

## Joseph Lawrence Antonelli, Ph.D.

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| CONTACT INFORMATION                  | University of Florida<br>Department of Statistics<br>206 Griffin-Floyd Hall, P.O. Box 118545<br>Gainesville, FL 32611-8545   | Mobile phone: 352-359-8037<br>jantonelli111@gmail.com<br>Citizenship: United States |
| CURRENT POSITION                     | Assistant Professor, Department of Statistics<br>University of Florida, Gainesville, FL  | 2018 - present  |
| EDUCATION                            | Ph.D. Biostatistics, Harvard University<br><i>Thesis:</i> Statistical methods for analyzing complex spatial and missing data<br><i>Advisors:</i> Professors Francesca Dominici and Brent Coull | 2015  |
|                                      | M.A. Biostatistics, Harvard University   | 2013  |
|                                      | B.S. Statistics, The University of Florida<br><i>Summa Cum Laude</i>   | 2011  |
| RESEARCH AND PROFESSIONAL EXPERIENCE | Postdoctoral Research Fellow, Department of Biostatistics<br>Harvard T.H. Chan School of Public Health, Boston, MA   | 2015 - 2018   |
|                                      | Statistical Consultant, Brigham and Women's Hospital<br>Boston, MA   | 2015 - 2018   |
|                                      | Decision Support Analyst Intern, Google Inc.<br>Mountain View, CA  | 2013  |
|                                      | Environmental Statistics Trainee, National Institutes of Health<br>Boston, MA  | 2011 - 2015   |
|                                      | Statistical Programming Intern, Department of Pharmaceutical Outcomes and Policy<br>Gainesville, FL  | 2010 - 2011   |
|                                      | Actuarial Intern, Tower Hill Insurance Company<br>Gainesville, FL  | 2009  |
| TEACHING EXPERIENCE                  | Professor, University of Florida Department of Statistics<br><i>Course:</i> Introduction to Probability  | 2018  |
|                                      | Course Developer, Harvard Department of Biostatistics<br><i>Course:</i> Applied Bayesian Methodology   | 2016  |
|                                      | Teaching Assistant, Harvard Department of Biostatistics<br><i>Course:</i> Advanced Topics in Clinical Trials   | 2014  |
|                                      | Teaching Assistant, Harvard Department of Biostatistics<br><i>Course:</i> Bayesian Methodology in Biostatistics.   | 2013 - 2014   |
|                                      | Teaching Assistant, Harvard Department of Biostatistics<br><i>Course:</i> Statistical Programming in R   | 2012  |

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|                                     | Teaching Assistant, Harvard Department of Biostatistics<br><i>Course: Introduction to Python</i>  | 2012 |
| ADVISING<br>EXPERIENCE              | Armando Turchetta, Masters student (Co-advisor)   | 2017 |
| HONORS AND<br>AWARDS                | 2017 JSM Biometrics section young investigators award for “Doubly robust matching estimators for high dimensional confounding adjustment”<br>2016 International Society for Bayesian Analysis (ISBA) young investigator travel award<br>2015 Harvard Biostatistics award for excellence in teaching<br>2015 International Conference on Health Policy Statistics (ICHPS) student travel award<br>2014 ENAR distinguished student paper award for “Mitigating bias in generalized linear mixed models: The case for Bayesian nonparametrics”<br>Recipient of Harvard scholarship to attend a course on environmental genetics in Cyprus, 2012<br>Phi Beta Kappa, 2010  |      |
| REFEREED<br>JOURNAL<br>PUBLICATIONS | <b>Antonelli JL</b> , Parmigiani G, Dominici F. High dimensional confounding adjustment using continuous spike and slab priors. <i>Bayesian Analysis</i> . To Appear.<br><b>Antonelli JL</b> Daniels, M. Invited discussion of “Penalized Spline of Propensity Methods for Treatment Comparison”. <i>Journal of the American Statistical Association</i> . To appear.<br><b>Antonelli JL</b> , Cefalu M, Palmer N, Agniel D. Doubly robust matching estimators for high dimensional confounding adjustment. <i>Biometrics</i> . To appear. <i>arXiv:1612.00424</i><br><b>Antonelli JL</b> , Han B, Cefalu M. A synthetic estimator for the efficacy of clinical trials with all-or-nothing compliance. <i>Statistics in Medicine</i> . 36.29 (2017): 4604-4615.<br>Makar M, <b>Antonelli JL*</b> (Co-first author), Di Q, Cutler D, Schwartz J, Dominici F. Estimating the causal effect of low levels of fine particulate matter on hospitalization. <i>Epidemiology</i> . 28.5 (2017): 627-634.<br><b>Antonelli JL</b> , Zigler CM, Dominici F. Guided Bayesian imputation to adjust for confounding when combining heterogeneous data sources in comparative effectiveness research. <i>Biostatistics</i> . 2017<br><b>Antonelli JL</b> , Schwartz J, Kloog I, Coull B. Spatial multiresolution analysis of the effect of PM <sub>2.5</sub> on birth weights. <i>The Annals of Applied Statistics</i> 2017; 11.2: 792-807.<br><b>Antonelli JL</b> , Cefalu M, Bornn L. The positive effects of preferential sampling in environmental epidemiology. <i>Biostatistics</i> 2016; 17(4): 764-778.<br><b>Antonelli JL</b> , Trippa L, Haneuse S. Mitigating bias in generalized linear mixed models: The case for Bayesian nonparametrics. <i>Statistical Science</i> 2016; 31.1: 80-95. |      |
| PUBLICATIONS<br>UNDER REVIEW        | Claggett B, <b>Antonelli JL*</b> (Co-first author), Henglin M, Watrous J, Lehmann K, Musso G, Correia A, Jonnalagadda S, Demler O, Ramachandran V, Larson M, Jain M, Cheng S. Quantitative comparison of statistical methods for human disease trait association with mass spectrometry based metabolomics data. Under Revision. <i>BMC Bioinformatics</i><br><b>Antonelli JL</b> Dominici F. A Bayesian semiparametric framework for causal inference in high-dimensional data. <i>arXiv: 1805.04899</i><br><b>Antonelli JL</b> , Mazumdar M, Bellinger D, Christiani D, Wright R, Coull B. Bayesian variable selection for multi-dimensional semiparametric regression models. <i>arXiv:1711.11239</i>  |      |

