

Curriculum Vitae

Vittorio Addona

Macalester College
Math, Stats, CS (MSCS)
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Education

PhD (Statistics)	McGill University, Mathematics and Statistics Advisor: Dr. David B. Wolfson Thesis title: "Stationarity in a prevalent cohort study with follow-up"	2006
MSc (Statistics)	McGill University, Mathematics and Statistics Advisor: Dr. David B. Wolfson Thesis title: "Group comparisons in the presence of length-biased data"	2002
BSc (Probability/Statistics)	McGill University, Mathematics and Statistics First Class Honors	2000

Academic Employment

Full-Time Appointments:

2006-present	Assistant Professor, Macalester College, MSCS
2005-2006	Visiting Professor, Macalester College, MSCS

Part-Time Appointments:

2001-2005	Course Instructor, McGill University, Mathematics and Statistics
2000-2002	Teaching Assistant, McGill University, Mathematics and Statistics

Non-Academic Employment / Consulting Work

- 2007-present Statistical Consultant, Citizens for Election Integrity Minnesota (CEIMN)
- Providing statistical support in the field of election audits.
 - Served on CEIMN panel to review Minnesota's audit law.
- 2002-2004 Statistical Analyst, Center for Clinical Epidemiology and Community Studies, Jewish General Hospital, Montréal, Québec
- Assisted with statistical analysis of a study examining the unmet needs of community dwelling elderly.
- Summer 2000 Research Assistant, McGill University, Mathematics and Statistics
- Natural Science and Engineering Research Council of Canada (NSERC) Undergraduate Summer Research Award (USRA).
 - Studied the topic of length-biased sampling in survival analysis.
- Summer 1998 Research Assistant, Université de Québec à Montréal, Mathématiques
- Aided in project studying the effects of social relationships on the health of dialysis patients.

Published Scholarly Work

* Indicates an undergraduate student co-author.

Refereed Journals:

- 9. Wolfson, J., Addona, V., and Schmicker, R.H. (2011) The quarterback prediction problem: Forecasting the performance of college quarterbacks selected in the NFL draft. *Journal of Quantitative Analysis in Sports*, Vol. 7, Iss. 3, Article 12.**
- 8. Addona, V., Wagon, S., and Wilf, H. (2011) How to lose as little as possible. *Ars Mathematica Contemporanea*, Vol. 4, No. 1, pp. 29-62.**
7. **Addona, V.** and Yates, P.A. (2010) A Closer Look at the Relative Age Effect in the National Hockey League. *Journal of Quantitative Analysis in Sports*, Vol. 6, Iss. 4, Article 9.
6. **Addona, V.** and *Roth, J. (2010) Quantifying the Effect of Performance-Enhancing Drug Use on Fastball Velocity in Major League Baseball. *Journal of Quantitative Analysis in Sports*, Vol. 6, Iss. 2, Article 6.
5. Rogers, R., Fricke, H.C., **Addona, V.**, *Canavan, R.R., *Dwyer, C.N., Harwood, C.L., Koenig, A.E., Murray, R., Thole, J., and *Williams, J. (2009) Using Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry (LA-ICP-MS) to Explore Geochemical Taphonomy of Vertebrate Fossils in the Upper Cretaceous Two Medicine and Judith River Formations of Montana. *PALAIOS*, Vol. 25, No. 3, pp. 183-195.

4. **Addona, V.**, Asgharian, M., and Wolfson, D.B. (2009) On the incidence-prevalence relation and length-biased sampling. *Canadian Journal of Statistics*, Vol. 37, No. 2, pp. 206-218.
3. McCarthy, J., Stanislevic, H., Lindeman, M., Ash, A., **Addona, V.**, and Batcher, M. (2008) Percentage-Based Versus Statistical-Power-Based Vote Tabulation Audits. *The American Statistician*, Vol. 62, No.1, pp. 11-16.
2. Quail, J., **Addona, V.**, Wolfson, C., Podoba, J., Levesque, L.Y., and Dupuis, J. (2007) Association of unmet need with self-rated health in a community dwelling cohort of disabled seniors 75 years of age and over. *European Journal of Ageing*, Vol. 4, No. 1, pp. 45-55.
1. **Addona, V.** and Wolfson, D.B. (2006) A formal test for stationarity of the incidence rate using data from a prevalent cohort study with follow-up. *Lifetime Data Analysis*, Vol. 12, No. 3, pp. 267-284.

