

# Curriculum Vitae

Michael D. Escobar

## A. Date prepared

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## B. Biographical Information

### 0. Personal:

University Address:  
Department of Public Health Sciences  
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### 1. Degrees:

B.S. 1981 Liberal Arts College, Tufts University (USA), Mathematics

Ph.D. 1988 Dept. of Statistics, Yale University (USA), Statistics  
Thesis: *Estimating the Means of Several Normal Populations by Nonparametric Estimation of the Distribution of the Means.* Supervisor: John A. Hartigan.

### 2. Employment:

Professor: Department of Public Health Sciences, University of Toronto (7/07- present).

Interim Chair: Department of Public Health Sciences, University of Toronto (7/07-present).

Professor: Department of Statistics, University of Toronto (cross appointment, 7/07-present).

Associate Professor: Department of Preventive Medicine and Biostatistics (10/95-7/97), Department of Public Health Sciences (7/97-6/07), University of Toronto. (tenure-track, 10/95-6/98; tenured, 7/98- )

Director: Graduate Program in Biostatistics, Graduate Department of Public Health Sciences, University of Toronto, (7/01-6/06).

Associate Director: Graduate Program in Biostatistics, Graduate Department of Community Health, University of Toronto, (7/98-6/01).

Full Member: Graduate Department of Community Health, School of Graduate Studies, University of Toronto (7/96-present).

Associate Professor: Department of Statistics, University of Toronto (cross appointment, 10/95-6/07).

Visiting Scholar: Department of Biostatistics, Harvard University, (8/99-6/00).

Director: Biostatistical Consulting Laboratory, Department of Biostatistics, Harvard University (8/99-6/00).

Assistant Professor: Department of Statistics, University of Toronto (tenure-track, 7/94-9/95).

Assistant Professor: Department of Preventive Medicine and Biostatistics, University of Toronto (contracted limited term appointment 9/93-6/94, cross appointment 7/94-9/95).

Associate Member: Graduate Department of Statistics, School of Graduate Studies, University of Toronto, (7/94-6/96).

Assistant Professor: Department of Statistics, Carnegie Mellon University (tenure-track, 8/90-6/94).

Adjunct Assistant Professor: Department of Psychiatry, University of Pittsburgh (7/92-6/94).

Associate Research Scientist: Department of Epidemiology and Public Health (Biostatistics), Yale University (7/88-6/90).

Acting Director: Biostatistical Consulting Unit, Department of Epidemiology and Public Health, Yale University (7/89-12/89).

### 3. Honours:

Leonard J. Savage Thesis Award (1988) presented by the L.J. Savage Memorial Fund and the NBER-NSF

National Research Training Grant in Psychiatric Statistics (1991-1993) National Institute of Mental Health

#### 4. Professional Affiliations and Activities:

Institute of Mathematical Statistics American Statistical Association 1983-present.  
Member of the New Researchers Committee 1991-1992

##### Canadian Statistical Society

President-elect 2004-2005, Biostatistics Section.  
President 2005-2006, Biostatistics Section.  
Member of the Program Committee, 2005-2006.  
Past-President 2006-2007, Biostatistics Section.  
Election Committee 2006-2007.

##### Biometrics Society

International Society of Bayesian Analysis 1994-present

Journal of the American Statistical Association,  
Associate Editor, Theory and Methods Section 1/2002-12/2005

Referee (I average about 3-5 per year. Below is an example of some of the journals and grant review boards for which I have been a referee):

*Journal of the American Statistical Association*  
*Journal of the Royal Statistical Society, Ser. B*  
*Biometrics*  
*Biometrika*  
*Journal of Economics and Business Statistics*  
*Journal of Pattern Recognition*  
*Canadian Journal of Statistics*  
*Pakistan Journal of Statistics*  
*Annals of Statistics*  
*Technometrics*  
*Cancer Epidemiology Biomarkers and Prevention* (Journal)  
*Canadian Journal of Public Health*  
*Statistics in Medicine*  
*Journal of Applied Statistics*  
*Communications in Statistics-Simulation and Computation*  
The National Science and Engineering Research Council (NSERC)  
Medical Research Council of Canada  
Canadian Institute of Health Research (CIHR)  
The National Science Foundation (USA)  
Concurso Nacional de Proyectos Fondecyt Regular (Chile)

Organized Session for North American regional meeting of the International Society of Bayesian Analysis (ISBA), Toronto, August, 1994.

Chaired session at Joint Statistical Meetings, Chicago, August, 1996.

Canadian Institute of Health Research (CIHR), Grant Review Committees:

Public, Community, and Population Health: Invited member, 2000(winter).

Public, Community, and Population Health: Member, 2001(winter).

Public, Community, and Population Health: Member, 2002(spring).

Public, Community, and Population Health: Member, 2002(winter).

Public, Community, and Population Health: Member, 2003(spring).

Ministry of Training, Colleges and Universities, Ontario

Panel Member, Ontario Graduate Scholarship (OGS) competition, 2006-2007.

## C. Academic History

### 1. Research Endeavours:

My research has been a combination of theoretical and applied areas. My major theoretical and applied areas:

- 1) Developing new methods to compute Dirichlet process models for nonparametric Bayesian methods.
- 2) Developing mixture models using both frequentist and Bayesian techniques and applying these methods to model population heterogeneity.
- 3) Applying statistical methods in psychiatric research, especially in the areas of schizophrenia, learning disabilities, and suicide.
- 4) Applying and improving statistical techniques in the medical, biological, and public health sciences.

### 2. Research Awards:

“Biostatistical Science: Applications, Methods, and Practice”. 1991 Carnegie Mellon University's NIH Biomedical Research Support Program, \$35,404. My role: Co-investigator; PI: Joel B. Greenhouse

“Bayesian Methods in Biostatistics”. 1991-1994 National Cancer Institute, \$181,725. My role: Co-investigator; PI: Joel B. Greenhouse

“Mental Health Clinical Research Center for the Study of Suicidal Behavior”. 1993-1994 National Institute of Mental Health, \$334,037/year. My role: Core Scientist; PI: John Mann.

“Semi-parametric Methods in Bayesian Statistics”. 1994-1997. National Science and Engineering Research Council (NSERC), \$48,000 (total). My role: Principal investigator. [No other investigators]

“Semi-parametric Methods in Bayesian Statistics”. 1994-1995. University of Toronto start-up grant, \$6,200 (total). My role: Principal investigator. [No other investigators]

“Statistical Computing Facility”, 1994-1995. NSERC Program Equipment Grant, \$42,104 (total). PI: Michael Evans, My role: co-researcher with 11 others.

“Statistical Methods in Human Genetics”. 1995-1998. NSERC, \$346,500 (total). PI: Shelley Bull, my role: Co-PI with 5 other Co-PI’s.

“Statistical computing facility”, 1996-1997, NSERC Program Equipment Grant, \$50,420 (total). PI: Michael Evans, My role: Co-PI’s with 10 others.

“Social-Structural Determinants of HIV-related Behaviours Among Prisoners”. 1996-1997. National Health Research and Development Program (NHRDP), \$225,000 (2 year total). My role: Co-investigator; PI: Liviana Calzavara.

“Prostate Specific Antigen (PSA) as a Prognostic Indicator in Breast Cancer”. 1996-1998. National Cancer Institute of Canada, \$97,350 (2 year total). My role: Co-investigator; PI: Eleftherios Diamandis.

“Investigation of Suicides in the Canadian Armed Forces”. 1995-1996. Canadian Armed Forces, \$29,780 (Total). My role: Co-investigator; PI: Isaac Sakinofsky.

“Statistical Computing Facility”, 1998-1999. NSERC Program Equipment Grant, \$76,000 (total) PI: Nancy Reid, My role: co-investigator with 14 others.

“Advanced and Introductory Nonparametric Bayesian Methods”, 1998-2002. NSERC, \$73,040 (total). My role: Principal investigator. [*No other investigators.*]

“Statistical modeling and analysis of complex traits in human populations”, 1999-2005, NCE: Mitacs, \$51,000 (total). PI: Mary Corey. My role: Co-PI. (There are 3 other Co-PI’s).

“The Ottawa language Study: The moderating effect of transitional age variables on psychosocial outcomes: A 20 year follow up study”, 2001-2004, CIHR, \$282,000 (total). PI: J. Beitchman. My role: Co-Investigator (total of 6 Co-I’s).

“Advanced Nonparametric Bayesian Models”, 2002-2006, NSERC, \$92,000 (total). My role: Principal investigator. [*No other investigators.*]

“High Performance Parallel Computer Server for Statistics and Biostatistics”, 2002-2003, NSERC Program Equipment Grant, \$44,728 (total) PI: James Stafford, My role: co-PI with 11 others Co-PI’s.

“Predictors of Post-acute Survival in a High-Risk Traumatic Brain Injured Population”. 2003-2004, Ontario Neurotrauma Foundation, \$87,000 (total). PI: Angela Colantonio, my role: Co-PI with three other Co-PI’s.

“Modern Statistical Approaches in High-throughput Genomics Research”. 2004-2009, CIHR, \$300,000 per year (\$1.5 million over 5 years). My role, Principal investigator. (There were 5 Co-PI’s.)

“Developing Applied Bayesian Methods”. 2006-2009, NSERC, \$45,000 (total). My role: Principal investigator. *[No other investigators.]*

“High Performance Computing Resource for Statistical Genomics”, 2006, NSERC, \$68,250 (total). PI: R. Kustra. My role: Co-Investigator (total of 7 Co-I's).

