

APRIL J HARRY

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EDUCATION

PhD	Purdue University , Statistics <i>Advisor: Olga Vitek, Northeastern University</i> <i>Thesis title: "Design and statistical analysis of mass spectrometry imaging experiments"</i>	Expected Dec 2017
MS	Purdue University , Applied Statistics	May 2012
BS	Xavier University of Louisiana , Mathematics <i>Double Concentration in Statistics and Philosophy</i> <i>Summa Cum Laude</i>	May 2010

HONORS AND AWARDS

George Washington Carver Fellowship <i>Awarded by Purdue University Graduate School to high-achieving students accepted to a Ph.D. program from Historically Black Colleges and Universities, Hispanic-serving institutions, or Tribal colleges</i>	2010-2015
Purdue University StatCom Community Service Award	2015
Oracle Infinite Possibilities College Scholarship <i>Awarded to underrepresented minority women displaying merit and an intention to study and pursue a career in mathematics or statistics</i>	2010

PUBLICATIONS

- Harry, April**; Vitek, Olga. Accounting for spatial heterogeneity in design and analysis of mass spectrometry-based imaging experiments. *In Preparation*.
- Harry, April**; Bemis, Kylie; Guo, Dan; Thomas, Mathew; Lanekoff, Ingela; Stenzel-Poore, Mary; Stevens, Susan; Laskin, Julia; Vitek, Olga. Statistical detection of differentially abundant ions in mass spectrometry-based imaging experiments with complex designs. *International Journal of Mass Spectrometry*. Under review.
- Bemis, Kylie; **Harry, April**; Eberlin, Livia; Ferreira, Christina; van de Ven, Stephanie; Mallick, Parag; Stolowitz, Mark; Vitek, Olga. May 2016. "Probabilistic segmentation of mass spectrometry images helps select important ions and characterize confidence in the resulting segments." *Molecular & Cellular Proteomics*. 15(5):1761-72.
- Bemis, Kylie; **Harry, April**; Eberlin, Livia; Ferreira, Christina; van de Ven, Stephanie; Mallick, Parag; Stolowitz, Mark; Vitek, Olga. July 2015. "Cardinal: An R Package for Statistical Analysis of Mass Spectrometry-Based Imaging Experiments." *Bioinformatics (Oxford, England)*. 31 (14): 2418–2420.
- Kaufman, J.; Lessler, J.; **Harry, April J.**; Edlund, S.; Hu, K.; Douglas, J.; Thoens, C.; Appel, B.; Käsbohrer, A.; Filter, M. 2014. A likelihood-based approach to identifying contaminated food products using sales data: performance and challenges. *PLOS Computational Biology*. 10(7): e1003999.

PUBLICATIONS, CONT.

Harry, April; Troisi, J., Aug 2014, STATtr@k: Service Oriented Statistics. *AMSTATNEWS*. p 19.

Harry, April J., Kent, C., Kocic, V., March 2012, Global behavior of solutions of a periodically forced Sigmoid Beverton-Holt model. *Journal of Biological Dynamics*. 6(2): 212-234.

PRESENTATIONS AND TALKS

Statistical detection of differentially abundant ions in mass spectrometry-based imaging experiments with complex designs Oct 2017
Imaging Mass Spectrometry Society Inaugural Meeting, Waltham, MA

My Experience as a PhD Student Mar 2017
Minority Access to Research Careers (MARC)
Xavier University of Louisiana, New Orleans, LA, USA

Statistical Design and Analysis of Mass Spectrometry Imaging Experiments Jun 2016
Enhancing Diversity in Graduate Education (EDGE)
Purdue University, West Lafayette, IN, USA

Biomedical applications of Cardinal: a mass spectrometry imaging toolbox for statistical analysis Jun 2016
American Society for Mass Spectrometry
San Antonio, Texas, USA

Statistical testing for differentially abundant ions in mass spectrometry imaging experiments Mar 2015
United States Human Proteome Organization (US HUPO)
Tempe, Arizona, USA

A likelihood based method for accelerating investigation of food-borne disease outbreaks: an internship experience Sep 2013
Exploring Statistical Sciences Research Seminar, Purdue University

A (very) brief introduction to graphical models Jul 2013
MSRI-Undergraduate Program Workshop
Mathematical Sciences Research Institute, Berkeley, California, USA

SERVICE AND OUTREACH

Director, Purdue University StatCom Aug 2014-Aug 2015
Acted as lead coordinator for service-oriented statistical consulting group

Volunteer Consultant, Purdue University StatCom 2012-2016
Designed experiments and surveys, analyzed and visualized data for government and non-profit groups

TEACHING EXPERIENCE

Teaching assistant, Purdue University Jan 2015-May 2015
Course: STAT 301: Elementary Statistical Methods
Instructed lab sections using the SPSS statistical computing software, graded exams and lab assignments, held office hours

EMPLOYMENT

Research Technician, College of Science Northeastern University, Boston, Massachusetts, USA	2016-Present
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Research Assistant, Department of Statistics Purdue University, West Lafayette, Indiana, USA	2015-2016
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Peer Mentor, Enhancing Diversity in Graduate Education (EDGE) Harvey Mudd College, Claremont, California, USA <i>Directly mentored fourteen underrepresented, female students preparing for graduate programs in the mathematical sciences; Facilitated daily homework problem sessions; Organized community-building activities</i>	2014
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Summer Intern, IBM Almaden Research Center San Jose, California, USA <i>Public Health Research Team, manager James Kaufman Analyzed the performance of a likelihood-based method for determining contamination sources of food-borne illness epidemics</i>	2013
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Private Tutor, Purdue Disabilities Resource Center <i>Provided assistance to students learning Algebra, Trigonometry, and Calculus who have been identified as having learning disabilities</i>	2012-2013
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Student Researcher, Minority Access To Research Careers Xavier University of Louisiana, New Orleans, Louisiana, USA <i>Worked with a faculty mentor to model populations using difference equations Project Title: "Dynamics of the Sigmoid Beverton-Holt Population Model"</i>	2008-2010
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PROGRAMMING LANGUAGES

Expert in R
Proficient in C

PROFESSIONAL DEVELOPMENT

Hierarchical Bayesian Modeling and Analysis for Spatial Data Joint Statistical Meetings, Short Course	2014
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MALDI Imaging Mass Spectrometry American Society for Mass Spectrometry, Short Course	2014
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JSM Diversity Mentoring Program Joint Statistical Meetings 2013, Montreal, Quebec, CA	2013
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Responsible Conduct of Research Certification, Collaborative Institutional Training Initiative	2012
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Enhancing Diversity in Graduate Education (EDGE) North Carolina State University, Raleigh, North Carolina, USA	2010
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MEMBERSHIPS AND AFFILIATIONS

Imaging Mass Spectrometry Society
Greater Boston Mass Spectrometry Discussion Group
US Human Proteome Organization
American Statistical Association
Mu Sigma Rho Statistical Honor Society