Philip A. Yates

Department of Mathematical Sciences, DePaul University 2320 N. Kenmore Avenue, Schmitt Academic Center, Room 507 – Chicago, IL 60614

Education

University of South Carolina Columbia, SC

Ph.D. in Statistics December 2006

Dissertation Title: Methods for the Analysis of Flood Frequency Distributions

Advisor: John M. Grego

The University of Vermont Burlington, VT

M.S. in Biostatistics May 1999

Advisor: Larry D. Haugh

DePaul University Chicago, IL

B.S. in Mathematical Sciences

June 1997

Minor in Economics. Graduated with High Honors.

Academic Appointments

DePaul University Chicago, IL

Associate Professor 2020 – present

Department of Mathematical Sciences

DePaul University

Assistant Professor

2017 – 2020

Assistant Professor

Department of Mathematical Sciences

Saint Michael's College Colchester, VT

Associate Professor 2014 – 2017

Department of Mathematics

Saint Michael's College
Assistant Professor

Colchester, VT
2010 – 2014

Department of Mathematics

California State Polytechnic University, Pomona Pomona, CA

Assistant Professor 2007 – 2010

Department of Mathematics and Statistics

Teaching Experience

DePaul University:

- o HON 180: Data Analysis and Statistics.
- o MAT 137: Business Statistics.
- o MAT 341/448: Statistical Methods Using SAS.
- o MAT 348: Applied Statistical Methods.
- o MAT 353: Probability & Statistics III.
- o MAT 356/456: Applied Regression Analysis.

- o MAT 441: Applied Statistics I.
- o MAT 442: Applied Statistics II.
- o MAT 443: Applied Statistics III.

Saint Michael's College:

- o MA 120: Elementary Statistics.
- o MA 140: Biological Data & Statistics.
- o MA 150: Calculus I.
- o MA 160: Calculus II.
- o MA 251: Probability and Statistics.
- o MA 351: Applied Regression Analysis.
- o MA 410: Seminar in Mathematics.
- o MA 451: Applied Statistical Methods.

California State Polytechnic University, Pomona:

- o MAT 114: Analytic Geometry and Calculus I.
- o STA 120: Statistics with Applications.
- o STA 241: Applied Probability Theory.
- o STA 310: Sampling Theory and Applications.
- o STA 326: Statistical Methods for Computer Scientists.
- o STA 341: Applied Statistics.
- o STA 432: Applied Regression Analysis.
- o STA 533: Linear Statistical Models I.
- o STA 534: Linear Statistical Models II.
- o STA 565: Multivariate Analysis.

University of South Carolina:

- o STAT 110: Introduction to Descriptive Statistics.
- o STAT 201: Elementary Statistics.
- o STAT 516: Statistical Methods II.

Students Supervised:

DePaul University

- o Spencer J. Brinkman, B.S. in Cybersecurity, Spring 2020
- o Eleanor R. Marshall, B.S. in Mathematical Sciences, Spring 2018

Saint Michael's College

- o Abigail J. Hotaling, B.S. in Mathematics, Spring 2017
- o Lauren A. Krzaczek, B.S. in Mathematics, Spring 2017
- o Mackenzie J. Edmondson, B.S. in Mathematics, Spring 2016
- o Eric J. Parziale, B.S. in Mathematics, Spring 2013
- o Maura E. O'Riordan, B.S. in Mathematics and Secondary Education, Fall 2012

California State Polytechnic University, Pomona

- o Tiffany Chao, M.S. in Mathematics, Statistics Emphasis, June 2010
- o Maria M. Perez, M.S. in Mathematics, Statistics Emphasis, June 2010
- o Edward A. Reyes, M.S. in Mathematics, Statistics Emphasis, August 2009

Grants and Contracts

(Not funded, 2019) National Science Foundation

Title: "HDR DSC: Collaborative Research: The Metropolitan Chicago Data Science Corps (MCDC): Learning

from Data to Support Communities" Role: Co-Principal Investigator

(Funded, March 2017–July 2017) Aperture Bio – Biologics, Williston, VT

Role: Statistical Consultant

Amount: \$3,000

(Funded, June 2011) Junior Faculty Summer Research Grant Saint Michael's College, Faculty Development Committee

Amount: \$4,000

(Not funded, 2010) National Science Foundation, Division of Mathematical Sciences

Title: "EMSW21-MCTP: The NSF Euphemia Scholars Program: A Mentorship Alliance Increasing PhD Bound

US Mathematical Baccalaureates" Role: Co-Principal Investigator

(Funded, October 2009-March 2014) United States Department of Agriculture, Forest Service

