

Rajeshwari Sundaram, Ph.D., M.Stat.

Current Position: Senior Investigator, Biostatistics & Bioinformatics Branch
Division of Intramural Population Health Research
Eunice Kennedy Shriver National Institute of Child Health
& Human Development
The National Institutes of Health

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Education:

1994-1999 Ph.D., Statistics, Michigan State University, East Lansing
1991-1993 M.Stat. (Applied Statistics & Data Analysis), Indian
Statistical Institute, Kolkata
1988-1991 B.Sc. (Honors), Mathematics, University of Calcutta, India

Research Interests:

Statistical Methods:

- Survival analysis: Random truncation, Current Status data, Dependent censoring, Recall error
- Multivariate Survival analysis: Recurrent events, Panel Count Data Multistage models
- Joint modeling of longitudinal and survival data
- Machine Learning Methods
- Statistical methods with application to reproductive, perinatal, pediatric and environmental epidemiology

Scientific Areas:

- Reproductive Health: Fecundity, Infertility, Semen Quality
- Obstetrics: Labor Progression, Fetal Growth
- Pediatrics: Infant Development, Child Development
- Environmental Epidemiology: Endocrine Disrupting Chemicals, Non-persistent chemicals, mixtures of chemical toxicants, exposome

Work Experience:

- Senior Investigator, Biostatistics & Bioinformatics Branch, DIPHR, NICHD, NIH, 2014 onwards
- Investigator, Biostatistics & Bioinformatics Branch, DIPHR, NICHD, NIH, 2006-2014

- Assistant Professor, Department of Mathematics, University of North Carolina-Charlotte, 1999-2006
- Statistical Consultant at UNC-Charlotte, Michigan State University
- Teaching Assistant, Michigan State University, 1994-1996, 1998-1999
- Course Coordinator, Michigan State University, Fall, 1996

Honors and Awards:

- Jeanne E. Griffith Mentoring Award, Government Statistical Sections, American Statistical Association, 2020
- American Statistical Association's Outstanding Statistical Applications Award, 2020 for the paper "Joint modeling of competing risks data and current status data: an application to spontaneous labour study". Lee Y, Wang M-C, Grantz KL, **Sundaram R**. *Journal of the Royal Statistical Society, Series-C*, 68:1167-1182, 2019
- Elected Fellow of American Statistical Association, 2020
- Elected Member, International Statistical Institute, 2019
- Research selected for Spotlight on Research, NICHD, NIH, 2017 for. "Couples' body composition and time-to-pregnancy". **Sundaram R**, Mumford SL, Buck Louis GM *Human Reproduction*, 32(3):662-668, 2017
- NICHD, NIH Collaboration award for Upstate KIDS, 2014.
- NIH Merit Award. For successfully designing and completing the novel ENDO Study aimed at answering questions about environmental influences on endometriosis, 2012
- NIH Merit Award. For ingenuity in designing and dedication in completing the LIFE Study, whose aim is to identify environmental reproductive toxicants, 2009
- Travel Award, Association for Women in Mathematics-National Science Foundation, 2002
- Junior Faculty Research Grants, UNC-Charlotte, 2000 & 2002
- Nominated for best doctoral thesis from Department of Statistics and Probability, College of Natural Sciences, Michigan State University, 1999
- Best graduating Mathematics student (Mathematics Honors Program, Bachelor of Science), Lady Brabourne College, Kolkata University, India

Research projects:

Lead Statistician and Co-Investigator, Eunice Kennedy Shriver National Institute of Child Health and Human Development

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| 2004-2016 | Longitudinal Investigation of Fertility and the Environment (LIFE Study) |
| 2006-2009 | Stress and Time to Pregnancy |
| 2006-2010 | Persistent Environmental Compounds and Gynecologic Health (ENDO Study) |

- 2012-present Exposome of Normal Pregnancy: Proof-of-Concept Study
- 2007-present Upstate KIDS Study
- 2011-2012 Air Quality and Women’s Reproductive Health, (LIFE Study and Consortium on Safe Labor Study)
- 2014-2019 Upstate KIDS CVD Follow-Up
- 2018 onwards NEXT Study
- 2018 onwards Ambient air pollution exposure during pregnancy and longitudinal fetal growth

