

# CURRICULUM VITAE

## Jing Qiu

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### EDUCATION

- Ph.D. in Statistics, Cornell University, Ithaca, New York, 2004
- M.S. in Statistics, Cornell University, Ithaca, New York, 2002
- B.S. in Information Management and Decision Theory, University of Science & Technology of China, Hefei, P.R. China, 1998.

### POSITIONS AND EMPLOYMENT

- Assistant Professor, University of Missouri-Columbia, Department of Statistics, Sep. 2004 - Present.
- Consulting Statistician, University of Missouri-Columbia, Missouri Agricultural Experiment Station, Sep. 2004 - Present.
- Teaching Assistant, Cornell University, Department of Statistics Science, Sep. 1998-May 2004
- Research Assistant, Jackson Laboratory, Gary Churchill's lab, spring 2003.
- Summer Intern, Food and Drug Administration, summer 2000.

### HONORS/AWARDS

2005, 2006	NSF Travel Grant
2005	Summer Research Fellowship of University of Missouri-Columbia
2003	NIH Travel Grant.
1999 and 2003	Graduate School Fellowship, Cornell University.
1997-1998	GuoMoruo Scholarship , University of Science & Technology of China.
1996-1997	Shekou Scholarship , University of Science & Technology of China.
1995-1996	Panasonic Scholarship, University of Science & Technology of China.
1994-1995	1 <sup>st</sup> class excellent student award, University of Science & Technology of China
1993-1994	New Star Award, University of Science & Technology of China

**PUBLICATIONS**

1. Cui, X., Hwang J.T.G., **Qiu, J.**, Blades, N.J. and Churchill, G.A. (2005), "Improved Statistical Tests for Differential Gene Expression by Shrinking Variance Components Estimates", *Biostatistics*, **6**, 59-75.
2. Kumar, R, **Qiu, J.**, Joshi, T., Valliyodan, B., Xu, D. and Nguyen, H. (2007), "Single Feature Polymorphism Discovery in Rice", *PLoS ONE* **2** (3):e284.
3. **Qiu, J.** and Hwang J.T.G. (2007), "Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis", *Biometrics*, **63**, 767-776.
4. Srivastava, G.P., **Qiu, J.** and Xu, D. (2008). "Genome-Scale Functional Annotation from Meta-Analysis of Microarray Datasets", *Proceedings of the 2008 IEEE International Conference on Bioinformatics and Biomedicine*, 367-371.
5. Franck, W.L., Chang, W.S., **Qiu, J.**, Sugawara, M., Sadowsky, M.J., Smith, S.A. and Stacey, G. (2008). "Whole-Genome Transcriptional Profiling of Bradyrhizobium japonicum during Chemoautotrophic Growth.", *Journal of Bacteriology*, **190**, 6697-6705
6. Hwang, J.T.G., **Qiu, J.** and Zhao, Z. (2009) "Empirical Bayes Confidence Intervals Shrinking Both Means and Variances", *Journal of Royal Statistical Society, Series B*, **71**, 265-285.
7. Schulz, L.C, Widmaier E.P., **Qiu, J.**, and Roberts R.M. (2009) "Effect of Leptin on Mouse Trophoblast Giant Cells", *Biology of Reproduction*, **80**, 415-424.
8. **Qiu, J.** and Hwang J.T.G. (2009), "Reply to Dr. Glimm's comment on Qiu and Hwang (2007), *Biometrics* 63, p. 767-776", *Biometrics*, **65**, 324-325.
9. Srivastava, G.P., **Qiu, J.** and Xu, D. (2009). "Genome-wide functional annotation by integrating multiple microarray datasets using meta-analysis", *International Journal of Data Mining in Bioinformatics*, in press.
10. Srivastava, G.P., Joshi, T., Song, Z., Zhang, C., Lin, G.N., Li, P., Ross, A., Popescu, M., Liu, J.D., **Qiu, J.**, Xu, D. (2009) "GO- based gene function and network characterization", Book chapter of "Data mining applications using ontologies in biomedicine", Artech House
11. Cui, X., Zhou, J., **Qiu, J.**, Johnson, M.R., and Mrug M. (2009) Validation of endogenous internal real-time PCR controls in renal tissues, *American Journal of Nephrology*, **30**, 413-417
12. **Qiu, J.** and Cui, X. (2009), "Evaluation of a statistical equivalence test applied to microarray data", *accepted by Journal of Biopharmaceutical Statistics*.
13. Libault, M., Zhang, X., Govindarajulu, M., Ong, Y.T., Brechenmacher, L., Berg, R.H., Hurley-Sommer, A., **Qiu, J.**, Finger, R.E., Taylor, C. G., Stacey, G. (2009) A member of the highly conserved *FWL* (tomato *FW2.2-like*) gene family is essential for soybean nodule organogenesis, *submitted*

**TECHNICAL REPORTS**

Kumar, R, **Qiu, J.**, and Nguyen, H. (2009) "Gene-chip based polymorphism detection in rice", *Technical report*.