Refereed Abstracts:

2. **Addona, V.** (2011) **Beyond the Second Course in Statistics: Applied Survival Analysis.** *Presented as a poster at the United States Conference on Teaching Statistics (USCOTS)*, Cary, NC, May 2011.

1. **Addona, V.** and *Roth, J. (2009) Quantifying the effect of performance-enhancing drug use on fastball velocity in Major League Baseball. *Presented as a poster at the New England Symposium on Statistics in Sports*, Harvard University, Boston, MA, September 2009.

Conference Proceedings:

3. (2010) Using sports data to motivate statistical concepts: Experiences from a freshman course. *Proceedings of the Eighth International Conference on Teaching Statistics (ICOTS-8): Invited Paper*, Ljubljana, Slovenia: International Association of Statistical Education, Paper 7B4.

2. **Addona, V.**, Asgharian, M., and Wolfson, D. (2007) Nonparametric Maximum Likelihood Estimation of the Incidence Rate Using Data From a Prevalent Cohort Study with Follow-up. *2007 Proceedings of the American Statistical Association*, Biometrics Section [CD-ROM], Alexandria, VA: American Statistical Association, pp. 4-11.

1. *Lewin, D. and **Addona, V.** (2007) Measuring player contribution in the NBA. *2007 Proceedings of the American Statistical Association*, Section on Statistics in Sports [CD-ROM], Alexandria, VA: American Statistical Association, pp. 2578-2580.

Other Publications:

5. Lindeman M., Halvorson, M., Smith, P., Garland, L., and **Addona, V.** (2008) Principles and Best Practices for Post-Election Audits. *Published at www.electionaudits.org*.

4. McCarthy, J., Stanislevic, H., Lindeman, M., Ash, A., **Addona, V.**, and Batcher, M. (2007) Percentage-Based Versus SAFE Tabulation Auditing: A Graphic Comparison. *Published at www.verifiedvotingfoundation.org/auditcomparison*.

3. **Addona, V.** and Wolfson, D.B. (2005) A formal test for stationarity of the incidence rate using data from a prevalent cohort study with follow-up. *Technical report 2005-03*, McGill University, Mathematics and Statistics.
2. **Addona, V.** (2005) Stationarity in a prevalent cohort study with follow-up. *PhD thesis*, McGill University, Mathematics and Statistics.
1. **Addona, V.** (2001) Group comparisons in the presence of length-biased data. *Master's thesis*, McGill University, Mathematics and Statistics.

Accepted Scholarly Work

2. Ding, L., *Zou, H., and Addona, V. Semi-Transparency, Dealership Market, and Foreign Exchange Market Quality. *Review of Financial Economics*, *Accepted*.
1. *Roth, J., Addona, V. Quantifying the effect of steroid use on Major League Baseball batters. *Journal of Recreational Mathematics*, *Accepted*.

Submitted Scholarly Work

(none).

Presentations

Presentations at Regional, National, or International Conferences:

11. Statistical modeling for poets: Modeling, statistics, computation, and calculus (MOSAIC) Kick-Off Workshop, Minneapolis, MN, July 2010.
10. Remodeling data analysis! (with Daniel Kaplan): Mathematical Association of America Mini-Course at the Joint Mathematics Meetings, San Francisco, CA, January 2010.
9. Teaching statistical modeling (with Daniel Kaplan): A satellite workshop to the USCOTS 2009 conference, Columbus, Ohio, June 2009.
8. Teaching introductory data analysis through modeling (with Daniel Kaplan): Mathematical Association of America Ancillary Workshop at the Joint Mathematics Meetings, Washington, DC, January 2009.
7. A trigger for further auditing after a post-election audit for winner verification: Social Statistics Section, Section on Government Statistics at the Joint Statistical Meetings of the American Statistical Association, Denver, CO, August 2008.
6. Statistical modeling in an introductory statistics course: National Institute for Technology and Liberal Education conference "Developing and Supporting Data Fluency", Macalester College, Saint Paul, MN, March 2008.