“Women and Traumatic Brain Injury”, 2006-2009, CIHR, \$235, 065 (total). PI: Angela Colantonio. My role: Co-Investigator.

### 3. Other Research Contracts

“Psycholinguistics and Biological Mechanisms in Dyslexia”, 1988-1990, NICHD (USA) sponsored research. My role: statistician, PI: B. Shaywitz.

Yale Psychiatric Institute, 1988-1990. My role: consulting statistician, project leader: R. Hoffman .

Department of Obstetrics and Gynecology, Yale U., 1988-1990. My role: consulting statistician, project leader: B. Shapiro.

Children's Clinical Research Center, Yale U., 1989-1990, NIH sponsored research. My role: consultant, PI: R. Donaldson.

Comprehensive Cancer Center, Yale U., 7/1989-12/1989, My role: statistician, PI: A. Sartorelli.

Department of Oncology, Yale U., 7/1989/12/1989, consulting statistician.

“Mental Health Clinical Research Center for the Study of Suicidal Behavior”. 1990-1993, NIMH (USA) sponsored research. My role: consultant, PI: J. Mann.

“Transition to Adulthood: Developmental Pathways from Pre-School to Young Adulthood”, 1995-present, NHRDP sponsored research. My role: consultant, PI: J. Beitchman.

“Long Term Follow-up of Head Injury in Adults”, 1996-present, NINDS (USA) sponsored research. My role: consultant, PI: A. Colantonio.

Consultant to:

National Epidemiology and Surveillance Department, Canadian Blood Services  
Quality Management Program—Laboratory Services (QMP/LS), Ontario Medical  
Association.

Ventana Clinical Research Corporation  
McCarthy Tetrault LLP

## D. Publications

### 1. Refereed Publications:

- 1) Makuch, R.W., Stephens, M.A., and Escobar, M. “Generalized Binomial Models to Examine the Historical Control Assumption in Active Control Studies,” *The Statistician*, 1989, 38, 61-70.
- 2) Shaywitz, S.E., Shaywitz, B.A., Fletcher, J.M., and Escobar, M.D. “Prevalence of Reading Disability in Boys and Girls: Results of the Connecticut Longitudinal Study,”
- 3) Hoffman, R.E., Buchsbaum, M.S., Escobar, M.D., Makuch, R.W., Nuechterlein, K.H., and Guich, S.M. “EEG Coherence of Prefrontal Areas in Normal and Schizophrenic during Perceptual Activation,” *Journal of Neuropsychiatry and Clinical Neurosciences*, 1991, 3, 169-175.
- 4) Makuch, R.W., Escobar, M.D., and Merril, S. “A Two Sample Test for Failure-Time and Incomplete Multivariate Data,” *Applied Statistics*, 1991, 40, 202-212.
- 5) Shaywitz, S.E., Shaywitz, B.A. Fletcher, J.M., Escobar, M.D., “Reading-Disability in Children -- Reply,” *Journal of the American Medical Association*, 1991, 265, 726-726.
- 6) Shaywitz, S.E., Escobar, M.D., Shaywitz, B.A., Fletcher, J.M., Makuch, R. “Evidence that Dyslexia May Represent the Lower Tail of a Normal Distribution of Reading Ability,” *The New England Journal of Medicine*, 1992, 326, 145-150.
- 7) Shapiro, B.S., Escobar, M.D., Makuch, R., Lavy, G., DeCherney, A. “A Model Based Prediction for Transvaginal Ultrasound Identification of Early Intrauterine

- Pregnancy,” *American Journal of Obstetrics and Gynecology*, 1992, 166, 1495-1500.
- 8) Shaywitz, S.E., Escobar, M.D., Shaywitz, B.A., Fletcher, J.M., Makuch, R., “Dyslexia -- Reply,” *The New England Journal of Medicine*, 1992, 327, 280-281.
  - 9) Escobar, M.D. Invited comment on “Bayesian Analysis of Mixtures: Some Results on Exact Estimability and Identification,” by Florens, Mouchart, and Rolin, in *Bayesian Statistics 4*, eds: J.M. Bernardo, J.O. Berger, A.P. Dawid and A.F.M. Smith, Oxford University Press, 1992, 142-144.
  - 10) Small, M.J. and Escobar, M.D., Invited comment on “Bayesian Hierarchical Models for Transport and Fate Modeling” by R.L. Wolpert, K.H. Reckhow, and L.J. Steinberg, in *Bayesian Statistics and Technology: Case Studies*, eds: C.A. Gatsonis, J.S. Hodges, R.E. Kass, and N.D. Singpurwalla, New York: Springer-Verlag, 1993, pp. 271-286.
  - 11) Sweeney, J.A., Clementz, B.A., Escobar, M.D., Li, S., Pauler, D.K., Haas, G.L., “Mixture Analysis of Pursuit Eye Tracking Dysfunction in Schizophrenia,” *Biological Psychiatry*, 1993, 34, 331-340.
  - 12) Escobar, M.D. “Estimating Normal Means with a Dirichlet Process Prior,” *Journal of the American Statistical Association*, 1994, 89, 268-277.
  - 13) West, M., Muller, P., Escobar, M.D., “Hierarchical Priors and Mixture Models, with Applications in Regression and Density Estimation,” *Aspects of Uncertainty: A Tribute to D. V. Lindley* eds: AFM Smith and PR Freeman, London: John Wiley and Sons, 1994, pp. 363-386.
  - 14) Sweeney, J.A., Haas, G.L., Clementz, B.A., Escobar, M.D., and Drake, K., “Eye Tracking Dysfunction in Schizophrenia: Characterization of Component Eye Movement Abnormalities,” *Journal of Abnormal Psychiatry*, 1994, 103, 222-230.
  - 15) Escobar, M.D., “Nonparametric Bayesian Methods in Hierarchical Models,” *The Journal of Statistical Inference and Planning*, 1995, 43, 97-106.
  - 16) Escobar, M.D. and West, M., “Bayesian Density Estimation and Inference Using Mixtures”, *Journal of the American Statistical Association*, 1995, 90, 577-588.
  - 17) Pauler, D.K., Escobar, M.D., Sweeney, J.A., Greenhouse, J., “Mixture Models for Eye-Tracking Data: A Case Study,” *Statistics in Medicine*, 1996, 15, 1365-1376.
  - 18) Green, L.M., Dodds, L., Miller, A.B., Tomkins, D.J., Li, J., and Escobar, M., “Risk of Congenital Anomalies in Children of Parents Occupationally Exposed to Ionizing Radiation,” *Occupational and Environmental Medicine*, 1997, 54, 629-635.

- 19) Roeder, K., Escobar, M., Kadane, J., and Balazs, I., "Measuring Heterogeneity in Forensic Databases," *Biometrika*, 1998, 85, 269-287.
- 20) Calzavara, L.M., Burchell, A.N., Myers, T., Bullock, S.L., Escobar, M., Cockerill, R., "Condom Use Among Aboriginal People in Ontario, Canada," *International Journal of STD and AIDS*, 1998, 9, 272-279.
- 21) Escobar, M.D. and West, M., "Computing Bayesian Nonparametric Hierarchical Models," in *Practical Nonparametric and Semiparametric Bayesian Statistics*, eds: D. Dey, P. Muller, D. Sinha, New York: Springer-Verlag, 1998, pp. 1-22.
- 22) Johnson, C.J., Beitchman, J., Young, A, Escobar, M., Atkinson, L., Wilson, B, Brownlie, E.B., Douglas, L., Taback, N., Lam, I., Wang, M. "Fourteen-Year Follow-up of Children With and Without Speech/Language Impairments: Speech/Language Stability and Outcomes," *Journal of Speech, Language, Hearing Research*, 1999, 42, 744-760.
- 23) Johnson, C.J., Taback, N., Escobar, M., Wilson, B., Beitchman, J. "Local Norming of the Test of Adolescent/Adult Language-3 in the Ottawa Speech and Language Study," *Journal of Speech, Language, Hearing Research*, 1999,42, 761-766.
- 24) Colantonio, A., Ratcliff, G., Chase, S., and Escobar, M., "What is the Impact of Age on Cognition Many Years after Head Injury?" *Brain and Cognition*, 1999, 39, 1-3.
- 25) Beitchman, J.H., Douglas, L., Wilson, B., Johnson, C., Young, A., Atkinson, L., Escobar, M., Taback, N., "Adolescent Substance Use Disorder: Findings from a 14-year Follow-up of Speech and Language Impaired and Control Children," *Journal of Clinical Child Psychology*, 1999, 28, 312-321.
- 26) Roeder, K., Escobar, M., Kadane, J.B., and Balazs, I. In discussion of "Hierarchical Models for DNA Profiling Using Heterogeneous Databases," by A.P. Dawid and J. Pueschel, in *Bayesian Statistics 6*, eds: J.M. Bernardo, J.O. Berger, A.P. Dawid and A.F.M. Smith, Oxford University Press, 1999, 208-209.
- 27) Escobar, M.D. Invited comment on "Bayesian Nonparametric Inference for Random Distributions and Related Functions," by S.G. Walker, P. Damien, P.W. Laud, and A.F.M. Smith, *Journal of the Royal Statistical Society, Ser. B.*, 1999, 61, 520-521.
- 28) Colantonio, A., Ratcliff, G., Chase, S., Escobar, M. "Is Cognitive Performance Related to Level of Community Integration Many Years After Head Injury?" *Brain and Cognition*, 2000, 44(1), 19-20.