**Qiu, J.**, Li, Q., Cui, X.Q. and Churchill, G.A. (2003) Biological Variation in Transcript Levels of Inbred Mice Revealed by Microarray Data Analysis, *Technical report*

**Qiu, J.** and Hwang, J.T. G. (2002) Improving upon Unconditional Mid P-value Test in 2-by-2 Contingency Table, *Technical report*

## INVITED TALKS

“Identifying Equivalent Gene Expressions in DNA Microarrays”: Department of Statistics, Purdue University, December 2008.

“Identifying Equivalent Gene Expressions in DNA Microarrays”: Division of Biostatistics, Washington University, MO, Oct., 2008.

“Identifying Equivalent Gene Expressions in DNA Microarrays”: Department of Statistics, University of Missouri-Columbia, Nov, 2008.

“Empirical Bayesian Confidence Intervals Shrinking Both Means and Variances”, University of Missouri, Columbia, MO, 2008.

“Double Shrinkage Empirical Bayesian Confidence Intervals for Multiple Parameters When the Variances are Unequal and Unknown”, Joint Statistical Meeting, Salt Lake City, UT, 2007.

“Statistical Equivalence Testing Applied to Microarray Data”: Department of Animal Science, University of Missouri-Columbia, MO, Nov., 2006.

“Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”: Summer Workshop on Multiplicity and Reproducibility in Scientific Studies, SAMSI, RTP, NC, 2006.

“Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”: the ICSA Symposium, Storrs, CT, 2006.

“Statistical Equivalence Testing Applied to Microarray Data”: UAB's Microarray Research Coordination Network annual retreat, Mohonk, NY, 2005.

“Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”: Northwestern University, 2004.

“Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”: New York University, 2004.

“Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”: University of Connecticut, 2004.

“Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”: University of Missouri-Columbia, 2004.

“Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”: University of Kentucky, 2004.

“Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”: Louisiana State University, 2004.

**CONTRIBUTED PRESENTATIONS**

- “Evaluation of a Statistical Equivalence Test Applied to Microarray Data”, the ICSCA Symposium, St. Francisco, USA, June 2009.
- “Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”, Joint Statistical Meeting, August, 2005, Minneapolis, Minnesota, USA
- “Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”, Eighth North American New Researcher Conference, August, 2005, Minneapolis, Minnesota, USA
- “Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”, OBayes5 - The Fifth International Workshop on Objective Bayes Methodology, June, 2005, Branson, Missouri, USA
- “Biological Variation in Transcript Levels of Inbred Mice Revealed by Microarray Analysis”, The Life Sciences Week, March, 2005, University of Missouri, Columbia, USA
- “Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”, ENAR, March, 2005, Austin, USA
- “Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”, Statistical Seminar, Cornell University, October 2003
- “Sharp Simultaneous Intervals for the Means of Selected Populations with Application to Microarray Data Analysis”, Churchill Group, Jackson Laboratory, March 2003
- “Improving upon Unconditional Mid P-value Test in 2-by-2 Contingency Table”, Biometrics Unit Discussion Series, Cornell University, April 2002

**TEACHING & ADVISING EXPERIENCE****• Graduate Course:**

Theory of Linear Model (Fall 2005 and Fall 2006, University of Missouri-Columbia)  
Introduction to Mathematical Statistics (Spring 2005, 2007 and 2008, Fall 2008, UMC)  
Introduction to Probability Theory (Spring 2006, UMC)  
Analysis of Variance (Fall 2007, UMC)

**• Undergraduate Courses:**

Introduction to Mathematical Statistics (Spring 2005, 2007 and 2008, Fall 2008, UMC)  
Introduction to Probability theory (Spring 2006, UMC)  
Analysis of Variance (Fall 2007, UMC)