Pacific Northwest Region, San Bernardino National Forest Role: Professional Mathematical and Statistical Services

Amount: \$3,000

(Funded, July 2009-October 2009) United States Department of Agriculture, Forest Service

San Dimas Technology & Development Center

Title: "Greater Yellowstone Area Snowmobile Use Monitoring Evaluation"

Role: Contractor Amount: \$2,500

(Funded, November 2008–June 2009) The Pew Charitable Trusts: Making Voting Work

Title: "How Does Vote By Mail Affect Voters? A natural experiment examining individual level turnout"

Role: Statistical Consultant

Amount: \$36,700

(Funded, October 2008–November 2008) United States Department of Agriculture, Forest Service

San Dimas Technology & Development Center

Title: "Black Powder Ignition Study"

Role: Contractor Amount: \$2,000

(Not funded, 2008) Staples Foundation for Learning

Description: Support for middle school mathematics camp program at California State Polytechnic University,

Pomona

Role: Co-Principal Investigator

Publications

Student co-authors: † indicates work done as an undergaduate

Refereed Journal Articles:

- 13. **Philip A. Yates**. (2019) "Punching a Ticket to Cooperstown," *Journal of Statistics Education*, 27(1), 37–47, https://doi.org/10.1080/10691898.2019.1565934.
- 12. Lauren A. Krzaczek[†] and **Philip A. Yates**. (2017) "A Statistical Analysis of Atmospheric CO₂ Levels at Mauna Loa," *Ball State Undergraduate Mathematics Exchange*, 11(1), 14–27, https://lib.bsu.edu/beneficencepress/mathexchange/11-01/StatisticalAnalysis_Krzaczek_Yates.pdf.
- 11. John M. Grego, **Philip A. Yates**, and Kaiwen Mai. (2015) "Standard Error Estimation for Mixed Flood Distributions with Historic Maxima," *Environmetrics*, 26(3), 229–242, https://doi.org/10.1002/env.2333.
- 10. John A. Trono and **Philip Yates**. (2014) "How Predictable is the Overall Voting Pattern in the NCAA Men's Basketball Post Tournament Poll?" *CHANCE*, 27(2), 4–12, https://doi.org/10.1080/09332480.2014.914734.
- 9. Kawika Pierson, Vittorio Addona, and **Philip Yates**. (2014) "A Behavioural Dynamic Model of the Relative Age Effect," *Journal of Sports Sciences*, 32(8), 776–784, https://doi.org/10.1080/02640414.2013.855804.
- 8. Eric J. Parziale[†] and **Philip A. Yates**. (2013) "Keep the Ball! The Value of Ball Possession in Soccer," *Reinvention: an International Journal of Undergraduate Research*, Volume 6, Issue 1, https://warwick.ac.uk/fac/cross_fac/iatl/reinvention/archive/volume6issue1/parzialeandyates.
- 7. **Philip Yates**. (2011) "The PING Ratings: A Model For Rating NCAA Baseball Teams," *The Baseball Research Journal*, Vol. 40, No. 2, 107–113.
- Elizabeth Bergman and Philip A. Yates. (2011) "Changing Election Methods: How Does Mandated Vote By Mail Affect Individual Registrants?" *Election Law Journal: Rules, Politics, and Policy*, 10(2), 115–127, https://doi.org/10.1089/elj.2010.0079.
- 5. David Rockoff and **Philip Yates**. (2011) "Joe DiMaggio Done It Again...and Again and Again?" *CHANCE*, 24(1), 14–18, https://doi.org/10.1080/09332480.2011.10739846.
- 4. Vittorio Addona and **Philip A. Yates**. (2010) "A Closer Look at the Relative Age Effect in the National Hockey League," *Journal of Quantitative Analysis in Sports*, Volume 6, Issue 4, Article 9, https://doi.org/10.2202/1559-0410.1227.
- 3. John M. Grego and **Philip A. Yates**. (2010) "Point and standard error estimation for quantiles of mixed flood distribution," *Journal of Hydrology*, 391, 289–301, https://doi.org/10.1016/j.jhydrol.2010.07.027.
- 2. David M. Rockoff and **Philip A. Yates**. (2009) "Chasing DiMaggio: Streaks in Simulated Seasons Using Non-Constant At-Bats," *Journal of Quantitative Analysis in Sports*, Volume 5, Issue 2, Article 4, https://doi.org/10.2202/1559-0410.1167.
- 1. **Philip A. Yates**. (2008) "Estimating Situational Effects on OPS," *Journal of Quantitative Analysis in Sports*, Volume 4, Issue 2, Article 2, https://doi.org/10.2202/1559-0410.1095.

