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Mathematics and Statistics
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EDUCATIONAL BACKGROUND

Degree	University	Department	Year
B.Sc.(Hons)	University College Cork, Ireland	Computer Science and Statistics	Oct 1989
M.Sc.	University of Toronto	Statistics	Nov 1991
Ph.D.	University of Toronto	Statistics	June 1995
	Thesis: “A System to Test for Convergence of the Gibbs Sampler”		
	Supervisor: Prof. Nancy M. Reid		

AREAS OF INTEREST: (research, teaching, consulting)

Teaching: Introductory statistics and probability, mathematical statistics, statistical computing, genetic statistics, regression, Monte Carlo and simulation.

Research: Computational statistics, Monte Carlo methods, applied statistics, semi-parametric statistical inference, statistical inference in genetics and genomics.

Consulting: Analysis of genetic experiments in medical/biological research (Gene expression, Genome wide association studies etc.)

ANGELO J. CANTY

CURRICULUM VITAE

EMPLOYMENT HISTORY

From	To	Employer	Position
1998	2001	Dept of Mathematics and Statistics Concordia University, Montreal	Assistant Professor (Tenure track)
1996	1998	Dept of Mathematics École Polytechnique Fédérale de Lausanne, Switzerland	Post-Doctoral Assistant
1995	1996	Dept of Statistics University of Oxford, UK	Post-Doctoral Research Assistant
1995	1996	Lady Margaret Hall College University of Oxford, UK	College Lecturer
1994		Dept of Statistics University of Toronto	Computer User Support Supervisor
1991	1994	Statistical Consulting Service University of Toronto	Consulting Assistant
1990	1994	Dept of Statistics University of Toronto	Teaching Assistant
1989	1990	Target Assurance Group United Kingdom	Actuarial Trainee
1988	1989	Dept of Statistics University College Cork, Ireland	Undergraduate Tutor
1988	1989	Dept of Computer Science University College Cork, Ireland	Undergraduate Tutor

VISITING APPOINTMENTS

From	To	Institution	Position
Sept 2016	Dec 2016	Lady Davis Research Institute, Montreal	Visiting Professor
July 2008	June 2009	Hospital for Sick Children, Toronto	Visiting Scientist
July 2004	June 2005	Hospital for Sick Children, Toronto	Visiting Scientist

HONOURS ACCORDED

June 2007 Canadian Journal of Statistics Award for 2006. Bootstrap Diagnostics and Remedies (with A.C. Davison, D.V. Hinkley and V. Ventura).

SCHOLARLY AND PROFESSIONAL ACTIVITIES (Past 6 years)

Activity	Position	Dates
The Applied Biostatistics Association	Executive Committee Member	2012–present
Liaison: The Newsletter of the Statistical Society of Canada	Associate Editor	2008–present
Statistics in Medicine	Referee	2016
Statistical Applications in Genetics and Molecular Biology	Referee	2016
NSERC Grant Selection	Referee	2004–2013, 2016
Statistical Society of Canada	Member, Program Committee	2013–2016
International Genetic Epidemiology Society	Member, Publication Liaison Committee	2015–2016
2015 Joint Statistical Meetings Program Committee	Statistical Society of Canada Representative	2014–2015
European J.of Human Genetics	Referee	2014
International Genetic Epidemiology Society	Member of working group to renegotiate the Wiley contract for Genetic Epidemiology	2013–2014
Canadian J. of Statistics	Managing Editor	2010–2012
Department of Pathology and Molecular Medicine, McMaster	External Tenure and Promotion Reviewer	2011