- 29) Austin, P., Escobar, M., Kopec, J., "On the Use of the Tobit Model in Analyzing Health Utility Indices," *Quality of Life Research*, 2000, 9, 901-910.
- 30) Beitchman, J.H., Wilson, B., Johnson, C.J., Atkinson, L., Young, A., Adlaf, E., Escobar, M., and Douglas, L., "Fourteen-year follow-up of speech/language impaired and control children: Psychiatric outcome," *Journal of the American Academy of Child and Adolescent Psychiatry*, 2001, 40(1), 75-82.
- 31) Wong, A., Escobar, M., Lesage, A., Loyer, M., Vanier, C., Sakinofsky, I., "Are United Nations Peacekeepers at Risk for Suicide?" *Suicide and Life-Threatening Behavior*, 2001, 31, 103-112.
- 32) Beitchman, J.H., Adlaf, E., Douglas, L., Atkinson, L., Young, A., Johnson, C.J., Escobar, M., and Wilson, B., "Comorbidity of psychiatric and substance use disorders in late adolescence: A cluster analytic approach," *American Journal of Drug and Alcohol Abuse*, 2001; 27(3):421-40.
- 33) Korn, C., Andrews, R.C., Escobar, M.D., "Development of Chlorine Dioxide-Related By-Product Models for Drinking Water Treatment," *Water Research*, 2002, 36(1), 330-342.
- 34) Buckeridge, D.L., Glazier, R., Harvey, B.J., Escobar, M., Amrhein, C., Frank, J., "Effect of motor vehicle emissions on respiratory health in an urban area," *Environmental Health Perspectives*, 2002;110(3):293-300.
- 35) Young, A.R., Beitchman, J.H., Johnson, C.J., Douglas, L., Atkinson, L., Escobar, M., Wilson, B. "Young adult academic outcomes in a longitudinal sample of speech/language impaired and control children," *Journal of Child Psychology, Psychiatry and Allied Disciplines*, 2002; 43(5):635-45.
- 36) Kohli, M., Yuan, L., Escobar, M., David, T., Gillis, G., Garcia, M., Conly, J., "A Risk Index for Sternal Surgical Wound Infection after Cardiovascular Surgery," *Infection Control and Hospital Epidemiology*, 2003, 24:17-25.
- 37) Burchell, A.N., Calzavara, L.M., Myers, T., Schlossberg, J., Millson, M., Escobar, M., Wallace, E., Major, C., "Voluntary HIV testing among inmates: sociodemographic, behavioural risk, and attitudinal correlates," *Journal of Acquired Immune Deficiency Syndromes*, 32(5):534-541, April 15, 2003.
- 38) Austin, P.C., and Escobar, M.D., "The Use of Finite Mixture Models to Estimate the Distribution of the Health Utilities Index," *Journal of Applied Statistics*, 2003, 30, 909-923.
- 39) Chiavetta, J.A., Escobar, M.D., Newman, A.M., He, Y.H., Driezen, P., Deeks, S.L., Hone, D.E., Sher, G., "Incidence and estimated rates of residual risk for HIV, hepatitis C, hepatitis B and human T-cell lymphotropic viruses in blood

- donors in Canada, 1990-2000,” *Canadian Medical Association Journal*, 2003, 169, 767-773.
- 40) Calzavara LM, Burchell AN, Schlossberg J, Myers T, Escobar M, Wallace E, Major C, Strike C, Millson M. “Prior opiate injection and incarceration history predict injection drug use among inmates,” *Addiction*, 2003, 98(9), 1257-1265.
- 41) Kohli, M., Yuan, L., Escobar, M., David, T., Gillis, G., Garcia, M., Conly, J., “A Risk Index for Sternal Surgical Wound Infection after Cardiovascular Surgery-- Reply,” *Infection Control and Hospital Epidemiology*, 2003, 24:559-559.
- 42) Colantonio A, Ratcliff G, Chase S, Escobar M, Kelsey S, Vernich L, “Long term outcomes after moderate to severe traumatic brain injury,” *Disability and Rehabilitation*, 2004, 26(5) 253-261.
- 43) Brownlie, E.B., J.H. Beitchman, M. Escobar, A. Young, L. Atkinson, C. Johnson, B. Wilson, L. Douglas, “Early Language Impairment and Young Adult Delinquent and Aggressive Behavior,” *Journal of Abnormal Child Psychology*, 2004, 32:453-467.
- 44) Ratcliff, G., Colantonio, A., Escobar, M., Chase, S., Vernich, L., “Long Term Survival following Traumatic Brain Injury,” *Disability and Rehabilitation*, 2005, 27, 305-314.
- 45) Austin, P.C., and Escobar, M.D., “Bayesian Modeling of Missing Data in Clinical Research,” *Computational Statistics and Data Analysis*, 2005, 49(3), 821-836.
- 46) Freedman, J., Luke, K., Monga, N., Lincoln, S., Koen, R., Escobar, M., Chiavetta, J., “A provincial program of blood conservation: The Ontario Transfusion Coordinators (ONTraC),” *Transfusion and Apheresis Science*, 2005, 33, 343-349.
- 47) He, Y., and Escobar, M. “A semi-parametric estimate of extra-Poisson variation for vital rates”, *Statistics in Medicine*, 2007, 26, 2131-2133.
- 48) Colantonio A, Escobar M, Chipman M, McLellan B, Austin P, Mirabella G, Ratcliff G, “Predictors of Post-acute Mortality Following Traumatic Brain Injury in a Seriously Injured Population,” *The Journal of Trauma, Injury, Infection and Critical Care*, (accepted for publication).

## 2. Refereed Abstracts:

- 49) Haas, G.L., Escobar, M., Sweeney, J.A., Keshavan, M.S., “Sex-Differences in age at onset in Schizophrenia -- Evidence for a Subgroup of Females with Delayed Illness Onset”, *Schizophrenia Research*, 1995, 15, 12-12. ABSTRACT

- 50) Colantonio, A., Ratcliff, G., Chase, S., Escobar, M., “The very long term consequences of head injury,” *Archives of Physical Medicine and Rehabilitation*, 1998, 79, 1328-1329. ABSTRACT
- 51) Colantonio, A., Ratcliff, G., Chase, S., Escobar, M., “Level of handicap many years after traumatic brain injury,” *Archives of Physical Medicine and Rehabilitation*, 1999, 80, 8, 973-974. ABSTRACT
- 52) Colantonio, A., Ratcliff, G. Chase S., Escobar, M. “Very Long Term Rehabilitation Outcomes After Moderate to Severe Traumatic Brain Injury,” *Archives of Physical Medicine and Rehabilitation*, 2000, 81. ABSTRACT
- 53) Ghadaki H, McKeown-Eyssen, Marrett L, Escobar M. “Response Bias from Failure to Provide a Blood Sample Among Participants in the Ontario Familial Colorectal Cancer Registry,” *American Journal of Epidemiology*, 2005, 161(Suppl):S436. ABSTRACT
- 54) Freedman J, Luke K, Escobar M, Garvey MB, Chiavetta JA, “Ontario nurse transfusion coordinators (ONTraC): A provincial blood conservation program”, *Vox Sanguinis*, 2006, 91: 157-157 Suppl. 3, August 2006

### 3. Non-Refereed Publications:

- 55) Sakinofsky, I., Lesage, A., Escobar, M., Wong, A., Loyer, M., and Vanier, C., “Suicide in the Canadian Armed Forces with special reference to Peacekeeping,” an independent study commissioned by the Directorate of Health Protection and Promotion, National Defence Headquarters, Canadian Armed Forces, 1996, 73 pages.
- 56) Calzavara, L.M., Myers, T., Wallace, E., Millson, M., Major, C., Escobar, M., Humphries, P., Burchell, A., Schlossberg, J., “Social and Structural Determinants of HIV-Related Risk Behaviours Among Prisoners: Final Report.” Prepared for the National Health Research Development Program, Health Canada, 1997, 34 pages.
- 57) Roeder, K., Escobar, M., Kadane, J.B., and Balazs, I., “Measuring Heterogeneity in Forensic Databases Using Hierarchical Bayes Models: Computational Method,” Department of Statistics Technical Report #662, Carnegie Mellon University, 1997.
- 58) Escobar F.S., Schwartz, M.D., Aboulijoud, M., Douzdjian, V., Escobar, M.D., Besarab, A., Elliot, J.P., “A Preliminary Study Comparing a New ‘Hooded’ vs. Conventional ePTFE Graft in Hemodialysis Patients,” *Proceedings of Vascular Access for Hemodialysis*, May 7-8, 1998.

- 59) Beitchman, J.H., Johnson, C.J., Young, A., Atkinson, L., Escobar, M., Wilson, B., Douglas, L., Brownlie, E.B., "Transitions to Adulthood: Developmental Pathways from Preschool to Young Adult Linguistic, Academic and Psychosocial Outcomes," Prepared for the Health Canada's National Health and Research Development Program, 1999, 58 pages.
- 60) Escobar, M.D., "Smaller Sample Sizes for Testing Sufficient Homogeneity," Report produced for Quality Management Program-Laboratory Services, Ontario Medical Association, 2003, 21 pages.

