

# YAJUAN SI

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<b>Contact</b>	Rm 685, WARF Building	<i>Phone:</i> 608-2650662 (Office) 845-7982013 (Cell)
<b>Information</b>	610 Walnut St Madison, WI 53726	<i>E-mail:</i> ysi@wisc.edu <i>Website:</i> <a href="http://www.biostat.wisc.edu/~ysi">http://www.biostat.wisc.edu/~ysi</a>
<b>Education</b>	<b>Duke University, Department of Statistical Science</b> , Durham, North Carolina, USA <b>Ph.D.</b> , Statistical Science, 2012 ; <b>M.Sci</b> , 2010 <i>Advisor:</i> <b>Jerome P Reiter</b> <i>Thesis:</i> Nonparametric Bayesian Methods for Multiple Imputation of Large Scale Incomplete Categorical Data in Panel Studies  <b>Renmin University of China, School of Statistics</b> , Beijing, P.R.China B.E., Statistics & Actuarial Science, 2008  <b>The University of Hong Kong, Department of Statistics &amp; Actuarial Science</b> , HK Exchange Student, Statistics & Actuarial Science, 2007	
<b>Professional Experience</b>	<b>Assistant Professor, Department of Biostatistics &amp; Medical Informatics and Department of Population Health Sciences,</b> <b>University of Wisconsin-Madison</b> , Madison, WI <i>Aug 2014 - present</i> <b>Affiliate, University of Wisconsin Survey Center</b> , Madison, WI <i>Feb 2015 - present</i> <b>Affiliate, Center for Demography and Ecology</b> , Madison, WI <i>Oct 2015 - present</i> <b>Affiliate, Department of Statistics</b> , Madison, WI <i>Nov 2015 - present</i>  <b>Postdoctoral Research Scholar, Department of Statistics, Columbia University</b> , NY <i>Supervisor:</i> <b>Andrew Gelman</b> <i>Aug 2012 - Jul 2014</i>  <b>Summer Intern, Educational Testing Service</b> , Princeton, NJ, USA <i>Mentors:</i> Matthias Von Davier and Xueli Xu <i>2010</i>	
<b>Teaching Experience</b>	<b>University of Wisconsin-Madison</b> BMI/PHS 651 Advanced Regression Methods PHS 805 Epidemiologic Methods (Guest) BMI/PHS 651 Advanced Regression Methods STAT 992 Research Topics in Predictive Modeling for Clinical Biostatistics PHS 805 Epidemiologic Methods (Guest) SIBS 546 Biostat Practicum BMI/PHS 652 Missing Data: Topics and Tools BMI/PHS 651 Advanced Regression Methods (Guest) BMI/PHS 551 Introduction to Biostatistics (Guest) <b>Harvard University</b>	<b>Instructor</b> <i>Fall 2016</i> <i>Fall 2016</i> <i>Fall 2015</i> <i>Fall 2015</i> <i>Fall 2015</i> <i>Summer 2015</i> <i>Spring 2015</i> <i>Fall 2014</i> <i>Fall 2014</i> <b>Guest Lecturer</b>

	Missing Data Methods		<i>Spring 2014</i>
	<b>Columbia University</b>		<b>Guest Lecturer</b>
	Sample Surveys		<i>Fall 2013</i>
<b>Active Support and Awarded Grants</b>	NIH/NIDDK R21DK110688	08/01/2016–07/31/2018	2.40 Calendar
	Profiling Missing Data in Electronic Health Records for Diabetes Care Research		
	Total Award Amount: \$408,030		
	Role: <b>Principal Investigator</b>		
	NSF/MMS SES 1534400	10/01/2015–09/30/2018	1.92 Calendar
	Multilevel Regression and Poststratification: A Unified Framework for Survey Weighted Inference		
Total Award Amount: \$328,667 (for UW-Madison)			
Role: <b>Principal Investigator</b>			
	NIH/NIDDK R01DK108073	04/01/2016–03/31/2021	0.96 Calendar
	Statistical Methods for Healthcare in Complex Patients with Diabetes		
	Total Award Amount: \$649,810 (for UW-Madison)		
	Role: Subcontract Investigator (PI: Zhao from Fred Hutchinson Cancer Research Center)		
	PCORI CE-1304-6543	03/01/2014–02/28/2017	1.20 Calendar
	Post-Treatment Surveillance in Breast Cancer: Bringing CER to the Alliance		
	Total Award Amount: \$1,976,801		
	Role: Co-Investigator(PI: Greenberg)		
	UW Health	07/01/2015–	0.96 Calendar
	Accountable Care Organization Reporting Project		
	Total Award Amount: N/A		
	Role: Biostatistician (PI: Smith)		
	University of Wisconsin Survey Center	02/20/2015–	1.20 Calendar
	Sampling Design and Survey Data Analysis		
	Total Award Amount: N/A		
	Role: Statistician		
<b>Pending Grants</b>	Carbone Methodology Fellow Program	04/01/2017–03/31/2018	1.20 Calendar
	Statistical Homogenization and Risk Stratification for Post-treatment Surveillance in Breast Cancer		
	Total Award Amount: \$75,000		
	Role: <b>Principal Investigator</b>		
	AHRQ P30HS024375	10/1/2015–09/30/2019	1.20 Calendar
	Engineering Hybrid Healthcare Delivery for Patient Safety		
	Total Award Amount: \$660,435		