RESEARCH GRANT INFORMATION

Year	Grantor	Title of Project	Amount
2013	NSERC	Statistical Methods for High Throughput Genomic Data	\$15,000 p.a. (5 years)
2012	CIHR	Lipids in Type 1 Diabetes (Co-PI with 4 others)	\$100,000 (1 year)
2012	Juvenile Diabetes Research Foundation	Genetics of the Decline in Glomerular Filtration Rate in Type 1 Diabetes (Co-PI with 5 others)	\$1,457,483 (3 years)
2008	NSERC	Applications of Resampling Methods	\$15,000 p.a. (5 years)
2006	Genome Canada	Genome-Environment Interactions in Type 1 Diabetes (Co-PI with 7 others)	\$7,499,748 (4 years)
2004	CIHR	Statistical Analysis of Multifactorial Disease	\$55,000 (1 year)
2003	NSERC	Resampling and Other Monte Carlo Methods for Statistical Inference	\$14,500 p.a. (4 years)
2001	McMaster	Start-up Operating and Equipment Grant	\$40,000
1999	NSERC	Modern Monte Carlo Methods in Practice	\$10,500 p.a. (4 years)
1999	NSERC	Workstation Upgrade for Statistics and Actuarial Mathematics (Joint with 3 others)	\$20,200
1999	Concordia	Implementation Issues for Monte Carlo Methods	\$10,100 p.a. (3 years)

POSTDOCTORAL SUPERVISION

Sareh Keshavarzi (CIHR STAGE postdoctoral trainee)	2016–2018	Multivariate Meta Genome-wide Association of Cardiovascular Disease Risk Factors in Type 1 Diabetes
Nabin Shrestha	2012–2013	Genome Wide Association Analysis of Density Gradient Ultracentrifugation Data
Amadou Sarr	2008–2010	Multivariate Analysis of Gene Expression Microarrays
Shaheena Bashir	2006–2008	Finding Interactions from Gene Expression Microarray Data

GRADUATE SUPERVISION

Student	Year	Program	Thesis/Project Title
K. Akula	in progress	M.Sc.	Not yet decided
J. Frances	in progress	M.Sc.	Evaluation of PrediXcan for Associating Traits with Genes.
C. Gu	2016	Ph.D.	Quasi-likelihood Based Differential Expression Analysis of RNA-Seq Data
H. Alsulami	2015	Ph.D.	Comprehensive Exam Independent Study: Bayesian Inference in GWAS
Q. Yang	2015	M.Sc.	Finding G-E Interactions in Quantitative Trait Analysis using Two-Step Methods
W. Deng (Co-supervised with G. Paré)	2013	M.Sc.	Finding Gene–Environment and Gene–Gene Interactions in Genome Wide Association Studies
T. Wang	2012	M.Sc.	A Longitudinal Genome Wide Association Study of Lipids in Type 1 Diabetes
C. Ye	2010	M.Sc.	Test Statistics and Q-Values to Identify Differentially Expressed Genes in Microarrays
J. Li	2008	M.Sc.	Using Smoothing Splines to Select Significant Genes in Microarrays

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CURRICULUM VITAE

Y. Wang	2008	M.Sc.	Empirical Bayes Analysis for Detecting Differential Expression in Microarrays
Y. Luo	2007	M.Sc.	Comparison between Affymetrix and Illumina gene expression microarray platforms.
Y. Gao	2006	M.Sc.	Detecting Locus-Locus Interactions Using Microarray Data.
R. Yang	2006	M.Sc.	Comparison of Normalization Methods in Microarray Analysis.
Y. We	2004	M.Sc.	Bootstrap Methods to Account for Model Uncertainty
A. Ismaila	2004	M.Sc.	Spatial Analysis of Miscarriages near the Sydney Tar Ponds
P. Popadiuk	2004	M.Sc.	Small Sample Results for Subsampling (Co-supervisor)
S. Sun	2002	M.Sc.	Post-blackening and Other Bootstrap Methods for Time Series
B. Vlas-Irima	2000	M.Sc.	Bootstrap Confidence Intervals in the Presence of Censored Data
A. Bliu	2000	M.Sc.	Jackknife Variance Estimation for Labour Force Surveys
D.N. Thomas	1999	M.Sc.	The Use of Loss Functions and Dynamic Programming in the Determination of Sample Size and Allocation of Units to Strata

UNDERGRADUATE SUPERVISION

Student	Year	Program	Thesis/Project Title
Michael Gallagher	2015	USRA	Analysis of Rare Exonic Variants in a Longitudinal GWAS
Michael Gallagher	2014–2015	Math 4P06	Fast Methods to Find Genetic Interactions with Time in Longitudinal GWAS Analyses.