Mentoring:

National Institutes of Health Intramural Research Training Award Fellows:

- 2006-2007 Seunggeun Hyun (PhD Student, University of North Carolina-Charlotte) Predoctoral Fellow. Subsequent Position: Assistant Professor, University of South Carolina
 - Won the “Best Student Oral Presentation” award at the Probability and Statistics Day Conference held at University of Maryland Baltimore County, May 2007
- 2006-2007 Katahyanee Murray, co-mentored with Dr Denise Haynie, Predoctoral Fellow, Prevention Research Branch
- 2008-2009 Kirsten Lum (PhD, Department of Biostatistics, George Washington University), Predoctoral Fellow
 - Won the Wray Jackson Smith Scholarship Award (sponsored by American Statistical Association and others) for her work on “Joint modeling of longitudinal data and time to an event: An application to time to pregnancy”
- 2007-2008 Sung Duk Kim (Postdoctoral student, University of Connecticut) Visiting Postdoctoral Fellow. Subsequent Position: Research Fellow, Biostatistics and Bioinformatics Branch
- 2008-2010 Sung Duk Kim (Postdoctoral fellow, NICHD), Research Fellow. Subsequent Position: Staff Scientist, Biostatistics and Bioinformatics Branch
- 2009-2011 Alexander C McLain (Postdoctoral fellow, North Carolina State University) Postdoctoral fellow. Subsequent Position: Research Fellow, Biostatistics and Bioinformatics Branch
- 2011-2012 Alexander C McLain (Postdoctoral fellow, NICHD), Research Fellow. Subsequent Position: Assistant Professor, University of South Carolina
- 2012-2014 Kirsten Lum (PhD Student, Department of Biostatistics, Johns Hopkins University), Predoctoral Fellow
 - Louis I. and Thomas D. Dublin Award for the advancement of

- Epidemiology and Biostatistics, Johns Hopkins University for thesis proposal
- 2013-2016 Kate Sapra (PhD Student, Department of Epidemiology, Columbia University), Predoctoral Fellow, co-mentoring with Dr Germaine M. Buck Louis
-American College of Epidemiology, 2014 Student Paper Award for Successive time to pregnancies among women experiencing hCG pregnancy loss.
- 2014-2016 Ling Ma (Doctoral Student, University of Missouri), Visiting Postdoctoral Fellow. Subsequent Position: Assistant Professor, Clemson University from Fall, 2016
- 2016-2018 Sedigheh Mirzaei (Doctoral Student, Indian Statistical Institute, Kolkata), Visiting Postdoctoral Fellow. Subsequent Position: Assistant Member, St. Jude's Research Hospital
- 2019-2020 Ndeah Terry (Postbaccalaureate Fellow, Social Behavioral Sciences Branch, NICHD). Subsequent Position: Master's in Statistics, George Washington University
-Won the Outstanding Poster Award on NIH Post-baccalaureate Poster Day 2020 for "Using Deep Learning to Identify Patterns of Sleep Among Adolescents from the NEXT Plus Cohort"
- 2019- Abhisek Saha (Postdoctoral Fellow, MD Anderson Cancer Center), Postdoctoral Fellow

National Institutes of Health Summer Interns:

- 2007 Kirsten Lum (MS, American University)
 2007 Elaine Nsoesie (PhD, Virginian Tech University)
 2010 Kirsten Lum (PhD, Johns Hopkins University)
 2016 Jenny Lee (MS, Yale University)

Dissertation Committee Member for Extramural Doctoral Students:

- 2013-2018 Somak Chatterjee (PhD Student), Department of Statistics, George Washington University. Role: Co-Advisor & Committee Member
- 2013-2015 Li Cheung (PhD Student), Department of Statistics, George Washington University. Role: Committee Member

Master's Thesis Advisor:

- 2002 X. Guo on thesis titled "Hazard estimation based on right censored data using Wavelets"
 2003 Z. Thompson on thesis titled "Graphical analysis of proportional odds model"
 2003 G. Ranganathan on thesis titled "Analysis of accelerated lifetime model with doubly censored data"
 2004 J. Jiang on thesis titled "Properties of Jeffrey's prior"