#### 4. Other Manuscripts

- 61) Tomlinson, G., Escobar, M.D., "Analysis of Densities," in revision.
- 62) Dawson, D.R., Levine, B., Escobar, M.D., Schwartz, M.L., and Stuss, D.T., "The Relationship of Acute Traumatic Brain Injury Characteristics to Functional Outcome at the the One Year post-Injury: A Prospective Study."
- 63) Beitchman, J.H., Wilson, B., Douglas, L., Atkinson, L., Johnson, C.J., Young, A., and Escobar, M., "Early childhood predictors of anxiety disorder and antisocial personality disorder in young adulthood: A fourteen-year follow-up of speech/language impaired and control children."
- 64) Atkinson, L., Beitchman, J.H., Douglas, L., Johnson, C.J., Wilson, B., Young, A., and Escobar, M., "Cumulative risk, cumulative outcome: A 14-year longitudinal study."
- 65) He, Y., and Escobar, M., "Contributions to the nonparametric statistical inference method for partial areas under receiver operating characteristic curves with application to genomic studies," *Journal of Biostatistics*, submitted for publication.
- 66) He, Y., and Escobar, M., "Weighted Nonparametric Methods for ROC Curve Analysis," submitted for publication.
- 67) Clarke DE, Colantonio A, Rhodes A, Escobar M, "Pathways to suicidality across ethnic groups in Canadian adults: A stress process model perspective," submitted for publication (to *Psychological Medicine*).
- 68) Clarke, DE, Colantonio, A, Rhodes, A, Escobar, M, "Ethnicity and mental health: Conceptualization, definition and operationalization of ethnicity from a Canadian context," submitted for publication.
- 69) Beitchman, JH, Jiang, H, Koyama, E, Johnson, CJ, Escobar, M, Atkinson, L, Brownlie, EB, Vida, R, "Models and Determinants of Vocabulary Growth from

Preschool to Adulthood,” submitted for publication (to *Journal of Child Psychology and Psychiatry*).

- 70) Freedman, J., Luke, K, Escobar, M, Vernich, L, Chiavetta, J., "Effectiveness of a network of Transfusion Coordinators for blood conservation (Ontario Transfusion Coordinators; ONTraC)." Transfusion (submitted for publication).

#### D. Presentations

##### 1. Invited presentations and workshops given at meetings and symposia:

- 1) Escobar, M.D. “An Analysis of the Difference between Stutterers and Their Siblings on Prenatal and Early Childhood Variables,” invited paper, Harvard-Yale Statistics Day, Cambridge, MA, November, 1984.
- 2) Escobar, M.D. Invited discussant for “Bayesian Analysis of Mixtures: Some Results on Exact Estimability and Identification,” by Florens, Mouchart, and Rolin at the Fourth Valencia International Meeting on Bayesian Statistics, Peniscola, Spain, April, 1991.
- 3) Escobar, M.D. “Nonparametrics Bayesian Methods in Hierarchical Models,” invited paper, Statistics '91 Canada, Montreal, Canada, May, 1991.
- 4) Small, M.J. and Escobar, M.D., “Bayesian Monte Carlo Method for Mechanistic Models.” Invited discussant for “Bayesian Hierarchical Models for Transport and Fate Modeling” by Wolpert, R.L., Reckhow, K.H. and Steinberg, L.J. at the Bayesian Statistics in Science and Technology: Case Studies conference. Pittsburgh, Pa., October, 1991.
- 5) Escobar, M.D. Invited discussant for “Some Statistical Uses of Successive Substitution” by Mark Schervish at the Joint Meeting of the Biometric Society, ENAR, ASA, and IMS. Cincinnati, Ohio, March, 1992.
- 6) Escobar, M.D. and West, M., “Computing Bayesian Nonparametric Hierarchical Models,” invited paper, Joint Statistical Meetings, Boston, Ma., August, 1992.
- 7) Escobar, M.D. “MCMC Methods in Nonparametric Bayesian Models,” invited paper, AMS-IMS-SIAM Summer Research Conference on Markov chain Monte Carlo methods, Mount Holyoke, MA, June, 1994.
- 8) Brunner, L.J. and Escobar, M.D. “Robust Error Structures with Dirichlet Processes”, invited paper, the North American regional meeting of the International Society of Bayesian Analysis (ISBA), Toronto, August, 1994.

- 9) Escobar, invited discussant for “Nonparametric Bayesian Analysis,” Special contributed papers section. Joint Statistical Meetings, Toronto, August, 1994.
- 10) Escobar, “Applications with Dirichlet Processes: Revisiting the Beckett-Diaconis Tack Data,” invited paper, Statistical Research in the 21st Century, sponsored by the The International Association of Statisticians of Indian Origin, Montreal, November, 1996.
- 11) Escobar, MD, “Applications with Dirichlet Processes: Revisiting the Beckett-Diaconis Tack Data,” Invited paper, Conference on Bayesian Nonparametrics, sponsored by Istituto per le Applicazioni della Matematica e dell'Informatica of the Consiglio Nazionale delle Ricerche (CNR-IAMI, Italy), Belgirate, Italy, June, 1997.
- 12) Escobar, M.D., “Applying a Bayesian mixture model to medical data,” invited paper, Joint Statistical Meetings, Anaheim, California, August, 1997.
- 13) Escobar, M.D. “Bayesian computational theory and techniques,” Invited talk, HIMA/FDA Workshop on Bayesian Methods in Medical Device Clinical Trials, November, 1998.
- 14) G. Tomlinson and M. Escobar, “Analysis of Densities”, Invited talk, Annual Meeting of the Statistical Society of Canada, Ottawa, Ontario, June, 2000.
- 15) G. Tomlinson, M. Escobar, and C. McLaren, “Analysis of Densities: An Application to the Distribution of Red Blood Cells.” Invited talk, Nonparametric Bayes Summit, Ann Arbor, Michigan, July, 2001.
- 16) G. Tomlinson, M. Escobar, and C. McLaren, “Finding Outliers in Density Space with Bayesian Nonparametrics.” Invited Talk. Workshop on Developments and Challenges in Mixture Models, Bump Hunting and Measurement Error Models, Cleveland, OH, June, 2002.
- 17) Escobar, MD, “An Introduction to Applied Bayesian Methods,” Joint Statistical Meetings, Continuing Education Course (all day workshop), San Francisco, August, 2003.
- 18) Escobar, MD, Tomlinson, G, and McLaren, C. “Hierarchical models with multiple mixtures of Dirichlet processes.” Invited talk, Neural Information Processing Systems Conference, Vancouver/Whistler, BC, December, 2003.
- 19) Invited discussion panel member, Nonparametric Bayes Workshop at Neural Information Processing Systems Conference, Whistler, British Columbia. December 9, 2005

- 20) Escobar, MD. "Applied Bayesian Methods," All day workshop, Annual Meeting of the Statistical Society of Canada. London, Ontario, May 2006.
- 21) Escobar, MD. "Applied Bayesian Methods," All day workshop, Statistical Society of Ottawa 2007 Symposium and Workshop, Ottawa, Ontario, March 2007.

## 2. Other talks and presentations at meetings and symposia:

- 1) Escobar, M.D. "Estimating the Means of Normal Populations," contributed paper, New England Statistical Symposium, Storrs, Connecticut, April, 1986.
- 2) Escobar, M.D. "Estimating Normal Means with a Dirichlet Process Prior," contributed paper, Joint Statistical Meetings, Washington, D.C., August, 1989.
- 3) Escobar, M.D and West, M. "Computing Bayesian Nonparametric Hierarchical Models," contributed paper, the Fifth Valencia International Meeting on Bayesian Statistics, Alicante, Spain, June, 1994.
- 4) Wong, A.H.C., Lesage, A., Escobar, M., Loyer, M, Vanier, C., Sakinofsky, I. "Suicide and Peacekeeping in the Canadian Armed Forces," presented at The Canadian Association of Psychiatric Epidemiology meeting, Quebec city, Quebec, October, 1996; and presented at the Canadian Association of Suicide Prevention meeting, Toronto, October, 1996.
- 5) Sakinofsky, I., Wong, A.H.C., Lesage, A., Escobar, M., Loyer, M, Vanier, C. "Suicide and Peacekeeping in the Canadian Armed Forces," presented at International Association for Suicide Prevention, Adelaide, Australia, March, 1997.
- 6) Escobar, MD, "Applications with Dirichlet Processes: Revisiting the Beckett-Diaconis Tack Data.," NBER-NSF Seminar on Bayesian Inference in Econometrics and Statistics, Columbus, Ohio, May, 1997.
- 7) Burchell, A, Calzavara, L, Myers, T, Bulluck, S, Escobar, M, Cockerill, R, Marshall, V, "Condom Use Among First Nations People Living On-Reserve in Ontario," The Canadian Society of Epidemiology and Biostatistics, London, Ontario, May, 1997.
- 8) Burchell, A, Calzavara, L, Schlossberg, J, Myers, T, Millson, M, Major, C, Wallace, E, and Escobar, M, "HIV Testing Patterns among Provincially Incarcerated Inmates," Sixth Annual Canadian Conference on HIV/AIDS Research, Ottawa, Ontario, May, 1997.

