011, Puerto Morelos, Mexico.
6. Elected Fellow, 2010, Institute of Mathematical Statistics.
7. Plenary speaker, Annual Meeting of the German Statistical Society, September 14 - 17, 2010, Nuremberg, Germany.
8. Featured speaker of the *Technometrics* invited session with discussions, Joint Statistical Meetings, July 31 - August 5, 2010, Vancouver, Canada.
9. Elected Fellow, 2009, American Statistical Association.
10. Elected member, 2009, International Statistical Institute.
11. Special invited speaker (with a 50-minute presentation), The Winter 2009 Canadian Mathematical Society meeting, December 5-7, 2009, Windsor, Canada.
12. The paper titled “Distribution-free multivariate process control based on log-linear modeling” by P. Qiu, published in *IIE Transactions*, **40**, 2008, 664–677, was featured by an article in the *Industrial Engineer* magazine, **40**, 2008, 53–54.
13. Inaugural Ziegel prize winner, sponsored by *Technometrics*, 2007 (for the book *Image Processing and Jump Regression Analysis*).
14. Marquis *Who’s Who in America*, 2003–2007, 2012–2013; Marquis *Who’s Who in American Education*, 2006, 2007.
15. Faculty Sabbatical Supplement Awards, 2004/2005, 2011/2012, College of Liberal Arts.

16. *Technometrics* invited speaker, 45th Annual Fall Technical Conference, October 18-19, 2001, Toronto, Canada.
17. Single Semester Leave Awards, Fall 2001, Fall 2008, College of Liberal Arts.
18. One of the three best paper winners of the 5th ISI competition for young statisticians, Cairo, Egypt, September 1991. (ISI: International Statistical Institute)
19. Winner of the 1990 UAP Mathematical Award, Fudan University, April 1990.