2005 M. Paulraj on thesis titled “Marginal estimation in multistage models based on right censored data”

Teaching

At NICHD:

- Faculty, *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, National Institutes of Health and Institute of Human Development, Child and Youth Health, Canadian Institutes of Health Research Summer Institute in Reproductive and Perinatal Epidemiology, 2010-2012

At University of North Carolina-Charlotte:

Graduate courses

- Applied Linear Statistical Models: Fall, 2000, 2001
- Design of Experiments: Spring, 2002
- Research Topics Course in Survival Analysis: Spring, 2003
- Theoretical Statistics I–II: Fall 2003, 2005; Spring 2004

Undergraduate courses

- Elementary Statistics for Business Majors: Fall, 1999; Spring, 2000
- Introductory Statistics for Social Sciences: Fall, 1999, 2000, 2001, 2003, 2004, 2005; Spring, 2000, 2001, 2002, 2003, 2004, 2005, 2006
- Probability and Statistics for Engineers: Fall, 2002; Spring, 2001
- Regression Analysis: Fall 2002, 2004; Spring 2005, 2006

Professional Activities:

Professional Association Activities:

- Director of New Professionals, International Indian Statistical Association (2008-2014)
- Member, Committee for Best Student Paper Award in Applied Statistics, International Indian Statistical Association, 2015
- Member, Selection Committee for President, International Indian Statistical Association, 2017
- Member, Program Committee, ASA Interest Group-Lifetime Data Analysis Meeting, University of Connecticut, Storrs, 2017
- Member, Program Committee, International Indian Statistical Association Conference, University of Florida, Gainesville, 2018
- Member, Program Committee, ASA Lifetime Data Sciences Section Meeting, University of Pittsburgh, Pittsburgh, 2019

- Chair, Student Paper Competition, ASA Risk Analysis Section, 2020
- Chair-Elect, ASA Risk Analysis Section, 2020

Professional Memberships:

American Association for Advancement of Science
 American Statistical Association
 International Biometric Society (ENAR)
 International Indian Statistical Association

Editorial Service:

- Newsletter Editor, International Indian Statistical Association, 2005-2006
- Associate editor, *Biometrics* 2009-2017

Journal Peer Review:

American Journal of Epidemiology
Biometrics
Biometrika
Environmental Health Perspective
Environmental International
Fertility and Sterility
Human Reproduction
International Journal of Epidemiology
Journal of the Royal Statistical Society-Series C
Journal of Statistical Planning and Inference
Lifetime Data Analysis
New England Journal of Medicine
Paediatric and Perinatal Epidemiology
PLOS One
Statistics and Probability Letters
Statistical Methodology
Statistics in Medicine
Statistics in Bioscience

Organization of Symposia/Sessions at National Meetings:

- Organized and Chaired an invited session on “Multistage modeling approach to complex biomedical data”, Eastern North American Regional Conference of International Biometric Society, 2008
- Co-organizer of a Panel Discussion on research/career opportunities for new professionals, Joint Statistical Meeting, 2009
- Organized a topic contributed session on “Statistical methods in reproductive epidemiology”, Joint Statistical Meeting, 2010
- Organized a topic contributed session on “Statistical methods in reproductive epidemiology”, Joint Statistical Meeting, 2010

- Organized an invited session on “Statistical methods in reproductive and environmental epidemiology”, Eastern North American Regional Conference of International Biometric Society, 2011
- Chaired an invited session on “Joint modeling with a view towards risk prediction” at Eastern North American Regional Conference of International Biometric Society, 2012
- Organized a topic contributed session on “Statistical methods in large epidemiological studies” at Joint Statistical Meeting, Seattle, Washington, 2015
- Organized a topic contributed session on “Emerging Public Health Issues” at Joint Statistical Meeting, Chicago, Illinois, 2016
- Organized an invited session titled “New and innovative advances in joint modeling of longitudinal and survival data”, Lifetime Data Analysis-Interest Group Conference, University of Connecticut, 2017
- Organized an invited session titled “Advances and innovative application of joint modeling”, Eastern North American Regional Conference, 2018
- Organized an invited session titled “New methods for statistical analysis of complex data”, Joint Statistical Meeting, Vancouver, British Columbia, Canada, 2018
- Organized and Chaired an invited session titled “Innovative applications of joint modelling”, Conference on Lifetime Data Sciences: Foundations and Frontiers, Pittsburgh, PA, May 29-31, 2019
- Organized an invited session titled “Innovative methods for assessing diagnostic accuracy and prediction accuracy”, 2019 Conference on Lifetime Data Sciences: Foundations and Frontiers, Pittsburgh, PA, May 29-31, 2019