- 9) Colantonio, A., Ratcliff, G., Chase, S., Escobar, M. "What is the impact of age on cognition many years after head injury," poster, the Rotman Research Institute 8th Annual Conference, Toronto, March, 1998.
- 10) Tomlinson, G. and Escobar M.D. "Analysis of Densities," poster, the 6th Valencia International Meeting on Bayesian Statistics. Alcossebre, Spain. May, 1998.
- 11) Korn, C., Andrews, R.C., Escobar, M.D., "Modeling Chlorine Dioxide Disinfection By-Product Formation in Surface and Groundwaters," Presented at the 1998 Ontario Municipal Water Association/Ontario Water Works Association Joint annual conference in Niagara Falls, ON, May, 1998.
- 12) Beitchman, J.H., Douglas, L., Wilson, B., Johnson, C.J., Young, A., Atkinson, L., Escobar, M., "Adolescent substance use disorders: Findings from a 14 year follow-up of speech and language impaired and control children". Canadian Academy of Child Psychiatry, Halifax, Nova Scotia, September, 1998.
- 13) Colantonio, A., Ratcliff, G., Chase, S., Escobar, M., 1998, "The Very Long Term Consequences of Head Injury." Presented to the American Congress of Rehabilitation Medicine Annual Meeting, November, 1998, Seattle, WA, USA.
- 14) Korn, C., Andrews, R.C., and Escobar, M.D., "Development of Chlorine Dioxide-Related By-Product Models for Drinking Water Treatment." Oral Presentation, 34th Central Symposium on Water Pollution Research, Feb. 8-9, 1999, Burlington, Ontario.
- 15) Korn, C., Andrews, R.C., and Escobar, M.D., "Development of Chlorine Dioxide-related By-Product Models for Drinking Water Treatment." Oral Presentatoin, AWWA Ontario Section Joint Annual Conference with the Ontario Municipal Water Association, May, 1999, Ottawa, Ontario.
- 16) Austin, P., Escobar, M., Kopec, J., "On the Use of the Tobit Model in Analyzing Health Utility Indices." Poster presentation at the Canadian Society for Epidemiology and Biostatistics, May, 1999, Vancouver, BC.
- 17) Atkinson, L., Beitchman, J.H., Douglas, L., Johnson, C., Young, A., Wilson, B., Escobar, M., and Brownlie, E.B., "Cumulative risk, cumulative outcome: A 14-year longitudinal study." Poster presentation at the International Society for Research in Child and Adolescent Psychopathology, June, 1999, Barcelona, Spain.
- 18) Beitchman, J.H., Atkinson, L., Johnson, C.J., Young, A., Brownlie, E.B., Wilson, B., Douglas, L., and Escobar, M., "Pathways to adolescent adversity: Findings from a 14 year prospective study of speech/language impaired and control

- children.” Poster presentation at the International Society for Research in Children and Adolescent Psychopathology, June, 1999, Barcelona, Spain.
- 19) Young, A.R., Johnson, C., Beitchman, J.H., Douglas, L., Wilson, B., Atkinson, L., and Escobar, M., “Pathways to adolescent adversity: Overview of longitudinal outcomes for children with and without speech/language impairments.” Poster presentation at the International Society of Research in Child and Adolescent Psychopathology, June, 1999, Barcelona, Spain.
  - 20) Korn, C., Andrews, R.C., and Escobar, M.D., “Development of Chlorine Dioxide-Related By-Product Models for Drinking Water Treatment.” Paper Presentation at the AWWA Annual Conference, June, 1999, Chicago, Illinois.
  - 21) Colantonio, A., Ratcliff, G., Chase, S., Escobar, M., “Level of handicap many years after traumatic brain injury”. Poster Presentation at American Congress of Rehabilitation Medicine Annual Meeting, Orlando, Florida, October 1999.
  - 22) Escobar, M., “Nonparametric Bayesian Methods Applied to Hierarchical Longitudinal Models,” Poster presentation at the Statistics and Health conference organized by the Biostatistics Research Group at the University of Alberta, Edmonton, Alberta, Canada, June, 2000.
  - 23) Tomlinson, G. and Escobar, M., “Analysis of Densities”, Contributed talk, Joint Statistical Meetings, Indianapolis, Indiana, USA, August, 2000. June, 2000.
  - 24) Colantonio, A., Ratcliff, G., Chase, S., Escobar, M., “Very Long Term Rehabilitation Outcomes after Moderate to Severe Traumatic Brain Injury.” Poster Presentation at American Congress of Rehabilitation Medicine Annual Meeting, South Carolina, October 2000.
  - 25) Johnson, C. J., Beitchman, J. H., & Escobar, M. “Conversation skills of young adults.” American Speech-Language-Hearing Association, Washington, DC, November, 2000.
  - 26) Colantonio, A., Escobar, M., Vernich, L., Chipman, M., McLellan, B., Muldovsky, B. “The use of geographic information systems mapping as a tool for planning traumatic brain injury rehabilitation.” Acquired Brain Injury Network Conference, Toronto, 2004.
  - 27) Colantonio, A., Ratcliff, G., Chase, S., Escobar, M., Vernich, L. “Activity limitations after moderate to severe traumatic brain injury.” Canadian Association of Occupational Therapy Conference, Charlottetown, June 2004.
  - 28) Ratcliff, G. Colantonio, A., Escobar, M. Chase, S., Vernich, L. “Long term survival following traumatic brain injury.” Greater Toronto Area Rehabilitation Network Research Day, Toronto, 2004.

- 29) Colantonio, A., Escobar, M., Vernich, L., Chipman, M., McLellan, B., Austin, P. "Monitoring post-acute mortality of traumatic brain injury in Ontario." Ontario Injury Prevention Conference, Toronto, 2004.
- 30) Beitchman, J.H., Kenaszchuk, C., Vida, R., Brownlie, E.B., Mik, H., Jabbar, A., Escobar, M., Atkinson, L., Johnson, C., & Adlaf, E. "Antisocial Behaviour and Substance Abuse Across the Lifespan: Research Findings and Clinical Implications." Centre for Addiction and Mental Health, Toronto, May, 2004.
- 31) Beitchman, J.H., Atkinson, L., Vida, R., Kenaszchuk, C., Brownlie, E.B., Mik, H., Jabbar, A., Escobar, M., Johnson, C., & Adlaf, E. J. "Tracking Caseness in Longitudinal Community Surveys: When Are Changes Real?" 51st Annual Meeting of the American Academy of Child and Adolescent Psychiatry, Washington, DC, October 2004.
- 32) Beitchman, J.H., Kenaszchuk, C., Vida, R., Brownlie, E.B., Mik, H., Jabbar, A., Escobar, M., Atkinson, L., Johnson, C., & Adlaf, E. J. "Twenty-year Association of Learning Disabilities and Substance Use Disorder." 51st Annual Meeting of the American Academy of Child and Adolescent Psychiatry, Washington, DC, October, 2004.
- 33) Brownlie, E.B., Beitchman, J.H., Jabbar, A., Kenaszchuk, C., Vida, R., Atkinson, L., Escobar, M., & Johnson, C. "Childhood Language Impairment, Sexual Victimization and Adult Alexithymia in a 20-Year Longitudinal Community Study". Poster presentation. Canadian Psychological Association Convention, Montreal, June. 2005.
- 34) Jabbar, A., Brownlie, E.B., Beitchman, J.H., Vida, R., Kenaszchuk, C., Atkinson, L., Escobar, M., & Johnson, C. "Adult Outcomes of Language Impairment in Women: The Importance of Sexual Abuse/Sexual Assault." Poster presentation. Canadian Psychological Association Convention, Montreal, June 2005.
- 35) Ghadaki, H., McKeown-Eyssen, G. Marrett, L., and Escobar, MD, "Response Bias from Failure to Provide a Blood Sample Among Participants in the Ontario Familial Colorectal Cancer Registry." Joint meeting of the Society for Epidemiologic Research and Canadian Society for Epidemiology and Biostatistics, Toronto, July, 2005.
- 36) Jabbar, A., Brownlie, E.B., Beitchman, J.H., Vida, R., Atkinson, L., Johnson, C., Adlaf, E., Escobar, M. "Childhood Language Impairment, Sexual Assault, and Psychiatric Outcomes Among Women." Poster presented at the American Academy of Child and Adolescent Psychiatry/Canadian Academy of Child and Adolescent Psychiatry Joint Annual Meeting, Toronto, October, 2005.