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CURRICULUM VITAE

Michael Gallagher	2014	NSERC USRA	Linear Mixed Effect Models for Longitudinal GWAS.
Andrew McEwen	2013	Co-op Placement	Statistical Methods to Detect Genetic Pleiotropy.
Nidhi Patel	2013	Co-op Placement	Multi-SNP Analyses of Lipid Traits from DCCT
Akram Alyass	2012	Research Assistant	Comparison of GEE and LME Methods for Longitudinal GWAS.
Wei Deng (Co-supervised with G. Paré)	2010–2011	Science 4B06	Variance Based Prioritization of SNPs for Gene–Environment Interactions
Remya John	2011	Co-op Placement	Statistical Methods to Analyze RNA-Seq Data
Sarica May	2010	Co-op Placement	Principal Component Analyses of Gene Expression Data
Chang Ye	2008	NSERC USRA	Methods for the Calculation of q-values.
Hanchun Zhu	2006	NSERC USRA	Analysis of Real-Time PCR data
Diego Kuonen	1998	Diplome	Saddlepoint Approximations for Bootstrap Distributions

EXTERNAL GRADUATE EXAMINATION

Student	Year	Degree	Institution
Ahmed Hossain	2011	Ph.D.	University of Toronto
Zhiheng Lu	2008	Ph.D.	University of Guelph
Elena Parkhomenko	2008	Ph.D.	University of Toronto

UNDERGRADUATE COURSES TAUGHT

Course Number	Institution	Course Title
STATS 249	Concordia	Probability 1
STATS 250	Concordia	Statistics 1
MAST 333	Concordia	Applied Statistics
STATS 343	Concordia	Sample Survey Theory and Applications
STATS 450	Concordia	Mathematical Statistics
STATS 461	Concordia	Simulation
STATS 1CC3	McMaster	Introductory Computer-Aided Statistics
STATS 2B03	McMaster	Statistical Methods for Science
STATS 2D03	McMaster	Probability Theory
STATS 2MB3	McMaster	Statistical Methods and Applications
STATS 3A03	McMaster	Applied Regression Analysis with SAS
STATS 3CI3	McMaster	Computational Methods for Inference
STATS 3D03	McMaster	Mathematical Statistics
STATS 3J04	McMaster	Probability and Statistics for Civil Engineering
STATS 3Y03	McMaster	Probability and Statistics for Engineering
STATS 4CI3	McMaster	Computational Methods for Inference
STATS 4M03	McMaster	Multivariate Statistics
STATS 4W03	McMaster	Survey Methodology (Reading Course)

GRADUATE COURSES TAUGHT:

Course Number	Institution	Course Title
STATS 672	Concordia	Statistical Inference
MAST 679T	Concordia	Computational Statistics
STATS 6CI3	McMaster	Computational Methods for Inference
STATS 6M03	McMaster	Multivariate Statistics
STATS 743	McMaster	Foundations of Statistics
STATS 744	McMaster	Monte Carlo and Computational Methods in Statistics
MATH 798	McMaster	Mathematical and Computational Statistics (Reading Course)