Henglin M, Niiranen T, Watrous J, Lehmann K, **Antonelli JL**, Claggett B, Demosthenes E, Von Jeinsen B, Ramachandran V, Larson M, Jain M, Cheng S. A Single Visualization Technique for Displaying Multiple Metabolite-Phenotype Associations

Kurtz S, **Antonelli JL**, Persia T, Lehmann L. A national survey of physician assistants' attitudes on assisted dying.

#### INVITED TALKS

Invited seminar speaker: "Bayesian variable selection for multi-dimensional semiparametric regression models." Boston Bayesians. 2018.

Invited conference speaker: "A Bayesian semiparametric framework for causal inference in high-dimensional data.". International Indian Statistical Association Conference. Florida. 2018.

Invited seminar speaker: "Bayesian variable selection for multi-dimensional semiparametric regression models." Yale University. 2017.

Invited seminar speaker: "Bayesian variable selection for multi-dimensional semiparametric regression models." McGill University. 2017.

Invited seminar speaker: "Bayesian variable selection for multi-dimensional semiparametric regression models." University of Florida. 2017.

Invited seminar speaker: "Bayesian variable selection for multi-dimensional semiparametric regression models." New York University. 2017.

Invited conference speaker: "High dimensional confounding adjustment using continuous spike and slab priors". CMStatistics. London. 2017

Webinar: "Estimating the causal effect of low levels of fine particulate matter on hospitalization". EPA STAR Webinar. 2017

Invited seminar speaker: "Spatial multiresolution analysis of irregularly spaced grids with application to the effect of PM2.5 on birth weights". Georgetown University. 2017

Invited lecture: "Using wavelets to decompose air pollution surfaces". Georgetown University. 2017

Webinar: "Estimating the causal effect of lowering particulate matter levels below the United States standards on hospitalization and death: An observational study using an open cohort". Health Effects Institute Webinar Series. 2016

Invited seminar speaker: "A synthetic estimator for the efficacy of clinical trials with all-or-nothing compliance" RAND corporation. Los Angeles, CA, 2016.

Invited seminar speaker: "Spatial multiresolution analysis of irregularly spaced grids with application to the effect of PM2.5 on birth weights." Harvard University Department of Biostatistics Environmental Health Seminar, 2014.

#### CONTRIBUTED TALKS

Contributed talk: "Nonparametric Bayes models for doubly robust causal inference for high-dimensional data". European Causal Inference Conference. Florence, Italy. 2018

Topic contributed talk: "Doubly robust matching estimators for high dimensional confounding adjustment.". Joint Statistical Meetings. Baltimore, MD. 2017

Contributed poster: "A flexible, tensor regression approach to estimating the health effects of chemical mixtures.". IMS New Researchers Conference. Baltimore, MD. 2017

Contributed poster: "A flexible, tensor regression approach to estimating the health effects of chemical mixtures.". Bayesian Nonparametric Conference. Paris, France. 2017

Contributed poster: "High dimensional confounding adjustment using continuous spike and slab priors". Atlantic Causal Inference Conference. Raleigh, NC. 2017

Contributed talk: “High dimensional confounding adjustment using continuous spike and slab priors”. Eastern North American Region Conference. Washington DC. 2017

Contributed talk: “Guided Bayesian imputation to adjust for confounding when combining heterogeneous data sources in comparative effectiveness research.” Joint Statistical Meetings. Chicago, IL, 2016.

Contributed poster: “Guided Bayesian imputation to adjust for confounding when combining heterogeneous data sources in comparative effectiveness research.” International society for Bayesian Analysis Conference. Sardinia, Italy, 2016.

Contributed talk: “Guided Bayesian imputation to adjust for confounding when combining heterogeneous data sources in comparative effectiveness research.” Eastern North American Region Conference. Austin, Texas, 2016.

Contributed poster: “Guided Bayesian imputation to adjust for confounding when combining heterogeneous data sources in comparative effectiveness research.” International Conference on Health Policy Statistics. Providence, RI, 2015.

Contributed talk: “Spatial multiresolution analysis of irregularly spaced grids with application to the effect of PM2.5 on birth weights.” Joint Statistical Meetings. Seattle, WA, 2015.

Contributed talk: “Mitigating bias in generalized linear mixed models: The case for Bayesian non-parametrics.” Eastern North American Region Conference. Miami, FL, 2015.

Contributed poster: “The positive effects of preferential sampling in environmental epidemiology.” New England Statistics Symposium. Boston, MA, 2014.

JOURNAL REFEREE *Biometrics; Annals of Applied Statistics; Journal of Causal Inference; Statistics in Medicine; Statistical Methods in Medical Research; Journal of Behavioral and Educational Statistics; Epidemiology; International Journal of Environmental Science and Technology; Multivariate Behavioral Research*

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| DEPARTMENTAL SERVICE | University of Florida Department of Statistics PhD Curriculum Committee | 2018 - present |
|                      | Harvard Biostatistics Environmental Statistics Seminar organizer        | 2016 - 2017    |
|                      | Harvard Biostatistics Computing Committee                               | 2015 - 2016    |