5. Post-election audits: Statistical power based methods and a trigger for further auditing: Presented by *Katherine Lim (Mentor: **Vittorio Addona**) at the 5th annual Young Mathematicians Conference, The Ohio State University, Columbus, OH, August 2007.
4. Nonparametric maximum likelihood estimation of the incidence rate using data from a prevalent cohort study with follow-up: Biometrics Section at the Joint Statistical Meetings of the American Statistical Association, Salt Lake City, UT, July 2007.
3. A formal test for the stationarity of the incidence rate using data from a prevalent cohort study with follow-up: Hawaii International Conference on Statistics, Mathematics, and Related Fields, Honolulu, Hawaii, January 2007.
2. Prevalence and correlates of self-rated health in a community dwelling cohort of seniors 75 years of age and over: 8th Annual McGill University Geriatric Medicine Research Day, Montréal, Canada, June 2003. Also presented at the Jewish General Hospital Centre for Clinical Epidemiology and Community Studies Lecture Series.
1. Length-biased Sampling: Canadian Undergraduate Mathematics Conference, Hamilton, Canada, June 2000. Revised for Society of Undergraduate Mathematics Students Lecture Series, McGill University, November 2000.

Invited Seminars:

6. Using sports data to motivate statistical reasoning: An invited panel discussion at the Joint Statistical Meetings of the American Statistical Association, Miami, FL, August 2011.
5. Using sports data to motivate statistical concepts: experiences from a freshman course: 8th International Conference on Teaching Statistics, Ljubljana, Slovenia, July 2010.
4. Using sports related examples to motivate statistical concepts: Augsburg College Mathematics Colloquium, Minneapolis, MN, March 2010.
3. The use of statistics in post-election audits and triggers for further auditing: Presented at Post Election Audit Summit, Minneapolis, MN, October 2007.
2. Statistically based audits: Presented (with Katherine Lim, *Mac '08*) to Citizens for Election Integrity Minnesota Organizing Committee, Saint Paul, MN, May 2007.
1. Examining the incidence rate when prevalent cases are sampled, as illustrated through the Canadian Study of Health and Aging: Coughlin Lecture Series, Mathematics Department, North Hennepin Community College, Brooklyn Park, MN, April 2006, *and* MSCS Department, Macalester College, Saint Paul, MN, February 2006.

Poster/Other Presentations:

10. **Vittorio Addona**. Beyond the Second Course in Statistics: Applied Survival Analysis. United States Conference on Teaching Statistics (USCOTS), Cary, NC, May 2011.
9. **Vittorio Addona**. Motivating statistical ideas through examples from medicine, elections, and sports. College Advancement's Faculty Talks Series, Saint-Paul, MN, April 2011.

8. **Vittorio Addona**. What do Mark Twain and Survival Analysis have in common? MSCS Department Seminar, Saint-Paul, MN, February 2011.
7. **Vittorio Addona**. Helping Students Understand Regression Coefficients: An Example of Modeling Body Fat Percentage. Modeling, Statistics, Computation, and Calculus (MOSAIC) M-CAST Webinar, Saint-Paul, MN, September 2010.
6. **Vittorio Addona** and Philip A. Yates. A Closer Look at the Relative Age Effect in the National Hockey League. Section on Statistics in Sports at the Joint Statistical Meetings of the American Statistical Association, Vancouver, BC, August 2010.
5. **Vittorio Addona**. Some examples from a course in sports statistics. Presented at Stat Chat (A monthly get-together of local statistics educators), Saint-Paul, MN, November 2009.
4. *Jeremy Roth and **Vittorio Addona**. Quantifying the effect of performance-enhancing drug use on fastball velocity in Major League Baseball. The New England Symposium on Statistics in Sports, Harvard University, Boston, MA, September 2009.
3. *David Lewin and **Vittorio Addona**. Measuring player contribution in the NBA. Section on Statistics in Sports at the Joint Statistical Meetings of the American Statistical Association, Salt Lake City, UT, July 2007, *and* presented at the National Institute for Technology and Liberal Education (NITLE) conference “Developing and Supporting Data Fluency”, Macalester College, Saint Paul, MN, March 2008.
2. *Katherine Lim and **Vittorio Addona**. Post-Election Audits: Statistical Power Based Methods. Presented at the 5th Annual Minnesota Private College Scholars at the Capitol Event, State Capitol, Saint Paul, MN, February 2008.
1. *Grace Arnold, Devavani Chatterjea, **Vittorio Addona**, and Jim Miner. A comparison of generalized pain in the emergency room between self-reported alcohol users and abstainers. Presented at the Minnesota Academy of Science Winchell Undergraduate Research Symposium, Hamline University, Saint Paul, MN, April 2007.