LIFETIME PUBLICATION LIST**PEER REVIEWED****Journal Articles**

1. M. Gallaugh, A.J. Canty and A.D. Paterson “Factors Associate with Heterogeneity in Microarray Gene Expression in Peripheral Blood Mononuclear Cells from Large Pedigrees” *BMC Proceedings* 2016 Oct 18;10(Suppl 7):91-95.
2. D. Roshandel, R. Klein, B.E. Klein, B.H. Wolffenbuttel, M.M. van der Klauw, J.V. van Vliet-Ostaptchouk, G. Atzmon, D. Ben-Avraham, J.P. Crandall, N. Barzilai, S.B. Bull, A.J. Canty, S.M. Hosseini, L.T. Hiraki, J. Maynard, D.R. Sell, V.M. Monnier, P.A. Cleary , B.H. Braffett, DCCT/EDIC Research Group and A.D. Paterson. “New Locus for Skin Intrinsic Fluorescence in Type 1 Diabetes Also Associated With Blood and Skin Glycated Proteins” *Diabetes*. 2016 Jul;65(7):2060-71. doi: 10.2337/db15-1484.
3. S.M. Hosseini, A.P. Boright, L. Sun, A.J. Canty, S.B. Bull, B.E.K. Klein, R. Klein, A.D. Paterson and the DCCT/EDIC Research Group. “The association of previously reported polymorphisms for microvascular complications in a meta-analysis of diabetic retinopathy” *Human Genetics* **134** 247–257 (2015).
4. A.S. Wong, S. Mortin-Toth, M. Sung, A.J. Canty, O. Gulban D.R. Greaves and J. Danska. “Polymorphism in the innate immune receptor SIRP α controls CD47 binding and automimmunity in the nonobese diabetic mouse” *Journal of Immunology* **193** 4833–4844 (2014).
5. X.J. Xiong, D.N. Frank, C.E. Robertson, S.S. Hung, J. Markle, A.J. Canty, K.D. McCoy, A.J. Macpherson, P. Poussier, J.S. Danska & J. Parkinson. “Generation and Analysis of a Mouse Intestinal Metatranscriptome through Illumina Based RNA-Sequencing” *PLoS One* **7** e36009 (2012).
6. K. Eppert, K. Takenaka, E.R. Lechman, L. Waldron, B. Nilsson, P. van Galen, K.H. Metzeler, A. Poepl, V. Ling, J. Beyene, A.J. Canty, J.S. Danska, S.K. Bohlander, C. Buske, M.D. Minden, T.R. Golub, I. Jurisica, B.L. Ebert, and J.E. Dick. “Stem cell gene expression programs influence clinical outcome in human leukemia” *Nature Medicine* **17** 1076–1085 (2011).
7. K. Xu, E. Nieuwenhuis, B.L. Cohen, W. Wang, A.J. Canty, J.S. Danska, L. Coultas, J. Rossant, M.Y. Wu, T.D. Piscione, A. Nagy, A. Gossler, G.G. Hicks, C.C. Hui, R.M. Henkelman, L.X. Yu, J.G. Sled, T. Gridley and S.E. Egan. “Lunatic Fringe-mediated Notch signaling is required for lung alveogenesis” *American Journal of Physiology - Lung Cellular and Molecular Physiology* **298** L45-56, (2010).
8. A.D. Paterson, D. Waggott, A.P. Boright, S.M. Hosseini, E. Shen, M.–P. Sylvestre, I. Wong, B. Bharaj, P.A. Cleary, J.M. Lachin, Meta-Analyses of Glucose and Insulin-related