- 37) Beitchman, J.H., Jiang, H., Vida, R., Escobar, M., Brownlie, E.B., Adlaf, E., Atkinson, L., & Johnson, C. "Models and Determinants of Vocabulary Growth from Preschool to Adulthood." Poster presentation. American Academy of Child and Adolescent Psychiatry/Canadian Academy of Child and Adolescent Psychiatry Joint Annual Meeting, Toronto, October, 2005.
- 38) Kang, S. and Escobar, M, "Semi-parametric Bayesian Logistic Regression," Contributed paper. Annual Meeting of the Statistical Society of Canada. London, Ontario, May 2006.
- 39) Beitchman, J.H., Vida, R., Brownlie, E.B., Jiang, H., Adlaf, E., Escobar, M., Atkinson, L., Johnson, C. "Drugs, Booze and Mental Illness: Determinants of Recovery vs. Chronicity." Poster presentation. Canadian Public Health Association's 97th Annual Conference, Vancouver, May, 2006.
- 40) He, Y. and Escobar, M., "Nonparametric Methods for Partial Areas Under Receiver Operating Characteristic Curves, with Application to Genomic Studies," Contributed paper, XXIII International Biometric Conference, Montreal, Quebec, July 2006.
- 41) Pham B , Escobar M, Thein R, Tomlinson G, Chen M, Krahn M, "Multi-Parameter Evidence Synthesis for Disease Progression in Chronic Hepatitis C Infection," Society for Medical Decision Making meeting, Boston, MA, USA, October 2006.
- 42) Colantonio, A, Escobar, M, Chipman, M, McLellan, B, Austin, P, Mirabella, G, Ratcliff, G, "Predictors of Post-acute Mortality Following Traumatic Brain Injury in a Seriously Injured Population," American Congress of Rehabilitation Medicine Meetings, Boston, MA, USA, October, 2006.
- 43) Clarke DE, Colantonio A, Rhodes A, Escobar M, "Pathways to suicidality across ethnic groups in Canadian adults: A stress process model perspective," Canadian Association for Suicide Prevention, Toronto, ON, October 2006.
- 44) Colantonio, A, Escobar, M, Chipman, M, McLellan, B, Austin, P, Mirabella, G, Ratcliff, G, "Predictors of Post-acute Mortality Following Traumatic Brain Injury in a Seriously Injured Population," Toronto ABI Network Conference, Toronto, ON, November, 2006.
- 45) Beitchman, J.H., Vida, R., Brownlie, E.B., Adlaf, E., Escobar, M., Atkinson, L., & Johnson, C. "Adolescent Drug Use and Mental Illness: Determinants of Chronicity vs. Recovery." Poster presentation. Canadian Psychiatric Association 56th Annual Conference, Toronto, November, 2006.
- 46) Clarke, D., Colantonio, A., Rhodes, A., Escobar, M., "Urban-Rural Variations in the Pathways to Suicidality across High-Risk Ethnic Groups in Canada.", poster

presentation at the 11th International Congress of the International Federation of Psychiatric Epidemiology, Goteborg, Sweden, May, 2007.

- 47) Koyama, E., Beitchman, J.H., Brownlie, E.B., Johnson, C.J., Atkinson, L., Escobar, M. (2007). "Attitudes toward reading among adults with language impairment and attention deficit hyperactivity disorder." Canadian Psychological Association Annual Convention, Ottawa, Ontario, June, 2007.

### 3. Invited Lectures at departments and research groups:

- 1) Miles Laboratory, Milford, Connecticut, January 16, 1990, "Nonparametric Estimation of Normal Means."
- 2) Department of Epidemiology and Public Health, Yale University, January 22, 1990, "Nonparametric Estimation of Normal Means."
- 3) Department of Statistics, University of Pennsylvania, February 5, 1990, "Nonparametric Estimation of Normal Means."
- 4) Department of Statistics, Carnegie Mellon University, February 6, 1990, "Nonparametric Estimation of Normal Means."
- 5) Department of Statistics, Purdue University, February 8, 1990, "Nonparametric Estimation of Normal Means."
- 6) Department of Biostatistics, University of California at Los Angeles, February 14, 1990, "Nonparametric Estimation of Normal Means."
- 7) Rand Corporation, February 16, 1990, "Nonparametric Estimation of Normal Means."
- 8) Department of Biostatistics, Johns Hopkins University, February 20, 1990, "Nonparametric Estimation of Normal Means."
- 9) Department of Biostatistics, University of North Carolina at Chapel Hill, February 22, 1990, "Nonparametric Estimation of Normal Means."
- 10) Department of Epidemiology and Biostatistics, Emory University, February 26, 1990, "Nonparametric Estimation of Normal Means."
- 11) Department of Biostatistics, Harvard University, March 1, 1990, "Nonparametric Estimation of Normal Means."
- 12) Department of Mathematics, York University, March 2, 1990, "Nonparametric Estimation of Normal Means."

- 13) Department of Epidemiology and Biostatistics, McGill University, March 5, 1990, "Nonparametric Estimation of Normal Means."
- 14) Institute of Statistics and Decision Science, Duke University, September, 1990, "Nonparametric Estimation of Normal Means."
- 15) Department of Biostatistics, University of Pittsburgh. March, 1991, "EEG Coherency and Schizophrenia: a Statistical Analysis."
- 16) Department of Pediatrics, Yale University School of Medicine, June, 1991, "Temporal Stability of Dyslexia."
- 17) Psychiatric Epidemiology: Research Methods Seminar. University of Pittsburgh, Department of Epidemiology, November, 1991, "Prevalence of Reading Disability in Boys and Girls."
- 18) Department of Mathematics and Statistics, University of Pittsburgh, February, 1993, "Computing Bayesian Nonparametric Hierarchical Models."
- 19) Department of Preventive Medicine and Biostatistics, University of Toronto, March, 1993, "Dyslexia."
- 20) School of Business, University of Chicago, April, 1993, "Computing Bayesian Nonparametric Hierarchical Models."
- 21) Department of Statistics, University of Toronto, October, 1993. "Computing Bayesian Nonparametric Hierarchical Models."
- 22) The O.T. Research Clinician's Network, Department of Occupational Therapy, University of Toronto, November, 1993, "Determining Sample Size and Power."
- 23) Department of Preventive Medicine and Biostatistics, University of Toronto, May, 1994, "Applications of Hierarchical Bayes Analysis to DNA."
- 24) Econometrics Workshop, Department of Economics, University of Toronto, November, 1994, "Nonparametric Bayesian Hierarchical Models with Dirichlet Process Priors."
- 25) Department of Statistics, Carnegie Mellon University, February, 1995, "Bayesian Nonparametric Hierarchical Modelling."
- 26) Clinical Biostatistics Rounds, Sponsored by the Southern Ontario Chapter of the ASA. March 27, 1996, "Mixture Analysis and Schizophrenia."

- 27) Clinical Epidemiology Department, Hospital for Sick Children, November, 1996, "Bayesian applications: past, present, and future?"
- 28) Department of Mathematics and Statistics, University of Guelph, November, 1996, "Applying a Bayesian mixture model to medical data."
- 29) Panel discussion member, Interdepartmental Seminar, co-sponsored by Department of Preventive Medicine and Biostatistics and Department of Behavioural Science, December, 1996, "Mapping the Human Genome: Implications for Community Health Research."
- 30) Department of Statistics, State University of New York at Buffalo, February, 1997, "Applications with Dirichlet Processes: Revisiting the Beckett-Diaconis Tack Data."
- 31) Dept of Human Development & Applied Psychology, Ontario Institute for Studies In Education, University of Toronto, April, 1999, "Overview of Longitudinal Models and Methods."
- 32) Department of Statistic, Carnegie Mellon University, October, 1999. "Analysis of Densities" (with George Tomlinson).
- 33) Bayesian Methodology Seminar, Department of Biostatistics, Harvard School of Public Health, October 12, 1999. "Nonparametric Bayesian Methods: Computing and Some Active and Passive Uses."
- 34) Longitudinal Models Methodology Seminar, Department of Biostatistics, Harvard School of Public Health, November 5, 1999. "Modelling Population Heterogeneity via Bayesian Methods."
- 35) Statistic Group, Massachusetts General Hospital, Boston, Massachusetts, December, 1999. "Analysis of Densities" (with George Tomlinson).
- 36) Department Colloquium Series, Department of Biostatistics, Harvard School of Public Health, January 13, 2000. "Analysis of Densities" (with George Tomlinson).
- 37) Department of Biostatistics, Harvard School of Public Health, Psychiatric Statistics seminar series, April 10, 2000. "Applying A Bayesian Mixture Model To Schizophrenia Onset Data."
- 38) Department of Statistics, McMaster University, October 30, 2002. "Finding Outliers in Density Space with Bayesian Nonparametrics."

## E. Teaching

### 1. Undergraduate Courses (Yale University):

1986 STA 230 Introductory Data Analysis

### 2. Undergraduate Courses (Carnegie Mellon University):

1990 36-309 Design of Experiments for Behavioral and Social Sciences

1991 36-401 Advanced Data Analysis I (Redesigned Course)

1992 36-402 Advanced Data Analysis II (Redesigned Course)

1992 36-401 Advanced Data Analysis I

1993 36-402 Advanced Data Analysis II

### 3. Undergraduate Courses (University of Toronto):

1993 STA220F The Practice of Statistics I

1994 STA250F Statistical Concepts

1995 STA250F Statistical Concepts (Course coordinator and lecturer)

1995 STA442F (STA2101F) Methods of Applied Statistics I (Redesigned Course)

1996 STA496S Readings in Statistics

1998-1998 STA498Y Readings in Statistics

### 4. Graduate Course (Carnegie Mellon University):

1990 36-744 Design of Experiments for Behavioral and Social Sciences

1991 36-912 Workshop in Biostatistics

1991 36-741 Advanced Data Analysis I (Graduate number for 36-401)

1992 36-742 Advanced Data Analysis II (Graduate number for 36-402)

1992 36-741 Advanced Data Analysis I (Graduate number for 36-401)

1993 36-742 Advanced Data Analysis II (Graduate number for 36-402)