**• Advising Students**

Shimin Zhuang, graduated with M.S. in statistics, May, 2008  
Master Thesis: *Investigating the performance of false discovery rate controlling procedures for non-uniformly distributed p-values*

**CONSULTING EXPERIENCES:**

*Providing consulting services to researchers from plant science, biochemistry and animal science and etc.*

1. **Peter Sutovsky's lab**, Department of Animal Science, University of Missouri-Columbia (Oct, 2005- Present)

*Proposal I: An integrated approach to development and application of precise methods of boar semen evaluation reflecting reproductive seasonality (USDA proposal, submitted on Feb, 2006, not funded).*

*Proposal II: Instrumentation Base for the Next Generation of Male Infertility Diagnostics (NIH proposal, submitted on May, 2009, pending).*

2. **Henry Nguyen's lab**, Division of Plant Sciences, National Center for Soybean Biotechnology, University of Missouri-Columbia (Nov., 2005 –Present)

*Project I: Transcript profiling of water-stressed Medicago truncatula root and leaf and soybean root (data analysis, April 2004-Oct., 2007)*

*Project II: Single Feature Polymorphism Discovery in Rice (data analysis, manuscript preparation, Sep., 2005- March, 2009)*

*Project III: Single Feature Polymorphism Discovery in Soybean (data analysis; April 2007-Present)*

3. **David Emerich's lab**, Department of Biochemistry, University of Missouri-Columbia (January, 2007- Present)

*Project I: Proteo-genomics of Bacteroid Development (data analysis, January, 2007-Present)*

*Project II: Transcriptional Profiling of Bradyrhizobium japonicum (data analysis, November, 2008- Present)*

4. **Gary Stacey's lab**, Division of Plant Sciences, National Center for Soybean Biotechnology, University of Missouri-Columbia (January, 2006-Present)

*Project I: Whole-Genome Transcriptional Profiling of Bradyrhizobium japonicum during Chemoautotrophic Growth (data analysis, manuscript preparation, Jan. 2006-July, 2008)*

*Project II: A member of the highly conserved FWL (tomato FW2.2-like) gene family is essential for soybean nodule organogenesis (data analysis, manuscript preparation, May 2009- Present).*

*Project III: Transcriptional response of Bradyrhizobium japonicum to the iron and magnesium ( data analysis, Feb, 2009-Present)*

*Project IV: Transcriptional response of Bradyrhizobium japonicum to the level of Nitrogen ( data analysis, Feb, 2009-Present)*

**5. Michael Roberts's lab**, Department of Animal Science, University of Missouri-Columbia

*Project I: Effect of Leptin on Mouse Trophoblast Giant Cells (data analysis, manuscript preparation, September, 2007-October, 2008)*

## INTERDISCIPLINARY COLLABORATION

Collaborator: Dong Xu, James C. Dowell professor, Digital Biology Laboratory, Computer Science Department, University of Missouri-Columbia, March, 2006-Present)

Genome-wide functional annotation by integrating multiple microarray datasets using meta-analysis

## RESEARCH GRANTS

1. Summer Research Fellowship of University of Missouri-Columbia

Status: Awarded on April 1, 2005.

FUNDS: \$5000.

My role: PI

2. National Institute of Health

Title: Predoctoral Research Training in Biostatistics at the University of Missouri-Columbia

STATUS: Awarded;

PERIOD: 09/01/2007-08/31/2012;

PI: Jianguo Sun

My role: Mentor

## PROFESSIONAL SERVICES

- Committee on Women in Statistics, ASA, January, 2006-December, 2011.
- Referred papers for the following journals: Statistics in Medicine; Journal of American Statistical Association; Biostatistics.
- Organizer of an IMS topic contributed session of the 2007 JSM meeting, Salt Lake City, UT.
- Chair of an IMS contributed session of the 2007 JSM meeting, Salt Lake City, UT.

## SOME SERVICES ON CAMPUS

- Member, the undergraduate studies committee of statistics department, UMC, 2005-2006
- Coordinator of Department Colloquium Series, University of Missouri-Columbia, 2007
- Member, Statistics department qualify and prelim committee, UMC, 2008-2009.
- Serving on Graduate Student Thesis Committee  
Guo baohong (MS, 2005), Gong Qi (MS, 2007), Xinyan Zhang (MS, 2007), Liang Zhu (PhD, 2008), Ling Chen (PhD, 2009), Seung Won Hyun (PhD, 2009), Ping Yao (PhD, 2009).