- traits Consortium, J.E. Below, D. Nicolae, N.J. Cox, A.J. Canty, L. Sun, S.B. Bull and Diabetes Control and Complications Trial/Epidemiology of Diabetes Interventions and Complications Research Group. “A genome-wide association study identifies a novel major locus for glycemic control in type 1 diabetes, as measured by both A1c and glucose” *Diabetes* **59** 539-549, (2010).
9. A.S. Ismaila, A.J. Canty and L. Thabane. A Comparison of Bayesian and Frequentist Approaches in Modelling Risk of Preterm Birth Near the Sydney Tar Ponds, Nova Scotia, Canada. *BMC Medical Research Methodology*, (2007).
 10. I.R. Matei, R.A. Gladdy, L.M. Nutter, A.J. Canty, C.J. Guidos and J.S. Danska. ATM deficiency disrupts TCR α locus integrity and the maturation of CD4+CD8+ thymocytes. *Blood* **109** 1887–1896, (2007).
 11. E.A. Ivakine, S.M. Mortin-Toth, O.M. Gulban, A. Valova, A.J. Canty, C. Scott and J.S. Danska. The *Idd4* locus reveals sex-specific epistatic effects on type 1 diabetes susceptibility in nonobese diabetic mice. *Diabetes* **55** 3611-3619, (2006).
 12. A.J. Canty, A.C. Davison, D.V. Hinkley and V. Ventura. Bootstrap Diagnostics and Remedies, *Canadian Journal of Statistics* **34**, 5-27, (2006).
 13. E.A. Ivakine, O.M. Gulban, S.M. Mortin-Toth, E. Wankiewicz, C. Scott, D. Spurrell, A.J. Canty and J.S. Danska. Molecular Genetic Analysis of the *Idd4* Locus Implicates the IFN Response in Type 1 Diabetes Susceptibility in Nonobese Diabetic Mice, *Journal of Immunology* **176**, 2976 – 2990, (2006).
 14. E.A. Ivakine, C.J. Fox, A. Paterson, S.M. Mortin-Toth, A.J. Canty, D.S. Walton, K. Aleksa, S. Ito and J.S. Danska. Sex-Specific Effect of Insulin-Dependent Diabetes 4 on Regulation of Diabetes Pathogenesis in the Nonobese Diabetic Mouse *Journal of Immunology* **174**, 7129 – 7140 (2005).
 15. G.J. Babu, A.J. Canty, and Y.P. Chaubey, Application of Bernstein Polynomials for Smooth Estimation of a Distribution and Density Function, *Journal of Statistical Planning and Inference* **105**, 377–392, (2002).
 16. A.J. Canty, Hypothesis Tests of Convergence in Markov Chain Monte Carlo, *Journal of Computational and Graphical Statistics* **8**, 93–108 (1999).
 17. A.J. Canty and A.C. Davison, Implementation of Saddlepoint Approximations in Resampling Problems, *Statistics and Computing* **9**, 9–15 (1999).
 18. A.J. Canty and A.C. Davison, Resampling-based Variance Estimation for Labour Force Surveys, *The Statistician*, **48**, 379–391 (1999).

NOT PEER REVIEWED**Invited Discussion Contributions**

1. A.J. Canty and A.C. Davison, Discussion of “The Estimating Function Bootstrap” by F. Hu and J.D. Kalbfleisch, *Canadian Journal of Statistics* **28**, 489–493. (2000).
2. A.J. Canty, A.C. Davison and D.V. Hinkley Reliable Confidence Intervals; A Discussion of “Bootstrap Confidence Intervals” by T.J. DiCiccio and B. Efron, *Statistical Science*, **11**, 214–219. (1996).

Software:

1. A.J. Canty. “A Library of S-plus Functions for Resampling Methods” Software released with *Bootstrap Methods and Their Application*, by A.C. Davison, and D.V. Hinkley, 1997, Cambridge University Press (1997).

Journal/Book Articles

1. A.J. Canty. Book review of “*Bootstrap Techniques for Signal Processing*” by A.M. Zoubir and D.R. Iskander. *Journal of the American Statistical Association* **102**, 1478–1479. (2007).
2. A.J. Canty and A.C. Davison. Bootstrap Inference. In *The Encyclopedia of Statistics in Behavioural Science* (B. Everitt and D. Howell, editors) John Wiley and Sons. (2005).
3. A.J. Canty. A Career Transition. *SSC Liaison* **19** Number 3, 35-38 (2005).
4. A.J. Canty. Resampling Methods in R: The boot package. *R News* **2** Issue 3, 2–7 (2002).

Conference Proceedings

1. A.J. Canty An S-plus Library for Resampling Methods. *Computing Science and Statistics; Proceedings of the 30th Symposium on the Interface*, 236–241 (1998).
2. A.J. Canty and A.C. Davison. Implementation of Saddlepoint Approximations to Bootstrap Distributions. *Computing Science and Statistics; Proceedings of the 28th Symposium on the Interface*, 248–253 (1996).
3. A.J. Canty. Applied Convergence Diagnostics for the Gibbs Sampler. *Computing Science and Statistics; Proceedings of the 26th Symposium on the Interface*, 319–323 (1994).