Role: Co-Investigator (PI: Carayon)

NIH/NCI R21CA209607

07/01/2016–06/30/2018

0.60 calendar

Identifying new cancer patients at risk for poor trajectories of adherence to oral anticancer drugs

Total Award Amount: \$150,000

Role: Co-Investigator (PI: Smith)

Ruth L Kirschstein National Research Service Award (F32)

Role: Biostatistician Mentor (PI: Park)

### Publications:

#### Peer Reviewed- Methodology

**Si, Y**, Reiter, JP and Hillygus, S (2016), “Bayesian latent pattern mixture models in panel studies with refreshment samples”, *The Annals of Applied Statistics*, 10(1), 118-143

Early, D, Berg, J, Alicea, S, **Si, Y**, Aber, J, Ryan, R and Deci, E (2016), “The impact of Every Classroom, Every Day on student achievement: Results from a school-randomized efficacy trial”, *Journal of Research on Educational Effectiveness*, 9(1), 3-29

**Si, Y**, Pillai, N and Gelman, A (2015), “Bayesian nonparametric weighted sampling inference”, *Bayesian Analysis*, 10(3), 605-625

**Si, Y**, Reiter, JP and Hillygus, S (2015), “Semi-parametric selection models for potentially non-ignorable attrition in panel studies with refreshment samples”, *Political Analysis*, 23, 92-112

Makela, S, **Si, Y** and Gelman, A (2014), “Statistical graphics for survey weights”, *Journal of Revista Colombiana De Estadística*, 37, 285-295

**Si, Y** and Reiter, JP (2013), “Nonparametric Bayesian multiple imputation for incomplete categorical variables in large-scale assessment surveys”, *Journal of Educational and Behavioral Statistics*, 38, 499 - 521

Deng, Y, Hillygus, S, Reiter, JP, **Si, Y** and Zheng, S (2013), “Handling attrition in longitudinal studies: The case for refreshment samples”, *Statistical Science*, 22, 238 - 256

**Si, Y** and Reiter, JP (2011), “A comparison of posterior simulation and inference by combining rules for multiple imputation”, *Journal of Statistical Theory and Practice*, 5, 335 - 347

#### Peer Reviewed- Collaborative

Neuman HB, Schumacher JR, Francescatti AB, Adesoye T, Edge SB, Burnside ES, Vanness DJ, Yu M, **Si Y**, McKellar D, Winchester DP and Greenberg CC (2016), “Utility of Clinical Breast Exams in Detecting Local-Regional Recurrence After Breast-Conservation in Women with a Personal History of High-risk Breast Cancer”, *Annals of Surgical Oncology*, 23(10), 3385–3391

DuGoff, EH, Cho, J, **Si, Y** and Pollack, C (2017), “Geographic Variations in Physician Relationships Over Time: Implications for Care Coordination”, *Medial Care Research & Review*, Forthcoming

#### Non-Refereed- Methodology

**Si, Y** and Reiter, JP (2010), “A new approach to protect confidentiality for census microdata with missing values”, *JSM Proceedings, Section on Survey Research Methods. Vancouver, CA*

#### Non-Refereed- Collaborative

**Si, Y** and Gelman, A (2014), “Survey Weighting for New York Longitudinal Survey on Poverty Measure”, Technical Report, Columbia University, NY

**Si, Y** and Gelman, A (2014), “Survey Weighting for Fragile Families and Child Wellbeing Study:

Wave 5 Core Survey, Wave 3–5 Child Survey and Wave 3–5 Primary Caregiver Survey”, Technical Report, Columbia University, NY