National Institutes of Health–Committees

- Ad-Hoc Member, Special Emphasis Panel ZDE1 JR 14, Review of NIDCR Small Research Grants for Oral Health Data Analysis and Statistical Methodology Development Applications, June, 2014
- DIPHR/NICHD Representative for trans-NIH Women Scientist Advisory Committee, 2016 onwards
- Member, Earl Stadtman Investigator of [Computational Biology/Bioinformatics/Biostatistics/Mathematics Search Committee](#), 2018
- Member, Earl Stadtman Investigator of [Computational Biology/Bioinformatics/Biostatistics/Mathematics Search Committee](#), 2019

NICHD–Committees and Workshops

- Moderator of session on study design and methodological challenges in Preconception Care Research: Improving birth outcomes and reproductive health workshop, 2008
- Member, Search Committee for staff scientist, Epidemiology Branch, NICHD, 2008
- Representative of Biostatistics & Bioinformatics Branch for IRTA Postdoctoral Review Guidelines Committee, NICHD, 2008
- Member, Planning Committee, Preconception Care Workshop, NICHD, 2008

- Member, Search Committee for Biostatistics and Bioinformatics Branch Chief, 2009
- Member, Search Committee for Biostatistics and Bioinformatics Branch, Tenure Track, 2011
- Member, Search Committee for Staff Scientist for Health Behavioral Branch, NICHD, 2015
- Member, Professional Development Committee, DIPHR, NICHD, 2015 onwards
- Member, Tenure and Promotions Committee, DIPHR, NICHD, 2016 onwards
- Chair, Search Committee for Biostatistics and Bioinformatics Branch Chief, 2017
- Chair, Professional Development Committee, DIPHR, NICHD, 2017 onwards

Academic Committees – University of North Carolina at Charlotte

- Member, Search committee for recruitment of tenure track assistant professor, 2002, 2003
- Member, Curriculum Development Committee at University of North Carolina, Charlotte, 2001-2003
- Chair, Committee for designing a large enrollment course on introductory statistics course for social sciences majors, 1999-2000
- Member, Undergraduate curriculum committee for designing concentration in statistics, 2001-2003
- Curriculum development of a sequence course (core requirement) on introductory statistics for undergraduate concentration in statistics, 2001-2002
- Member, Committee for restructuring Master's program in Statistics
- Curriculum development of a course on "Statistical Computation" for graduate students, 2001-2002
- Chair (Spring, 2001, 2002, 2003, 2004) Common Final Exam Committee for Introductory Statistics
- Member (Fall, 2002, 2003, 2004) of Common Final Exam Committee for Introductory Statistics

Talks:

Special Invited Talks & Invited Grand Rounds (in reverse chronological order)

- Special Invited Talk on Statistical challenges in obstetrics, International Indian Statistical Association Conference, University of Florida, Gainesville, FL May, 2018
- Grand Rounds on Analytical strategies for assessing pregnancy related outcomes: fecundity and infertility. American Society for Reproductive Medicine, November 2015, part of continuing education course for reproductive endocrinology fellows (2015 onwards)
- Special Invited Talk on [†]Monitoring Personal Hormonal Responses to Environmental Exposures, Emerging technologies for measuring individual exposomes workshop, The National Academies, December, 2011

[†] *This talk is profiled in Betts, K. Environmental Health Perspectives, 120:A158-165*

- Grand Rounds on Statistical challenges in modeling human fecundity. Department of Biostatistics, Johns Hopkins University, November 2009