### 5. Graduate Course (University of Toronto):

1994 CHL3501S Survey Methods in Health Sciences I

1994-1995 CHL5207Y Laboratory in Statistical Design and Analysis

1995 STA2004S Experimental Design (Designed course)

1995 STA4000H Supervised Reading Project I

1995 STA2101F Methods of Applied Statistics I (Graduate number for STA442F)

1996 STA2004S Experimental Design

1996 STA4000S Supervised Reading Project I

1996 STA4001S Supervised Reading Project II  
 1996 STA4000H Supervised Reading Project I  
 1996-1997 CHL5207Y Laboratory in Statistical Design and Analysis  
 1996 CHL5250F Special Topics in Biostatistics (Longitudinal Models)  
 1997 STA4000S Supervised Reading Project I  
 1997 CHL5222F Longitudinal Data Analysis (Newly Designed course)  
 1997-1998 CHL5207Y Laboratory in Statistical Design and Analysis  
 1998 CHL5407S Categorical Data Analysis (Redesigned Course)  
 1998 CHL5222F Longitudinal Data Analysis  
 1998-1999 CHL5207Y Laboratory in Statistical Design and Analysis  
 1998 CHL5201F Introductory Biostatistics for Students in the Biological Sciences I  
 1999 CHL5407S Categorical Data Analysis  
 2000 CHL5201F Introductory Biostatistics for Students in Biological Sciences I  
 2002 CHL5223S Applied Bayesian Methods (Newly designed Course)  
 2002 CHL5223F Applied Bayesian Methods  
 2003 CHL7001S Directed Reading: Theory of Bayesian Statistics  
 2003 CHL5223F Applied Bayesian Methods  
 2004 CHL7001S Directed Reading: Theory of Bayesian Statistics  
 2004 CHL5223F Applied Bayesian Methods  
 2005 CHL5406F Quantitative Methods for Biomedical Research  
 2006 CHL5223S Applied Bayesian Methods

## F. Student Supervision

### 1. Primary Supervision:

- 1) Anne Dupuis (MSc, Biostatistics). Thesis title: "Simulations of Measles Epidemics: Behaviour of Parameter Estimates for Different Models of Vaccine Action". Started September 1995 and finished September 1996.
- 2) George Tomlinson (PhD, Biostatistics). Thesis title: "Analysis of Densities". Started January 1995 and finished April 1998.
- 3) Marc Theriault (MSc, Biostatistics). Thesis title: "Bayesian hierarchical models for Mapping Lung Cancer Mortality in Ontario". Started September 1998 and finished September 2000.
- 4) Odesh Singh (MSc, Biostatistics). Thesis area: Data Mining. Started September, 1998.
- 5) Sohee Kang (PhD, Biostatistics). Thesis area: Goodness of Fit for Logistic Regression Models. Started September, 2000.
- 6) Marc Theriault (PhD, Biostatistics). Thesis area: Bayesian Spatial Statistics. Started January, 2001.

- 7) Paul Zhang. (PhD, Biostatistics). Thesis topic: “Multiple Imputation of Missing Data in Clinical Trials”. (Co-Primary Supervisor with Paul Corey). Started October 2000 and finished August 2001.
- 8) Yaohua (Helen) He, (PhD, Biostatistics). Thesis title: “Nonparametric Methods for Receiver Operating Characteristic (ROC) Curve Analysis in Genomic Studies and Diagnostic Medicine”. Started September 2003 and finished March 2006.
- 9) Nikolaos Mitsadakis, (PhD, Biostatistics). Thesis topic: Statistical genomics. (Co-Primary Supervisor with Rafal Kustra). Started September 2004.

## 2. Secondary Supervision:

- 1) Yu-Chiao Chang. (PhD, Statistics, Carnegie Mellon University). Thesis title: “Measuring the Size of HIV/AIDS Epidemic with a Bayesian Approach”. Primary Supervisor: J. Kadane. My role: Committee member. Started May 1992 and finished September 1993.
- 2) Theresa Mei-Lee Chiu, (MSc, Epidemiology). Thesis title: “Health Services Utilization by the Chinese in Greater Toronto”. Primary Supervisor: R. Eastwood. My role: Statistical Supervisor. Started October 1993 and finished February 1995.
- 3) Francis Tam, (MSc, Epidemiology). Thesis title: “Speech and Language impairment, Family Adversity, Biological Factors, Behaviour Problems and Reading Disabilities in School Age Children- A Seven Year Follow Up Study of Speech and Language Impairment in Children”. Primary Supervisor: J. Beitchman. My role: Statistical Supervisor. Started June 1994 and finished June 1995.
- 4) Susan Bondy, (PhD, Epidemiology). Thesis title: “Patterns of Drinking and the Consequences of Alcohol Use: Ontario 1994”. Primary supervisor: R. Ferrence. My role: Statistical Supervisor. Started January 1994 and finished August 1995.
- 5) Greg Webster, (MSc, Epidemiology). Thesis title: “Epidemiology of Attempted Suicide and Suicide Ideation”. Primary Supervisor: I. Sakinofsky. My role: Statistical Supervisor. Started February 1994 and finished September 1996.
- 6) Ann Burchell. (MSc, Epidemiology). Thesis title: “Condom Use Among First Nations People Living on Reserve in Ontario”. Primary Supervisor: Liviana Calzavara. My role: Statistical Supervisor. Started September 1995 and finished January 1997.
- 7) Sookhee Yun. (PhD, Statistics). Thesis title: “The efficient Hybrid Bootstrap Estimator: Exploiting Unbiasedness of Monte Carlo and Efficiency of Symbolic

- Computation”. Primary Supervisor: D. Andrews. My role: Committee member. Started October 1995 and finished January 1998.
- 8) Rafal Kustra. (MSc, Biostatistics). Thesis title: “Soft Decision Trees”. Primary Supervisor: R. Tibshirani. My role: Committee member. Started September 1996 and finished January 1997.
  - 9) Lorna Hsu. (MSc, Epidemiology). Thesis title: “A comparison of Obstetric Complication Histories of Individuals with Childhood-onset Schizophrenia vs. Adult-onset Schizophrenia: A Multi-site Feasibility Study”. Primary Supervisor: J. Beitchman. My role: Statistical Supervisor. Started May 1996 and finished September, 1999.
  - 10) Dominique Lord. (PhD, Civil Engineering). Thesis title: “Safety Issues in Urban Transpotation Networks”. Primary Supervisor: E. Hauer. My role: Committee member. Started February 1997, finished September, 2000.
  - 11) Michele Kohli. (MSc, Epidemiology). Thesis title: “A Risk Index for Sternal Surgical Wound Infection after Cardiovascular Surgery”. Primary Supervisor: L. Yuan. My role: Statistical Supervisor. Started April 1997, finished August, 1998.
  - 12) David Rebeck. (MSc, Epidemiology). Thesis title: “The Relationship Between Early Childhood Speech/Language Impairment and Young Adulthood Antisocial Behaviour.” Primary Supervisor: J. Beitchman. My role: Statistical Supervisor. Started May 1997, finished August, 1998.
  - 13) David Buckeridge. (MSc, Epidemiology). Thesis title: “A Spatial Analysis of the Relationship Between Respiratory Health and Motor Vehicle Emissions amongst Small Urban Areas.” Primary Supervisor: Richard Glazier. My role: Committee member. Started July 1997, finished September, 1998.
  - 14) Deirdre Dawson. (PhD, Psychology). Thesis title: “The Determinants and Correlates of Outcome Following Traumatic Brain Injury: a Prospective Study”. My role: Committee member. Started January 1998 and finished October, 1999.
  - 15) Sonia Jain. (PhD, Statistics). Thesis title: “Split-Merge Techniques for Bayesian Mixture Models”. Primary Supervisor: Radford Neal. My role: Committee Member. Started January, 1999 and finished April 2002.
  - 16) Rahim Moineddin. (MSc, Biostatistics). Thesis title: “Comments on Mallow's CP Statistics and Multicollinearity Effects on Predictions”. Primary Supervisor: Paul Corey. My role: Committee member. Started September 2000 and finished December 2000.
  - 17) Joseph Beyene. (PhD, Biostatistics). Thesis title: “Uses of the Fast Fourier Transform (FFT) in Exact Statistical Inference”. Primary Supervisor: David

- Andrews. My role: Committee member. Started October 2000 and finished June 2001.
- 18) Linda Vrbova. (MSc, Epidemiology). Thesis title: “The Association Between Socioeconomic Status and Community-Acquired Pneumonia in the Elderly in Ontario: A Population-Based Cohort Study Using Frequentist and Bayesian Statistical Methods”. Primary Supervisor: Ross Upshur. Started 2001 and finished September 2003.
  - 19) Michelle Fan. (PhD, Biostatistics). Thesis title: “A Multiplicative Model of the Transmission Rate and Its Statistical Inferences”. Primary Supervisor: John Hsieh. My role: Committee member. Started January 2001 and finished June 2002.
  - 20) Anne Wajji. (MSc, Epidemiology). Thesis title: “Prevalence and Risk factors for Drug Resistance at an Urban Hospital in Uganda”. Primary supervisors: Ian Johnson and Elizabeth Rea. My role: Statistical supervisor. Started January 2002 and finished December 2002.
  - 21) Malcolm Binn. (PhD, Biostatistics). Thesis topic: Analysis of EEG brainwave data. Primary Supervisor: Salomon Minkin. My role: Committee member. Started February, 2002 and finished March 2007.
  - 22) Eleanor Pullenayegum (nee Pinto), (PhD, Biostatistics). Thesis title: “Semi-Parametric Models for Cost-Effectiveness Analysis: Improving the Efficiency of Estimation from Censored Data”. Primary Supervisor: Andrew Willan. My role: Committee member. Started February 2004 and finished December 2005.
  - 23) Wie Xu, (PhD, Biostatistics). Thesis topic: Statistical Genetics. Primary Supervisor: Celia Greenwood and Mary Corey. My role: Committee member. Started September 2004 and finished in August 2006.
  - 24) Fasil Wolde Georgis, (PhD, Biostatistics). Thesis topic: Aggregated Incidence Estimation for Doubly Censored HIV Data. Primary Supervisor: James Stafford. My role: Committee member. Started February 2004.
  - 25) Anjela Tzontcheva, (PhD, Biostatistics). Thesis title: “A Computational Method for Analyzing Interval-Censored Time to Event Data in the Presence of Informative Examination”. Primary Supervisor: James Stafford. My role: Committee member. Started January 2004 and finished December 2006.
  - 26) Diana Clarke, (PhD, Epidemiology). Thesis title: “Ethnic and Geographic Differences in Suicidality in Canadian Adults: A Population-Based Study”. Primary Supervisor: Angela Colantonio. My role: Statistical supervisor. Started December 2004 and finished March 2006.