Wimer, C, Garfinkel, I, Gelblum, M, Lasala, N, **Si, Y**, Teitler, J and Waldfogel, J (2013) “The New York City Poverty and Disadvantage Tracker”, *Robin Hood Foundation*

Aber, L, Alicia, S, Berg, J, Deci, E, Early, D, Ryan. R and **Si, Y** (2013) “Validation of the Engagement, Alignment, and Rigor Classroom Visit Protocol and Every Classroom, Every Day Evaluation”, IRRE and NCER, *US Department of Education*

**Book Chapters** Makela, S, **Si, Y** and Gelman, A (2016), “Graphical visualization of polling results”, in *Oxford Handbook on Polling and Polling Methods*, edited by Lonna Atkeson and Michael Alvarez

**Papers Under Review** Schumacher JR, Neuman HB, Chang GJ, Kozower BD, Stephen E, Meng Y, Vanness DJ, **Si Y**, Jacobs EA, Francescatti AB, Spears P, Havlena J, Adesoye T, McKellar D, Winchester D and Greenberg CC (2016), “A National Study of the Use of Asymptomatic Systemic Imaging for Surveillance Following Breast Cancer Treatment”, *NEJM*

**Abstracts** Neuman HB, Schumacher JR, Francescatti AB, Adesoye T, Yu M, **Si Y**, McKellar D, Winchester DP and Greenberg CC (2016), “Utility of Clinical Breast Exams in Detecting Local-Regional Recurrence in Women with a Personal History of High-risk Breast Cancer”, *American Society of Clinical Oncology*

Schumacher JR, Neuman HB, Burnside ES, Havlena J, Adesoye T, Francescatti AB, Yu M, **Si Y**, Vanness DJ, Winchester D, McKellar D, Edge SB, Spears P and Greenberg CC (2016), “A Nationally Representative Study of the Overuse of Advanced Imaging for Follow-up Surveillance Following Breast Cancer Diagnosis and Treatment”, *AcademyHealth, MA*

McCarty, A and **Si, Y** (2015), “Racial/Ethnic Differences in Breast-Feeding and Its Consequences for Childhood Obesity”, *The Conference of Research Committee 28 on Social Stratification and Mobility of the International Sociological Association, PA*

**Invited** *2016 Conference for Women in Statistics and Data Science, NC, Oct. 2016*

**Presentations** *Survey Research Center, Institute of Social Research, University of Michigan, MI, Sept. 2016*

*Department of Statistics, University of Missouri, MO, Mar. 2016*

*ENAR meeting, Austin, TX, Mar. 2016*

*The 8th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK, Dec. 2015*

*Division of Biostatistics, Medical College of Wisconsin, WI, Oct. 2015*

*Joint Statistical Meetings, Seattle, WA, Aug. 2015*

*ISBS-DIA Joint Symposium on Biopharmaceutical Statistics, BJ, China, Jun. 2015*

*School of Statistics, Renmin University of China, BJ, China, Jun. 2015*

*Department of Statistics, University of Connecticut, CT, Apr. 2015*

*Department of Statistics, University of Wisconsin-Madison, WI, Mar. 2015*

*Department of Biostatistics and Epidemiology, University of Illinois at Chicago, IL, Oct. 2014*

*Department of Psychology, University of Notre Dame, IN, Sept. 2014*

*Computational Methods for Survey and Census Data in Social Sciences, Montreal, CA, Jun. 2014*  
*Department of Statistics, Iowa State University, IW, Mar. 2014*  
*Department of Mathematics and Statistics, American University, DC, Jan. 2014*  
*Department of Population Health Sciences, University of Wisconsin-Madison, WI, Jan. 2014*  
*The American Panel Study Workshop, Washington University at St. Louis, MO, Nov. 2013*  
*Department of Mathematical Sciences, New Jersey Institute of Technology, NJ, Oct. 2013*  
*Department of Epidemiology, Columbia University, NY, Apr. 2013*  
*Department of Statistics, Columbia University, NY, Sept. 2012*  
*Statistical Society of Canada 2012 Meeting, Guelph, ON, Canada Jun. 2012*  
*American Institute for Research, DC, Apr. 2012*  
*The Wharton School of Business, University of Pennsylvania, Philly, PA, Feb. 2012*  
*Merck Co, Philly, PA, Feb. 2012*  
*Joint Statistical Meetings, Vancouver, BC, Canada, Aug. 2010*