Invited Talks (in reverse chronological order)

- Joint modeling of multiple longitudinal processes and time-to-event measured on nested time scales, 2019 International Chinese Statistical Association Conference, Hangzhou, China, December 20-22, 2019
- Analyzing recurrent events in presence of recall error, Conference on Lifetime Data Sciences: Foundations and Frontiers, Pittsburgh, PA, May 29-31, 2019
- Statistical challenges in assessing progression of labor, The 7th Workshop on Biostatistics and Bioinformatics Research, Atlanta, GA, May 10-12, 2019
- Analyzing recurrent events in presence of recall error: an application to time-to-hospitalization, Philadelphia, PA, ENAR 2019
- Statistical modeling of progression of labor, Biostatistics Division, Department of Preventive Medicine Northwestern University, December 3, 2018
- Statistical modeling of progression of labor, Division of Epidemiology and Biostatistics, University of Illinois at Chicago, November 30, 2018
- Joint modeling of first stage and second stage of labor, JSM 2018
- Joint modeling of mixed type multiple longitudinal processes with time-to-event, with application to predicting infertility. Eastern North American Regional Conference, March, 2018
- Statistical modeling of progression of labor in women. Department of Biostatistics, Georgetown University, March, 2018
- Prediction of infertility based on biology and behavior, Lifetime Data Analysis, Storrs, CT, 2017
- Analyzing gap time distribution in presence of panel count data and informative examinations and unknown start time. International Chinese Statistical Association, Atlanta, Georgia, June, 2016
- Statistical modeling of labor data. Department of Statistics, George Washington University, March, 2016
- Promising analytic methods for filling data gaps. NICHD Workshop on *Is Human Fecundity Changing?*, September, 2015
- Statistical modeling of human fecundity, National Library of Medicine, August, 2015
- Joint modeling of longitudinal binary data and time to event measured on nested time scales: an application to fecundity studies. Eastern North American Regional Conference of International Biometric Society, March, 2014
- Statistics at the Crossroads: Its multifaceted impact on the society, University of Akron and Cleveland Chapter of Statistics Workshop, October, 2013 (declined due to Federal Government Shutdown)
- Statistical models for human fecundity, Department of Biostatistics, University of South Carolina, February, 2013
- Joint modeling of longitudinal and time to event data: An application to prospective pregnancy study, International Indian Statistical Association, North Carolina State University, April, 2011

- Marginal estimation in multistage models. Biostatistics Workshop, University of Maryland, Baltimore County, March, 2011
- Modeling human fecundity: A survival analysis approach. George Mason University, December, 2009
- Statistical challenges in modeling human fecundity, Institute of the Mathematical Statistics, Young Researchers Conference, Bethesda, NIH, July, 2009
- Statistical modeling of human fecundity, University of Chicago, November, 2008
- Analysis of recurrent events data in presence of terminal events, Department of Statistics, University of Connecticut, October, 2008
- Statistical Modeling of human fecundity at International Indian Statistical Association Conference, University of Connecticut, May, 2008
- Robust inference for analysis of recurrent events data in presence of terminal events, Conference in Honor of Professor Hira Lal Koul, Michigan State University, May, 2008
- Joint modeling of longitudinal and time to an event data: An application to human fecundity, University of Maryland, Baltimore County, May, 2008
- Nonparametric inference in multistage models with current status data at Probability and Statistics Day Conference held at University of Maryland Baltimore County, May, 2007
- Marginal estimation in multistate models with current status data at Biostatistics Branch, National Institute of Allergy and Infectious Diseases, December, 2006
- Marginal estimation in multistate models with current status data at Office of Biostatistics Research, National Heart, Lung and Blood Institute, October, 2006
- Semi-parametric transformation models for recurrent events data, Department of Mathematics, University of Kansas, March, 2005
- Semi-parametric inference in proportional odds model with time-dependent covariates, Department of Statistics, University of Georgia, October, 2003
- Estimation in two sample doubly censored scale model, Department of Mathematics, University of Nevada, Las Vegas, February, 1999

Invited Seminars (in reverse chronological order)