Published Abstracts

1. L.T. Hiraki, I.H. De Boer, A.J. Canty, L. Sun, A.P. Boright, R. Klein, B.E. Klein, S.B. Bull, A.D. Paterson & DCCT/EDIC Research Group. “Genetic Variants Associated with Repeated Longitudinal Measures of Renal Function in Type 1 Diabetes.” *Diabetes* **63** Supp. 1 A14 (2014).
2. A.J. Canty, N.M. Shrestha, M.-P. Sylvestre, J.D. Brunzell, A.P. Boright, S.B. Bull, and A.D. Paterson. “Genome-wide Association Analysis of Density Gradient Ultracentrifugation Data” In *Abstracts from the 22nd Annual Meeting of the Genetic Epidemiology Society* (C. Greenwood, J. Lorenzo Bermejo, B. Fridley, J. Houwing-Duistermaat, A. Paterson, S. Shete, A.F. Wilson and A. Ziegler editors) ISBN 978–1-940377-00-1. P. 15. Available through : <http://www.geneticepi.org/meeting-abstracts>.
3. Z. Chen, A.D. Paterson, A.J. Canty, L. Sun & S.B. Bull. “Joint Modeling of Repeated Quantitative Trait Measures and Time to Event in Longitudinal Genetic Association Studies” *Genetic Epidemiology* **36** 750 (2012).
4. A. Canty, T. Wang, S.B. Bull, L. Sun, A.P. Boright, DCCT/EDIC Research Group & A.D. Paterson. “GWAS of Repeated Lipid Measures in Type 1 Diabetes Identifies a Novel Locus for Low-density Lipoprotein Cholesterol” *Genetic Epidemiology* **36** 750 (2012).
5. W.Q. Deng, S. Asma, A.J. Canty & G. Paré. “A Maximum Likelihood Approach to Prioritize SNPs for Interactions Using Variance per Genotype” *Genetic Epidemiology* **36** 754 (2012).
6. W.Q. Deng, A.J. Canty & G. Paré. “A Maximum Likelihood Approach to Prioritize SNPs for Interactions Using Variance per Genotype” *Genetic Epidemiology* **36** 142 (2012).
7. M.-P. Sylvestre, A.J. Canty, D. Waggott, A.D. Paterson, A.P. Boright, J.D. Brunzell & S.B. Bull. “Genome-Wide Association Studies Of Functional Traits: An Application To Lipid Density Profiles In Type 1 Diabetes” *Genetic Epidemiology* **36** 146 (2012).
8. K.M. Eny, S.B. Bull, A.J. Canty, A.P. Boright, M. Hosseini, P.A. Cleary, J.M. Lachin, DCCT/EDIC Research Group & A.D. Paterson (2012). “Genome-Wide Association Study (GWAS) Of Lactose Consumption Measured Longitudinally Identifies A Novel Variant 500kb Downstream Of The LCT Gene Region” *Genetic Epidemiology* **36** 146 (2012).

9. A.D. Paterson, M. Hosseini, D. Waggot, A.P. Boright, E. Shen, M.-P. Sylvestre, P.A. Cleary, J.M. Lachin, J.E. Below, D. Nicolae, N.J. Cox, N. Sandholm, C. Forsblom, P.H. Groop, A.J. Canty, L. Sun, S.B. Bull and The DCCT/EDIC Research Group. “Genetic Variation at Adenylate Cyclase 5 (ADCY5) is Associated with Glycemic Control in Type 1 Diabetes” *Genetic Epidemiology* **34** 970 (2010).
10. C. Ye, A.J. Canty, D. Waggot, M.-P. Sylvestre, E. Shen, M. Hosseini, A.P. Boright, L. Sun, S.B. Bull, A.D. Paterson and the DCCT/EDIC Research Group. “A Repeated Measures Genome Wide Association Study of Blood Pressure in Type 1 Diabetes” *Genetic Epidemiology* **34** 973 (2010).
11. A. Paterson, D. Waggott, A. Boright, M. Hosseini, E. Shen, M.-P. Sylvestre, I. Wong, B. Bharaj, P. Cleary, J. Lachin, A. Canty, L. Sun, S. Bull, DCCT/EDIC Research Group. “A GWAS Identifies SORCS1 as a Major Locus for Glycemic Control in Type 1 Diabetes, as Measured by Both HbA1c and Glucose.” *Genetic Epidemiology* **33**, 793 (2009).