**Contributed  
Presentations**

*Advances in Causal Inference, Survey Statistics, Disclosure Risk, and Missing Data, in Honor of Rod Little's 65th Birthday, Ann Arbor, MI, Oct. 2015*  
*IMS Junior Researcher Conference, Seattle, WA, Aug. 2015*  
*ENAR Spring Meeting, Miami, FL, Mar. 2015*  
*Frontiers of Hierarchical Modeling in Observational Studies, Complex Surveys and Big Data, College Park, Maryland, May. 2014*  
*OBayes Workshop and Bayes 250, Durham, NC, Dec. 2013*  
*SAMSI Workshop on Computational Methods in Social Sciences, RTP, NC, Aug. 2013*  
*Joint Statistical Meetings, Montreal, CA, Aug. 2013*  
*The 25th Anniversary Celebration for Department of Statistical Science, Duke University, Durham, NC, Oct. 2012*  
*Joint Statistical Meetings, San Diego, CA, Aug. 2012*  
*Joint Statistical Meetings, Miami, FL, Aug. 2011*  
*The 2011 International Workshop on Objective Bayes Methodology, Shanghai, China, Jun. 2011*

**Awards**

- Travel Award, 2016, Women in Statistics and Data Science
- Travel Award, 2015, IMS Junior Researcher Conference
- Travel Award, 2015, ENAR Junior Investigator Workshop
- NSF Travel Award, 2014, Frontiers of Hierarchical Modeling in Observational Studies, Complex Surveys and Big Data
- Travel Award, 2013, OBayes 2013 Meetings: Celebrating 250 Years of Bayes
- Travel Award, 2011, International Workshop on Objective Bayes Methodology
- First-class Student Fellowship, 2005, 2006, 2007, Renmin University of China

**Certificates**

- Blend@UW Course Design Program, 2015
- Wisconsin Idea Seminar Alumni, 2015

**Professional  
Activities**

- Vice president for ASA Wisconsin Chapter, 2016

- Grant reviewer for:  
*Ad hoc* reviewer for NSF-MMS, 2016
- Organizing committee member for:  
Wisconsin ASA Chapter Madison Networking and Planning Luncheon, 2016  
The 7th International Forum on Statistics of Renmin University of China, 2016
- Reviewing committee member for:  
ICML, 2016  
AISTATS, 2016  
Student paper competition, Joint Statistical Meetings, 2015
- Invited Session Organizer for:  
ENAR meeting, 2016
- Department seminar committee for:  
Biostatistics & Medical Informatics, 2015-
- Session Chair for:  
Joint Statistical Meetings, 2015, 2013, 2011  
ENAR meeting, 2016, 2015
- Referee for: *Biometrika* (2 articles), *Annals of Applied Statistics*(5 articles), *Biometrics*, *Bayesian Analysis*(2 articles), *The American Statistician*, *STAT*, *Survey Methodology*, *Statistical methods in Medical Research*, *Statistical Analysis and Data Mining*(2 articles), *Journal of Machine Learning Research*, *American Journal of Public Health*, *Journal of Survey Statistics and Methodology*, *Journal of Statistical Software*, *Journal of Probability and Statistics*, *Journal of Computational and Applied Mathematics*, *Public Health Reports*, *Sociological Methods and Research*, *Psychological Methods* (2 articles), *Behavior Research Methods*, *British Journal of Mathematics & Computer Science*, *Spatial Statistics*, *Electronic Journal of Statistics*, *Methodology*, *European Journal of Operational Research*, *IERI Monograph Series*, *International Journal of Pattern Recognition and Artificial Intelligence*, *Communications in Statistics–Theory and Methods*, *Statistics and Probability Letters*, *Statistics and Computing*, *Journal of Official Statistics*, *Statistica Sinica*, *Journal of Educational and Behavioral Statistics*

#### Student advising

- Students: Peigen Zhou (Stat PhD)
- Academic Advising: Crystal Chen (Stat MS)
- PhD Dissertation Committee: Chenliang Xu (Stat), Cuicui Qi (Stat), Donggyu Kim (Stat), Tram Ta (Stat)
- PhD Preliminary Committee: Chenliang Xu (Stat), Tram Ta (Stat), Joe Levy (PHS), Sien Deng (Ed-Psych)

#### Membership

- American Statistical Association
- International Biometric Society-ENAR
- International Society for Bayesian Analysis
- Institute of Mathematical Statistics
- International Chinese Statistical Association