- Mapping the hidden curriculum, Social and Behavioral Sciences Branch SBSBeat, DIPHR, NICHD, November, 2019.
- How to handle missing data issues? Social and Behavioral Sciences Branch SBSBeat, DIPHR, NICHD, December, 2018
- Statistical challenges in assessing risky driving behavior of teenagers, SMART Working Group, Department of Biostatistics, Johns Hopkins University, December, 2018
- Effective packaging for academe positions, DIPHR, November, 2018
- Statistical challenges in modeling human fecundity. Joint seminar of SLAM-HPC, School of Public Health, Johns Hopkins University, September, 2017
- Modeling gap time distribution based on recurrent events with informative observation times and with unknown starting time, SLAM Working Group, Department of Biostatistics, Johns Hopkins University, September, 2016

- Statistical challenges in modeling labor in women, Part II, SLAM Working Group, Department of Biostatistics, Johns Hopkins University, November, 2013
- Statistical challenges in modeling labor in women, Part I, SLAM Working Group, Department of Biostatistics, Johns Hopkins University, May, 2013
- Marginal analysis of multistage models based on current status data, SLAM Working Group, Department of Biostatistics, Johns Hopkins University, May, 2010

Invited Panel Discussant

- Career opportunities for women in mathematics, NSF-George Washington University, Department of Mathematics, July, 2011

Oral Presentations at Scientific Meetings

- Joint modeling of multiple longitudinal and time to event analysis: an application to fecundity studies. Eastern North American Regional Conference of International Biometric Society, March, 2015
- Median cost associated with recurrent events in presence of terminal events, Eastern North American Regional Conference of International Biometric Society, March, 2013
- Joint modeling of menstrual cycle and time to pregnancy, Joint Statistical Meeting, August, 2010
- Semi-parametric regression of censored data incorporating both short term and long term covariate effects, Joint Statistical Meeting, August, 2008
- Quantile regression analysis of recurrent events data, Joint Statistical Meeting, August, 2007
- Robust analysis of recurrent events data in presence of terminal events, Eastern North American Regional Conference of International Biometric Society, March, 2007
- Robust analysis of recurrent events data in presence of terminal events, Joint Statistical Meeting, August, 2006
- Robust inference for censored point processes, Eastern North American Regional Conference of International Biometric Society of International Biometric Society, March, 2005
- Marginal analysis of multistage models based on current status data, Eastern North American Regional Conference of International Biometric Society, March, 2004
- Semi-parametric inference in proportional odds model with time-dependent covariates, Joint Statistical Meeting, August, 2003
- Semi-parametric inference in proportional odds model with time-dependent covariates, Eastern North American Regional Conference of International Biometric Society, March, 2002
- Semi-parametric inference in proportional odds model with time-dependent covariates, Western North American Regional Conference of International Biometric Society, March, 2002

Refereed Manuscripts:

* denotes mentee authored paper.