ACCEPTED FOR PUBLICATION

1. AJ Canty and AD Paterson. Evidence of batch effects masking treatment effects in GAW20 methylation data. To appear in *BMC Proceedings*.

SUBMITTED FOR PUBLICATION

1. C Gu and AJ Canty. A new quasi-likelihood method to detect differentially expressed genes in RNA-sequence data. Under revision following reviewer comments for publication in *Statistical Applications in Genetics and Molecular Biology*
2. LT Hiraki, CD Liao, M Gallagher, SM Hosseine, SB Bull, AJ Canty, AP Boright, BE Klein, R Klein, ML Caramori, M Mauer, J Snell-Bergeon, DM Maahs, PA Cleary, JM Lachin, IH de Boer, DCCT/EDIC Research Group and AD Paterson “Genome-wide association study of longitudinal repeated glomerular filtration rates in type 1 diabetes. Submitted to *Journal of the American Society of Nephrology*
3. SM Hosseini, AP Boright, KP Howard, L Sun, D-A Trégouët, N Vuori, N Sandholm, CN Palmer, MA Grassi, JK Snell-Bergeon, W Meng, KP Shah, LT Hiraki, HM Colhoun, HA Deshmukh, MS Lajer, M Marre, P-H Groop, S Hadjadj, AJ Canty, BE Klein, SB Bull, R Klein, DCCT/EDIC Research Group & AD Paterson. “Identification of Novel Variants for Severe Diabetic Retinopathy” Submitted to *Human Genetics*

UNPUBLISHED DOCUMENTS**Consulting Reports**

1. A.J. Canty and A.C. Davison. *Variance Estimation for Two Complex Surveys in Switzerland*. Report on work undertaken on a consulting contract for the Swiss Federal Statistical Office, Berne, Switzerland, 1998.
2. A.J. Canty and A.C. Davison. *Variance Estimation for the Labour Force Survey*. Report on work undertaken on a consulting contract for the Office for National Statistics, London, United Kingdom, 1997.

PAPERS IN PREPARATION

1. AJ Canty, NM Srestha, M-P Sylvestre, AD Paterson, AP Boright, S Marcovina, JD Brunzell, SB Bull. "A Genome-Wide Association Study for Lipoprotein Profiles Using an Empirically Fitted Null Distribution" Under final review for submission to *Genetic Epidemiology*.

PRESENTATIONS**Invited Lectures at Conferences**

- Mar 2017 *Epigenetic Changes After Fenofibrate Treatment*. 20th Genetic Analysis Workshop, San Diego, California.
- May 2014 *Genome-Wide Association Study for Lipoprotein Profiles Using an Empirically Fitted Null Distribution*. Statistical Society of Canada Annual Meeting, Toronto
- Aug 2011 *High Throughput Genetics: Challenges and Opportunities for Statisticians*. Keynote Presentation at the University of Western Ontario Graduate Students in Statistics Meeting, London Ontario.
- Sept 2008 *Model-Based Bootstrapping for M-Estimators*. Biomathematics and Biostatistics Symposium, Guelph, Ontario
- June 2007 *Bootstrap Diagnostics and Remedies*. Statistical Society of Canada Annual Meeting, St John's.
- Aug 2004 *Graphical Diagnostics for the Bootstrap*. Joint Statistical Meetings, Toronto .
- Oct 2003 *A Robust Bootstrap Test for the Equality of Several Medians*. Statistics, Combinatorics and Related Areas Conference, Portland, Maine.
- June 2003 *A Robust Bootstrap Test for the Equality of Several Medians*. Statistical Society of Canada, Halifax