- 27) Honny Ghadaki, (MSc, Epidemiology). Thesis title: “Response Bias in the Ontario Familial Colorectal Cancer Registry”. Primary Supervisor: Gail Eyssen. My role: Statistical supervisor. Started January 2005 and finished September 2005.
- 28) Victoria Brett, (PhD, Epidemiology and Population Health, The Australian National University). Thesis topic: Ross River virus disease: using climate, vector and host distributions to predict onset and severity of outbreaks. Primary Supervisor: AJ McMichael. My role: Co-statistical supervisor. Started June 2006.

Note: As the statistical supervisor, I am a committee member and the primary supervisor of the statistical method and analysis portions of the students thesis.

### 3. Thesis examination committee member:

- 1) Internal examiner for university examination for Qing Yao, Ph.D. thesis in Biostatistics. Thesis title: “Inference about Causal Ordering.” Primary Supervisor: D. Tritchler. Aug 1994.
- 2) Department examination committee member for Sunil Rao, Ph.D. thesis in Biostatistics. Thesis Title: “Adaptive Subset Selection via Cost--Optimization Using Resampling Methods in Linear Regression.” Primary Supervisor: R. Tibshirani. 1994.
- 3) Department and university examination committee member for Wen-Yi Lou, Ph.D. thesis in Biostatistics. Thesis title: “On Runs Tests for Independence of Binary Longitudinal Data Using the Method of Finite Markov Chain Imbedding”. Primary Supervisor: P. Corey. 1994.
- 4) Internal examiner for thesis of Nicola Chapman, MSc thesis in Biostatistics. Thesis title: “A Comparison of Non-Parametric Methods for Detecting Genetic Linkage.” Primary Supervisor: G. Darlington. 1995.
- 5) Department examination committee member for Shi-Yun Shen, Ph.D. thesis in Biostatistics. Thesis title: “Regression Shrinkage by Weighted Decay.” Primary Supervisor: M. LeBlanc/R. Tibshirani. 1995.
- 6) Department and university examination committee member for Min Gao, Ph.D. thesis in Biostatistics. Thesis title: “Statistical Procedures for Analyzing Drug Combination Effects.” Primary Supervisor: S. Minkin. 1995.
- 7) Internal examiner for thesis of Andreas Maetzel, MSc thesis in Clinical Epidemiology. Thesis title: “Measuring Physicians' Performance using Grade of Membership Analysis.” Primary Supervisor: Claire Bombardier. 1996.

- 8) University examination committee member for George Sampson, Ph.D. Thesis in Statistics. Thesis title: "Symbolic Computation of Nonparametric Bootstrap Estimators and their Properties." Primary Supervisor: D. Andrews, 1996.
- 9) University examination committee member for Michele Campolieti, Ph.D. Thesis in Economics. Thesis title: "Bayesian Estimation of Discrete Duration Models." Primary Supervisor: D.J. Poirier, 1997.
- 10) Internal examiner for thesis of Michael S. Manno, MSc thesis in Biostatistics. Thesis title: "An Evaluation of the Odds Ratio as an Estimator of Vaccine Efficacy." Primary Supervisor: P. Corey. 1997.
- 11) Internal examiner for thesis of S. Samuel Bederman, MSc thesis in Biostatistics. Thesis title: "Estimation Methods in Random Coefficient Regression for Continuous and Binary Longitudinal Data." Primary Supervisor: P. Corey. 1997.
- 12) Department examination committee member for Wenjiang Fu, Ph.D. thesis in Biostatistics. Primary Supervisor: R. Tibshirani. 1997.
- 13) Internal examiner for Alexander Kiss, MSc thesis in Biostatistics. Thesis title: "The inferential performance of five estimators in bivariate repeated measures regression analysis". Primary Supervisor: J.P. Szalai. 1998.
- 14) University examination committee member for Jiahui Li, Ph.D. thesis in Statistics. Thesis title: "Some Aspects of Bayesian and Frequentist Asymptotics". Primary Supervisor: N. Reid. 1998.
- 15) Department and university examination committee member for Carmen Mak, Ph.D. thesis in Biostatistics. Thesis title: "An Alternative Estimator for Polychotomous Logistic Regression via the Lasso." Primary Supervisor: R. Tibshirani. 1998.
- 16) Department and university examination committee member for Annie Dupuis, PhD Biostatistics. Thesis title: "Estimating Two-year Survival Using Cox Model with Updated Covariates". Primary Supervisor: Paul Corey. 2001.
- 17) University examination committee member for Lori Davis, PhD Biostatistics. Thesis title: "Estimating Random Effects and Serial Correlation in Random Coefficient Models: To Weight or Not To Weight". Primary Supervisors: Paul Corey and George Tomlinson. 2002.
- 18) Department and university examination committee member for Shafagh Fallah, Ph.D. thesis in Biostatistics. Thesis title: "Statistical Methods for Clustering Gene Expression Data." Primary Supervisor: David Tritchler. 2004.

19) External thesis examiner for Nathalie Malo, PhD Epidemiology and Biostatistic, McGill University. Thesis title: “Statistical contributions to data analysis for high-throughput screening of chemical compounds.” 2006.

#### 4. Independent reading course students:

Sai Wan (Ivan) Liu, 6/95-8/95.  
Chi-Man (Julian) Wong, 1/96-4/96.  
Chi Weng (Grace) Teng, 5/96-8/96.  
Michelle Fan, 5/96-8/96.  
Sonia Jain, 1/97-4/97.  
Lisa Strug, 1/97-4/97, 9/97-4/98.  
Susan Motran, 1/2003-4/2003.  
Marni Okell, 5/2003-7/2003.  
Justine Cohen, 5/2003-7/2003.  
Neerav Monga, 9/2003-12/2003.  
Juzheng (Joseph) Li, 5/2004-7/2004.  
Ryan Zhao, 5/2004-7/2004.

#### G. University committees and organizations

##### 1. Yale University (1988-1990):

Protocol review board for Comprehensive Cancer Center

Protocol review board for Critical Resource Center

Comprehensive examine committee member for biostatistical section of the Epidemiology PhD program (1989)

Comprehensive examine committee member for Biostatistics PhD program (1989)

##### 2. Carnegie Mellon University (1990-1994):

Comprehensive examine committee member for PhD theoretical statistics section, Department of Statistics, 1991, 1992, and 1993.

Search committee member, Department of Statistics, 1991-1992.

University Disciplinary committee. 1992-1993.

### 3. University of Toronto (1993-present):

Search committee member, Department of Physical Therapy, 1993-1994.

Comprehensive examination committee member for Reginald Hammah, PhD candidate in Civil Engineering, University of Toronto. 1996.

Comprehensive examination committee member for Dominique Lord, PhD candidate in Civil Engineering, University of Toronto. 1997.

Co-leader of the longitudinal models workshop, Department of Preventive Medicine and Biostatistics. 1996-1997.

Ontario Graduate Scholarship committee, Graduate Department of Community Health. 1996.

Teaching Awards committee, Graduate Department of Community Health. 1997, 1998.

Advisory Committee, Department of Public Health Sciences. September, 1998 to July, 1999.

Computer Committee, Department of Statistics. September 1998 to 1999.

Chaired Senate PhD Oral Exam for the Department of Pharmaceutical Sciences. November, 1998.

Chaired Senate PhD Oral Exam for the Graduate Department of Forestry. May, 1999.

Search committee member, Department of Public Health Sciences, Spring, 1999.

Tenure committee member, Department of Public Health Sciences, Spring, 1999.

Chaired MSc Oral Exam for the Graduate Department of Community Health. September, 2000.

Chaired MSc Oral Exam for the Graduate Department of Community Health. January, 2001.

Research committee for tenure review, Department of Public Health Sciences, 2001.

Member of department curriculum committee, Department of Public Health Sciences, 2001-2006.

Search committee member, Biostatistician/Scientist, Population Health Sciences, Hospital for Sick Children, 2001-2002.

Search committee member, Chair of the Department of Public Health Sciences, 2003.

Chair of the Biostatistics program admission committee, 2001-2006.

Member of departmental PhD admissions committee, 2003-2006.