1. Rougoor CW, **Sundaram R**, Van Arendonk JAM. The relation between breeding management and 305-day milk production, determined via principal components regression and partial least squares. *Livestock Production Science*, 66(1):71-83, 2000.
2. **Sundaram R**. Estimation of scale parameter based on doubly censored samples. *Journal of Statistical Planning and Inference*, 115:657-681, 2003.
3. Brandon WP, Troyer JL, **Sundaram R**, Schoeps N, Sun Y, Walsh BJ. Medicaid enrollee switching among managed care plans. *Journal of Health Care for the Poor and Underserved*, 16(4):760-779, 2005. PMID: 16311497.
4. **Sundaram R**. Semi-parametric inference in proportional odds model with time-dependent covariates. *Journal of Statistical Planning and Inference*, 136:320-334, 2006
5. **Sundaram R**. Estimation in two sample randomly truncated scale model. *Journal of Statistical Planning and Inference*, 136(9):2983-3006, 2006.
6. Biswas A, **Sundaram R**. Kernel survival function estimation based on doubly censored data. *Communications in Statistics - Theory and Methods*, 35(7):1293-1307, 2006
7. Datta S, **Sundaram R**. Nonparametric estimation of stage occupation probabilities in a multistage model using current status data. *Biometrics*, 62(3):829-837, 2006. PMID: 16984326.
8. **Sundaram R**. Robust analysis of recurrent events in presence of terminal events. *Statistical Advances in the Bio-Medical Sciences: State of the art and future directions*, Editors. Datta S, Segal M, Fine J, Biswas A; pp. 245-264, John Wiley and Sons, NJ, 2007.
9. Chang M, Parker EA, Muller TJ, Haenen C, Mistry M, Finkelstein GP, Murphy-Ryan M, Barnes KM, **Sundaram R**, Baron J. Changes in cell-cycle kinetics responsible for limiting somatic growth in mice. *Pediatric Research*, 64(3):240-245, 2008. PMID: 18535488. PMCID: [PMC2729112](#).
10. Zhang J, **Sundaram R**, Sun W, Troendle J. Fetal growth and timing of parturition in humans. *American Journal of Epidemiology*, 168(8):946-951, 2008. PMID: 18775925. PMCID: [PMC2727206](#).
11. Cooney MA, Buck Louis GM, **Sundaram R**, McGuinness BM, Lynch CD. Validity of self-reported time to pregnancy. *Epidemiology*, 20(1):56-59, 2009. PMID: 19057382. PMCID: [PMC4226997](#).

12. Brandon WP, **Sundaram R**, Dunham AA. Multiple switching in Medicaid managed care: A proportional hazards model. *Journal of Health Care for Poor and Underserved*, 20(4):1124-1141, 2009. PMID: 20168023.
13. **Sundaram R**. Semi-parametric inference in proportional odds model with randomly truncated data. *Journal of Statistical Planning and Inference*, 139:1381-1393, 2009.
14. Datta S, Lan L, **Sundaram R**. Nonparametric estimation of waiting time distributions in a Markov model based on current status data. *Journal of Statistical Planning and Inference*, 139(9):2885-2897, 2009. Authorship in alphabetical order.
15. *Hyun S, Sun Y, **Sundaram R**. Assessing cumulative incidence functions under the semiparametric additive risk model. *Statistics in Medicine*, 28(22):2748-2768, 2009. PMID: 19585462. PMCID: [PMC2773213](#).
16. Sun Y, **Sundaram R**, Zhao Y. Empirical likelihood inference for the Cox model with time-dependent coefficients via local partial likelihood. *Scandinavian Journal of Statistics*, 36(3):444-462, 2009. PMID: 19838322. PMCID: [PMC2762234](#).
17. Mikolajczyk RT, Buck Louis GM, Cooney MA, Lynch CD, **Sundaram R**. Characteristics of prospectively measured vaginal bleeding among women trying to conceive. *Paediatric and Perinatal Epidemiology*, 24(1):24-30, 2010. PMID: 20078826. PMCID: [PMC3422651](#).
18. Murphy LE, Gollenberg AL, Buck Louis GM, Kostyniak PJ, **Sundaram R**. Maternal serum preconception polychlorinated biphenyl concentrations and infant birth weight. *Environmental Health Perspectives*, 118(2):297-302, 2010. PMID: 20123616. PMCID: [PMC2831933](#).
19. *Kim S, **Sundaram R**, Buck Louis GM. Joint modeling of intercourse behavior and human fecundability using structural equation models. *Biostatistics*, 11(3):559-571, 2010. PMID: 20173100. PMCID: [PMC2912701](#).
20. Neta GI, von Ehrenstein OS, Goldman LR, Lum K, **Sundaram R**, Andrews W, Zhang J. Umbilical cord serum cytokine levels and risk of small-for-gestational-age and preterm birth. *American Journal of Epidemiology*, 171(8):859-867, 2010. PMID: 20348155. PMCID: [PMC2877445](#).
21. Pollack AZ, Buck Louis GM, **Sundaram R**, Lum KJ. Caffeine consumption and miscarriage: A prospective cohort study. *Fertility and Sterility*, 93(1):304-306, 2010. PMID: 19732873. PMCID: [PMC2812592](#).
22. Zhang J, Troendle J, Mikolajczyk R, **Sundaram R**, Beaver J, Fraser W. The natural history of the normal first stage of labor. *Obstetrics & Gynecology*, 115(4):705-710, 2010. PMID: 20308828.

