Mathieu **Bray**

PhD Candidate · Department of Biostatistics · University of Michigan School of Public Health

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Education

University of Michigan   *Ann Arbor, Michigan, USA*

Ph.D. in Biostatistics   *Aug. 2012 - Present*

- Advisor: Peter X-K. Song
- Achieved Candidacy – June 2015
- Expected Completion – August 2018

McGill University   *Montreal, Quebec, Canada*

B.Sc. Joint Honours in Statistics and Computer Science   *Sep. 2009 - May 2012*

- Distinction - Top 25% of graduating class
- First Class Honours - CGPA above 3.5
- Deans Honour List - 2010-2011 & 2009-2010 academic years

Academic & Research Experience

University of Michigan, Kidney Epidemiology and Cost Center   *Ann Arbor, Michigan, USA*

Research Assistant   *Aug. 2012 - Present*

- Assist the Kidney-Paired Donation (KPD) simulation group at the Kidney Epidemiology and Cost Center with investigations on optimization strategies in KPD, as well as development of visualization software for KPD networks.
- Advisors: Peter X-K. Song, Jack (John D.) Kalbfleisch

McGill University Hospital Centre, Neuroepidemiology Research Unit   *Montreal, Quebec, Canada*

endMS Summer Student   *May 2011 - Sep. 2012*

- Provided research and analysis on general practitioner preferences in managing care for multiple sclerosis patients.
- Advisor: Christina Wolfson

McGill University, Dept. of Epidemiology, Biostatistics & Occupational Health   *Montreal, Quebec, Canada*

Biostatistics Summer Intern   *May 2010 - Jul. 2012*

- Selected for the inaugural cohort of Undergraduate Summer Internships within the biostatistics division.
- Assisted with preparation of a literature review on the relation between family responsibilities and gender to the productivity and career satisfaction of medical faculty, as well as the release of a software package for optimal dynamic treatment regimes.
- Advisor: Erica E. M. Moodie

Committee Membership & Service

Fifth Bayesian, Fiducial & Frequentist (BFF5) Conference   *Ann Arbor, Michigan, USA*

Member, Organizing Committee   *May 2017 - Present*

- Currently participating as member of the organizing committee for the Fifth Bayesian, Fiducial and Frequentist (BFF5) Conference, primarily responsible for drafting and sending speaker invitations, maintaining the conference website, and scheduling organizing committee meetings.
- Contact: Peter X-K. Song, Professor, Department of Biostatistics, University of Michigan

Biostatistics Student Association   *Ann Arbor, Michigan, USA*

Executive Member   *Aug. 2014 - Apr. 2016*

- Communicated issues and events pertaining to students, represented student interests, and organized social and professional development activities, which included student computing workshops.
- Contact: Nicole Fenech, Program Coordinator, Department of Biostatistics, University of Michigan

Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSISS) *Ann Arbor, Michigan, USA*

Student Organizing Committee, Biostatistics Representative *Sep. 2014 - Mar. 2015*

- Organized, advertised and hosted MSSISS 2015 (March 20, 2015).
- Selected student speakers, judged the student oral presentation competition, coordinated with the keynote speaker, and helped select the keynote speaker for the event the following year.
- Contact: Timothy D. Johnson, Professor, Department of Biostatistics, University of Michigan

Skills

Languages

- English (written and oral)
- Français (écrit et verbal)

Technical Expertise

- High level of experience with R (RStudio, Shiny, shinyapps.io), C++ (GUI programming with Qt), LaTeX
- Previous extensive experience with Java, C, SAS, MATLAB
- Familiarity with SQL, Python, Julia, Ruby, Tableau, Spark, Tensorflow

Distinctions

2012-2013	**Postgraduate Scholarship (Master's) PGS M**, NSERC	
2012-2013	**Alexander Graham Bell Canada Graduate Scholarship (Master's) CGS M**, NSERC	*Declined*
2012-2013	**Bourse de Maitrise (Master's Scholarship) B1**, FQRNT	*Declined*
2011	**endMS Summer Studentship Award**, Multiple Sclerosis Society of Canada	
2011-2012	**Sir Edward Beatty Memorial Scholarship** , McGill University	
2009-2010	**J.W. McConnell Scholarship**, McGill University	

Publications

Kidney Paired Donation

Bray M, Wang W, Rees MA, Song PXK, Leichtman AB, Ashby VB, and Kalbfleisch JD (2017). A Visualization Software Platform for Managing a Kidney Paired-Donation Program. In Preparation

Bray M, Wang W, Song PXK, and Kalbfleisch JD (2017). Valuing Sets of Potential Transplants in a Kidney Paired Donation Network. Statistics in Biosciences (Submitted)

Wang W, Bray M, Song PXK, and Kalbfleisch JD (2017). An Effective Algorithm to Enumerate Sets with Fallbacks for a Kidney Paired Donation Program. Operations Research in Health Care (Submitted)

Ashby VB, Leichtman AB, Rees MA, Song PXK, Bray M, Wang W, and Kalbfleisch JD (2017). A Kidney Graft Survival Calculator that Accounts for Mismatches in Age, Sex, HLA, and Body Size. Clinical Journal of the American Society of Nephrology (Published Online June 2017). DOI: 10.2215/CJN.09330916

Wang W, Bray M, Song PXK, and Kalbfleisch JD (2017). A Look-Ahead Strategy for Non-Directed Donors in Kidney Paired Donation. Statistics in Biosciences 9 : 453–69. DOI: 10.1007/s12561-016-9155-y

Bray M, Wang W, Song PXK, Leichtman AB, Rees MA, Ashby VB, Eikstadt R, Goulding A, and Kalbfleisch JD (2015). Planning for Uncertainty and Fallbacks Can Increase the Number of Transplants in a Kidney Paired Donation Program. American Journal of Transplantation 15 : 2636–45. DOI: 10.1111/ajt.13413

Multiple Sclerosis

Bray M, Wolfson C, Moore F, Zhu B, and Uniat J (2016). General practitioner preferences in managing care of multiple sclerosis patients. Canadian Journal of Neurological Sciences 43 : 142–8. DOI: 10.1017/cjn.2015.239

Invited Commentary

Bray M and Song PXK (2016). Commentary on "Statistical modelling of citation exchange between statistics journals" by Varin C, Cattelan M, and Firth D. Journal of the Royal Statistical Society: Series A (Statistics in Society) 179 : 1–63. DOI: 10.1111/rsssa.12124

Presentations

Oral Presentations

Mar. 15, 2017	**ENAR 2017**, Assessing the Benefits of Multiple Incompatible Donors in Kidney Paired Donation	*Washington D.C., USA*
Mar. 25, 2016	**MSSISS 2016**, Incorporating Candidates with Multiple Associated Incompatible Donors in Kidney Paired-Donation	*Ann Arbor, MI, USA*
Sep. 8, 2011	**endMS Rounds**, General Practitioner Preferences in Managing Care for Multiple Sclerosis Patients	*Montreal, QC, Canada*

Poster Presentations

Jun. 14, 2016	**American Transplant Congress**, A Visualization Software Platform for Managing a Kidney Paired-Donation Program	*Boston, MA, USA*
Mar. 6, 2016	**ENAR 2016**, Incorporating Candidates with Multiple Associated Incompatible Donors in Kidney Paired-Donation	*Austin, TX, USA*
Mar. 21, 2014	**MSSISS 2014**, Incorporating Uncertainties and Contingencies in a Paired Donation Program	*Ann Arbor, MI, USA*
Nov. 7, 2013	**ASN Kidney Week**, Incorporating Uncertainties and Contingencies in a Paired Donation Program	*Atlanta, GA, USA*