- June 2000 *Discussion of “The Estimating Function Bootstrap” by Hu and Kalbfleisch.* Statistical Society of Canada, Ottawa
- July 1998 *Resampling Methods for Sample Surveys.* Workshop on Small-Sample Inference, Ecole Polytechnique Fédérale de Lausanne
- Sept 1997 *Resampling Based Estimation of Precision for Panel Surveys.* CRM Workshop on Resampling Methods, Montreal
- June 1997 *Bootstrap Assessment of Uncertainty.* INSERM Workshop, Paris (A.C. Davison and A.J. Canty)

Invited Colloquia and Seminars (Last 6 years only)

- Apr 2017 *Some Recent Methods for Gene-Gene Interactions.* Statistical Methods in Genetics and Genomics, Toronto.
- Nov 2016 *QuasiDE: A Quasi-Likelihood Method to Detect Differential Expression in RNA-Seq Data.* Université Laval
- Nov 2016 *Using Genotype Data to Predict Gene Expression.* Lady Davis Research Institute, Montreal.
- Sept 2016 *QuasiDE: A Quasi-Likelihood Method to Detect Differential Expression in RNA-Seq Data.* McGill University
- Sept 2016 *QuasiDE: A Quasi-Likelihood Method to Detect Differential Expression in RNA-Seq Data.* Lady Davis Research Institute, Montreal.
- May 2016 *A Genome-Wide Association Study of Longitudinal Renal Function in Type 1 Diabetes.* TH Chan School of Public Health, Harvard University, Boston
- Feb 2016 *Meta Analysis for Rare Variant Association Studies.* Statistical Methods in Genetics and Genomics, Toronto.
- Nov 2015 *Longitudinal Genome-Wide Association Studies: Methodology and a Case Study.* McMaster University
- Jan 2015 *Fast Methods to Detect SNP-time Interactions in Longitudinal GWAS.* Statistical Methods in Genetics and Genomics, Toronto.
- March 2014 *Genome-Wide Association Analysis of Complex Multivariate Phenotypes.* McMaster University.
- Feb 2014 *Statistical Methods For Testing Gene-Environment Interactions.* Statistical Methods in Genetics and Genomics, Toronto.

- Feb 2012 *Three Statistical Packages for RNA-Seq Data*. Statistical Methods in Genetics and Genomics, Toronto.
- Dec 2011 *A Longitudinal Genome Wide Association Study of Blood Pressure in Type 1 Diabetes*. University of Waterloo.
- Oct 2011 *A Longitudinal Genome Wide Association Study of Blood Pressure in Type 1 Diabetes*. McMaster University.
- Oct 2011 *A Longitudinal Genome Wide Association Study of Blood Pressure in Type 1 Diabetes*. University of Manitoba.
- Sept 2011 *A Longitudinal Genome Wide Association Study of Blood Pressure in Type 1 Diabetes*. University of Guelph.

Invited Short Courses

- June 2008 *Bootstrap Methods*. Sveriges Lantbruksuniversite, Umeå, Sweden. (With A.C. Davison)
- June 1998 *Introduction to Lisp-Stat and its Applications*. École Polytechnique Fédérale de Lausanne, Switzerland

Contributed Lectures at Conferences (Last 6 years only)

- June 2017 *Association testing of 5-hydroxymethylcytosine (5hmC) methylation*. Statistical Society of Canada Annual Meeting, Winnipeg, Manitoba
- May 2012 *Genetic Association Studies of Lipid Density Profiles*. Conference on Applied Statistics in Ireland, Dundalk, Ireland.

Contributed Posters at Conferences (Last 6 years only)

- Mar 2017 A.J. Canty and A.D. Paterson. *Epigenetic Changes After Fenofibrate Treatment*. 20th Genetics Analysis Workshop, San Diego, California.
- Oct 2016 S.M. Hosseini, J.K. Snell-Bergeon, A.P. Boright, A.J. Canty, L. Sun, S.B. Bull, S.M. Marcovina, J.D. Brunzell, DCCT/EDIC Research Group & A.D. Paterson. *“Identifying Genetic Variants for Serum Lipoprotein(a) Independent of Kringle Repeat Polymorphism”* American Society of Human Genetics Annual Meeting, Vancouver,
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