Awards, Recognition, and Grants

Graduate and Undergraduate Scholarships:

2003-2004	Fonds Québécois de la recherche sur la nature et les technologies (FQRNT): Doctoral Research Scholarship
2003-2004	J.W. McConnell McGill Major Fellowship; declined because in receipt of FQRNT Scholarship
2003-2004	SOLIDAGE research group: Training Program Scholarship; declined because in receipt of FQRNT Scholarship
2002-2004	Institut des Sciences Mathématiques (ISM) Scholarship

2000 Natural Science and Engineering Research Council of Canada (NSERC)
Undergraduate Summer Research Award (USRA)

1997-2000 McGill University Edward Beatty Entrance Scholarship

External Grants:

2011 (under review) Participant on Canadian Institutes of Health Research Operating Grant proposal “Accelerating the Generation of Results from Longitudinal Studies of Aging”, \$191,206.

2011 (funded) Participant on National Science Foundation Research Experience for Undergraduates proposal “Interdisciplinary Mathematics Research”, institutional grant (submitted with the Institute for Mathematics and Its Applications).

2009 (funded) Participant on National Science Foundation Course, Curriculum, and Laboratory Improvement proposal “Building a Community around Modeling, Statistics, Computation, and Calculus”, \$348,000 institutional grant.

2008 (funded) Public Health and the Educated Citizen Conference. This grant was submitted to the AAC&U to attend a workshop on undergraduate public health education in Washington, D.C. Funding was provided for myself and my collaborators, Devavani Chatterjea and Liz Jansen.

2007 (not funded) Co-principal investigator on PEW Charitable Trust’s Make Voting Work Initiative proposal “A new diagnostic to assess a statistically based audit model to ensure accurate election outcomes” (submitted with *Katherine Lim and Citizens for Election Integrity Minnesota), \$21,336.

Internal Grants:

2010 (funded) Wallace Travel Grant for travel to Eighth International Conference on Teaching Statistics, Ljubljana, Slovenia, \$2,862.

2010 (funded) Mellon Curricular Pathways Grant for course development: Applied Survival Analysis (Math 353), \$3,100.

Teaching

Courses Taught:

- Math 153: Data Analysis and Statistics, Macalester College (9 sections)
- Math 153: Data Analysis and Statistics: Statistical Analysis of Sports and Games, First-year course, Macalester College (1 section)
- Math 155: Introduction to Statistical Modeling, Macalester College (8 sections)

- Math 253: Applied Multivariate Statistics, Macalester College (2 sections)
- Math 353: Modern Statistics (Applied Survival Analysis), Macalester College (2 sections)
- Math 354: Probability, Macalester College (3 sections)
- Math 355: Mathematical Statistics, Macalester College (4 sections)
- Math 203: Principles of Statistics I, McGill University (3 sections)

Teaching Assistantships:

- Math 323: Probability, McGill University (1 section)
- Math 139: Calculus, McGill University (2 sections)

Capstone/Honors Project Primary Advisor:

- 2011 Emily Hall Risk factors associated with bone marrow transplant in leukemia patients.
Emily won an MSCS Department Capstone presentation prize.
- 2011 Sen Raveendranathan Are women more credit worthy than men among the poor?
- 2011 Mei Sun Exploring the association between health variables and Macalester College students' academic success.
- 2011 Yenee Soh Time Management as a Strong Predictor of College Success.
- 2011 Jhanelle Latore A survival analytic approach to modeling breast feeding duration.
- 2011 Jimerson Asencio Ferrufino What is the effect of trade on the gender wage gap in the Mexican manufacturing sector?
- 2010 Hao Zou Statistical Post-Election Audits.
- 2010 Jeremy Roth The effect of performance-enhancing drug use on MLB batters.
- 2009 Jessica Blascak Improving the accuracy of Netflix recommendation: Using statistical analysis to model the effects of time in movie ratings.
Jessica won the Computer Science Ezra Camp Award in our department.
- 2009 Jung Yul Kim The relationship between economic development and democratization.
- 2009 Sherry Kurisinkal Benford's Law and its applications.
- 2009 David Lewin Measuring player performance in the NBA.
- 2009 Evi Kourtella How do smoking bans affect bar sales in Europe?