23. Bloom MS, Buck Louis GM, **Sundaram R**, Kostyniak J, Jain J. Associations between blood metals and fecundity among women residing in New York State. *Reproductive Toxicology*, 31(2):158-163, 2011. PMID: 20933593. PMCID: [PMC3039711](#).
24. Buck Louis GM, Rios LI, McLain A, Cooney MA, Kostyniak PJ, **Sundaram R**. Persistent organochlorine pollutants and menstrual cycle length. *Chemosphere*, 85(11):1742-1748, 2011. PMID: 22018858. PMCID: [PMC4143889](#).
25. ♦ Buck Louis GM, Lum K, **Sundaram R**, Chen Z, Kim S, Lynch CD, Schisterman, EF, Pyper C. Stress reduces conception probabilities across the fertile window: Evidence in support of relaxation. *Fertility and Sterility*, 95(7):2184-2189, 2011. PMID: 20688324. PMCID: [PMC2975045](#).
♦ covered by multiple international media including BBC, CNN, USA Today, NY Times, WebMD
26. Gollenberg AL, Mumford SL, Cooney MA, **Sundaram R**, Buck Louis GM. Validity of retrospectively reported behaviors during the periconception window. *Journal of Reproductive Medicine*, 56(3-4):130-137, 2011. PMID: 21542530. PMCID: [PMC4127194](#).
27. Buck Louis GM, Hediger ML, Peterson CM, Croughan M, **Sundaram R**, Stanford J, Chen Z, Fujimoto VY, Varner MW, Trumble A, Giudice L; ENDO Study Working Group. Incidence of endometriosis by study population and diagnostic method: The ENDO Study. *Fertility and Sterility*, 96(2):360-365, 2011. PMID: 21719000. PMCID: [PMC3143230](#).
28. Buck Louis GM, Schisterman EF, Sweeney AM, Wilcosky TC, Gore-Langton RE, Lynch CD, Boyd Barr D, Schrader SM, Kim S, Chen Z, **Sundaram R**. Designing prospective cohort studies for assessing reproductive and developmental toxicity during sensitive windows of human reproduction and development--the LIFE study. *Paediatric and Perinatal Epidemiology*, 25(5):413-424, 2011. PMID: 21819423. PMCID: [PMC4118054](#).
29. *Lum KJ, **Sundaram R**, Buck Louis GM. Women's lifestyle behaviors while trying to become pregnant: Evidence supporting preconception guidance. *American Journal of Obstetrics and Gynecology*, 205(3):203.e1-7, 2011. PMID: 21658667. PMCID: [PMC3172381](#).
30. *McLain AC, **Sundaram R**, Cooney MA, Gollenberg AL, Buck Louis GM. Clustering of fecundability within women. *Paediatric and Perinatal Epidemiology*, 25(5): 460-465, 2011. PMID: 21819427.
31. Buck Louis GM, **Sundaram R**. Exposome: time for transformative research. *Statistics in Medicine*, 31(22):2569-2575, 2012. PMID: 22969025. PMCID: [PMC3842164](#).

32. *McLain AC, *Lum KJ, **Sundaram R**. A joint mixed effects dispersion model for menstrual cycle length and time-to-pregnancy. *Biometrics*, 68(2):648-656, 2012. PMID: 22321128.
33. Buck Louis GM, **Sundaram R**, Schisterman EF, Sweeney AM, Lynch CD, Gore-Langton RE, Chen Z, Kim S, Caldwell KL, Barr DB. Heavy metals and couple fecundity, the LIFE study. *Chemosphere*, 87(11):1201-1207, 2012. PMID: 22309709. PMCID: [PMC3327819](#).
34. Kunisue T, Chen Z, Buck Louis GM, **Sundaram R**, Hediger ML, Sun L, Kannan K. Urinary concentrations of benzophenone-type UV filters in U.S. women and their association with endometriosis. *Environmental Science and Technology*, 46(8):4624-4632, 2012. PMID: 22417702. PMCID: [PMC3352028](#).
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