

Curriculum Vitae

Vittorio Addona

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Mathematics and Computer Science
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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, Mathematics and Computer Science
2005-2006	Visiting Professor, Macalester College, Mathematics and Computer Science

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

Refereed Journals:

4. **Addona, V.**, Asgharian, M., and Wolfson, D.B. (2009) On the incidence-prevalence relation and length-biased sampling. *The 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.

Conference Proceedings:

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. (*Mac '09*) 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:

6. 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*.

5. 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*.

4. **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.

3. **Addona, V.** (2005) Stationarity in a prevalent cohort study with follow-up. *PhD thesis*, McGill University, Mathematics and Statistics.

2. **Addona, V.** (2001) Group comparisons in the presence of length-biased data. *Master's thesis*, McGill University, Mathematics and Statistics.

1. **Addona, V.** and Stayn, G.P.H. (1999) Math 423: Regression and Analysis of Variance. *Lecture Notes*, McGill University, Mathematics and Statistics, 145 pp.

Scholarly Work Submitted

4. Roth, J. (*Mac '10*) and **Addona, V.** Quantifying the effect of performance-enhancing drug use on fastball velocity in Major League Baseball. *Submitted to 2009 New England Symposium on Statistics in Sports, June 2009*.

3. Gupta, N. (*Mac '11*), Raveendranathan, S. (*Mac '11*), Snider, K.S. (*Mac '10*), and **Addona, V.** A Game-Theoretic Approach to Two-Player Dominoes. *Re-submitted to Mathematics Magazine, June 2009*.

2. Sen, S., Blascak, J. (*Mac '09*), and **Addona, V.** Global Effects in Recommender Systems. *Submitted to ACM RecSys 2009, May 2009.*

1. Ding, L., Zou, H. (*Mac '10*), and **Addona, V.** Semi-transparency, Dealership Market and Foreign Exchange Market Quality. *Submitted to 2009 Southern Finance Association Meetings, March 2009.*

Scholarly Work in Progress

6. 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. 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. *In preparation for submission to PALAIOS.*

5. Goetzke, G. (*Mac '10*), **Addona, V.**, and Topaz, C.M. Tuberculosis screening for international students at a Midwestern liberal arts college. *In preparation for submission to BMC Public Health.*

4. **Addona, V.** Using sports data to motivate statistical concepts: experiences from a freshman course. *In preparation for submission to 8th International Conference on Teaching Statistics (ICOTS 2010).*

3. **Addona, V.** and Lim, K. (*Mac '08*) A trigger for further auditing after a post-election audit for winner verification. *In preparation.*

2. **Addona, V.** and Wolfson, D.B. Assessing stationarity of the survival distribution using data from a prevalent cohort study with follow-up. *In preparation.*

1. Choi, J.Y. (*Mac '10*), Nah, D.H. (*Mac '08*), Wickens, Z. (*Mac '10*), and **Addona, V.** The Truel Revisited. *In preparation.*

Presentations

Presentations/Workshops at Regional, National, or International Conferences:

8. Teaching Introductory Data Analysis through Modeling (with Daniel Kaplan): A Mathematical Association of America (MAA) Ancillary Workshop at the Joint Mathematics Meetings (JMM), 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 (JSM) of the American Statistical Association, Denver, CO, August 2008.

6. Statistical modeling in an introductory statistics course: National Institute for Technology and Liberal Education (NITLE) 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 (*Mac '08*) (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 (JSM) 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 (CUMC), Hamilton, Canada, June 2000. Revised for Society of Undergraduate Mathematics Students Lecture Series, McGill University, November 2000.

Invited Seminars:

4. Using sports data to motivate statistical concepts: experiences from a freshman course: 8th International Conference on Teaching Statistics (ICOTS), Ljubljana, Slovenia, July 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 (CEIMN) 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* Mathematics and Computer Science Department, Macalester College, Saint Paul, MN, February 2006.

Poster Presentations:

3. David Lewin (*Mac '09*) and **Vittorio Addona**. Measuring player contribution in the NBA. Section on Statistics in Sports at the Joint Statistical Meetings (JSM) 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 (*Mac '08*) 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 (*Mac '07*), 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:

- 2009 (in review) Participant on National Science Foundation (NSF) Undergraduate Biology/Mathematics (UBM) proposal “Quantitative Biology: Education/Research Training (QBERT) at Macalester College”, \$634,835 institutional grant.
- 2009 (in review) Participant on National Science Foundation (NSF) Course, Curriculum, and Laboratory Improvement (CCLI) 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 The PEW Charitable Trust’s Make Voting Work Initiative proposal “A new diagnostic to assess a statistically based audit model to ensure accurate election outcomes” (this was submitted in collaboration with Katherine Lim (*Mac ‘08*) and Citizens for Election Integrity Minnesota), \$21,336.

Teaching

Courses Taught:

- Math 153: Data Analysis and Statistics, Macalester College (5 sections)
- Math 155: Introduction to Statistical Modeling, Macalester College (5 sections)
- Math 253: Applied Multivariate Statistics, 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:

- 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 Investigating 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 in recipient countries?
- 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:
A cross-sectional analysis for the year 2005.
- 2007 Pawan Dhir The 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:

- 2009 Jayant Gokhale (Economics) Why do macroeconomic forecasters forecast inaccurately? An examination of the relationship between 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

Internship Faculty Supervisor:

- 2009 Ji Young Choi (*Mac '10*): Allianz Life Insurance Company of North America
- 2009 Senthuran Raveendranathan (*Mac '11*): Christopher Gross Consulting
- 2009 Saad Anjum (*Mac '10*): Hewitt Associates
- 2009 Sherry Kurisinkal (*Mac '09*): The Clifton Group
- 2008 Saad Anjum (*Mac '10*): Allianz Life Insurance Company of North America
- 2008 Meng Wang (*Mac '09*): EMB America
- 2008 Sherry Kurisinkal (*Mac '09*): The Clifton Group

Service

Professional and Community Activities/Service:

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| 2009 | Referee, IEEE Transactions on Information Forensics and Security: Special Issue on Electronic Voting. |
| 2009 | Referee, The Mathematical Intelligencer. |
| 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:

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| 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 am also serving on the CGH steering committee. |
| 2006-present | Actuarial Program Liaison, Mathematics and Computer Science. |
| 2005-present | Participate in monthly “Stat Chat” meetings, which bring together local statistics professors trying to improve statistics education. |
| 2009 | Participated in Spring Professional Activities Workshop (SPAW). |
| 2008-2009 | Statistics search committee, Mathematics and Computer Science (hired Alicia Johnson). |
| 2008 | Participated in a Diversity in Science Collective (DISC) meeting. |
| 2007-2008 | Helped prepare proposal for new major in Applied Math and Statistics. |

- 2007-2008 Honorary Degree Committee.
- 2006-2008 Statistics coordinator, Mathematics and Computer Science.
- 2006-2007 Applied Math search committee, Mathematics and Computer Science
(hired Chad Topaz).
- 2006-2007 Co-ran the Mathematics and Computer Science Senior Capstone Seminar.

Membership in Professional Societies:

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