- 2009 Conrad Lichty The economic effect of hosting the Olympics.
- 2008 Katherine Lim (Honors) Post-election audits: Statistical power based methods.
Katherine won the Mathematics Konhauser Award in our department.
- 2008 Reed Andrews Probabilities of rare events: The dove and Randy Johnson.
- 2008 Ozkan Erguden Do IMF loans and programs improve economic growth rates?
- 2008 Elad Rachevsky Inequality: Measurement issues, trends, and importance;
A cross-country time series data analysis.
- 2008 Murat Ilgen What is the effect of Wal-Mart on average retail wages?
- 2008 Viet Hoang The mathematics of option pricing.
- 2007 Andi Luka Corporate governance and firm performance of publicly traded American corporations in the wake of the Sarbanes-Oxley Act of 2002.
- 2007 Pawan Dhir Effect of stock market liberalization on emerging equity market volatility.
- 2007 Marija Krgovic Principal component analysis and international stock market dynamics.
- 2007 Kyle Goerschler A probabilistic analysis of Joe DiMaggio's 56 game hitting streak.

Honors Project Review Committee:

- 2010 Nora Catolico (Geology) Osteohistological analysis of a late cretaceous herpetofauna.
- 2010 Ernesto Nunes (Computer Science) A hybrid genetic algorithm for the student-aware university course timetabling problem.
- 2010 Hao Zou (Economics) Did the electronic trading system make the foreign exchange market more efficient?
- 2010 Jeremy Roth (Economics) How does income inequality affect U.S. county growth?
- 2009 Jayant Gokhale (Economics) Why are macroeconomic forecasts inaccurate?
An examination of herding and forecast accuracy.
- 2009 Colin Hottman (Economics) Does violent crime cause individuals to join gangs?
- 2009 Todd Copenhaver (Economics) Does NBA attendance respond to an increased emphasis on offense?
- 2008 Hiroyuki Miyake (Economics) Can fundamental factors explain asymmetric correlations in stock market returns?

2008 Patrick Schnarrenberger (Psychology) A rebound effect after stereotype threat?

2007 Dan Allen (Mathematics) Toward a Common Currency: Using Item Response Theory to Adjust for Grading Inconsistency.

Summer Research Advisees:

2009 Paul Burns (*Mac '11*): Developing data fluency in the social sciences (co-supervised by Paru Shah and Daniel Kaplan)

2008 Michael Kapernaros (*Mac '10*): Run expectancy in Major League Baseball
Grace Goetzke (*Mac '10*): Tuberculosis testing in the Macalester community
(co-supervised by Chad Topaz)

Hao Zou (*Mac '10*): Response times to news events in the foreign exchange market
(co-supervised by Liang Ding)

2007 Katherine Lim (*Mac '08*): Statistically based post-election audits

Service

Professional and Community Activities/Service:

2011 Referee, European Journal of Sport Science

2010-11 Organized two sessions (in Statistics Education and Statistics in Sports) for the 2011 Joint Statistical Meetings.

2010-11 Referee, Journal of Quantitative Analysis in Sports

2010 Referee, Journal of Statistical Computation and Simulation

2009-10 Referee, The Mathematical Intelligencer

2009 Referee, IEEE Transactions on Information Forensics and Security: Special Issue on Electronic Voting

2009 Reviewer, Chapman Hall/CRC Book Proposal

2009 Reviewer, John Wiley and Sons Statistics Textbook

2007 Participated in the "Future Faculty Seminar" in School Psychology Program at the University of Minnesota. I gave a talk to PhD students about the job of a professor in a small liberal arts college

2004-2005 Committee of Graduate Affairs, McGill University

2003-2004 Membership committee of the Statistical Society of Canada (SSC)

2000-2002 Library committee, McGill University, Mathematics and Statistics
1999-2000 President, McGill Society of Undergraduate Math Students (SUMS)

Macalester College Activities/Service:

2010-present Organize and run MSCS Department preceptor training
2010-present Beyond Mac coordinator, MSCS
2009-present Served as scribe/interviewer, Midterm Course Interview (MCI) Program.
2007-present Participated in an interdisciplinary planning group for concentration
in Community and Global Health (CGH), and was a member of CGH
reading group. I also serve on the CGH steering committee
2006-present Actuarial Program Liaison, MSCS
2005-present Participate in monthly “Stat Chat” meetings, which bring together local
statistics professors trying to improve statistics education
2010-11 Senior commencement speaker selection committee
2008-2009 Statistics search committee, MSCS (hired Alicia Johnson)
2007-2009 Honorary degree committee
2007-2008 Helped prepare proposal for new major in Applied Math and Statistics
2006-2008 Statistics coordinator, MSCS
2006-2007 Applied Math search committee, MSCS (hired Chad Topaz)
2006-2007 Co-ran the MSCS Senior Capstone Seminar

Membership in Professional Societies:

- American Statistical Association (ASA) 2006-present
- Statistical Society of Canada (SSC) 2006-present