Book Chapters & Encyclopedia Entries:

2. Elizabeth Bergman, Dari Sylvester Tran, and **Philip Yates**. (2018) "Voter Identification" in *Electoral Integrity in America: Securing Democracy*, Pippa Norris, Sarah Cameron, and Thomas Wynter (Eds.). Oxford University Press: New York, NY, 102–113.

 Philip A. Yates. (2017) "Margin of Error" in The SAGE Encylcopedia of Communication Research Methods, Mike Allen (Ed.), SAGE Publications, Thousand Oaks, CA, 904–905. http://dx.doi.org/10.4135/9781483381411.n314.

Books & Manuals:

- 2. **Phil Yates**, contributing writer. (2017) *Guide to Evidence-Based Instructional Practices in Undergraduate Mathematics*, Mathematical Association of America, Washington, D.C. https://www.maa.org/programs/faculty-and-departments/ip-guide.
- 1. **Philip Yates**. (2010) SPSS Manual to accompany *Discovering Statistics Brief Version* by Daniel T. Larose. W.H. Freeman and Company, New York.

Book Reviews:

1. **Philip A. Yates**. *Wizardry: Baseball's All-Time Greatest Fielders Revealed* by Michael A. Humphreys, Oxford University Press, 2011. Review in *The American Statistician*, Vol. 66, No. 1, 72, 2012.

Technical Reports:

- Halvorsen, K., Lubecke, A.M., Whittinghill, D., Yates, P., and J. McKenzie. (2016) "Evaluating Some Popular Introductory Applied Statistics Textbooks: What We Like About Them and What We Would Like Them to Do Differently." In *JSM Proceedings*, Statistics Education Section. Alexandria, VA: American Statistical Association. 1314–1319.
- 3. John A. Trono and **Philip Yates**. (2015) "Predicting the NCAA Men's Postseason Basketball Poll More Accurately," Saint Michael's College, Colchester, Vermont, Tech Report: SMC-2015-CS-001, 11 p.
- 2. Elizabeth Bergman, **Philip Yates**, and Elaine Ginnold. (2009) *How Does Vote By Mail Affect Voters? A natural experiment examining individual-level turnout.* Pew Charitable Trusts. Pew Center on the States: Make Voting Work. 37 p.
- Haston, D. V.; Finney, M. A.; Horcher, A.; Yates, P. A.; Detrich, K. (2009) Ignition Potential of Muzzle-Loading Firearms: An Exploratory Investigation. U.S. Department of Agriculture, Forest Service, National Technology & Development Program. 5100–Fire Management; April 2009. 0951 1802–SDTDC; San Dimas Technology & Development Center, San Dimas, California. 28 p.

Manuscripts in Progress:

- Desale Habtzghi and Philip A. Yates. (under revision) "News from the Frontline: A Survey of Statistician and Data Scientist Technology Use Post-Graduation."
- 2. John M. Grego and **Philip A. Yates**. (under revision) "Nonstationary Flood Frequency Analysis: A Mixed and Pooled Approach."
- 1. Walter E. Auch, III and **Philip A. Yates**. (under revision) "A quantification and analysis of the US Great Lakes Basin's post-industrial inter- and intra-city vacant parcel state of affairs."

Scholarly Papers Presented

Conference Presentations:

"Nonstationary Flood Frequency Analysis: A Mixed and Pooled Approach," Presenter, American Geophysical Union Fall Meeting, San Francisco, California, December 12, 2019.

"Nonstationary Flood Frequency Analysis: A Mixed and Pooled Approach," Presenter, Joint Statistical Meetings, Vancouver, British Columbia, Canada, August 1, 2018.

"Instructor Characteristics Associated with Student Appreciation of Statistics," Presenter, Joint Statistical Meetings, Vancouver, British Columbia, Canada, August 4, 2010.

"Mixture Methods for the Analysis of Flood Frequency Distributions," Presenter, WNAR-IMS Meeting, University of California, Davis, June 24, 2008.

"Estimation of a Mixture of Two Three-Parameter Gammas." American Statistical Association, South Carolina Chapter Annual Meeting, University of South Carolina, 2004

Conference Posters:

"Keep the Ball! The Value of Possession in Soccer,"

Poster Presentation, New England Symposium on Statistics in Sports, Harvard University, September 24, 2011.

"Instructor Characteristics Associated with Improved Student Attitudes Toward Statistics," Poster Presentation with Michael Posner, United States Conference on Teaching Statistics, Cary, North Carolina, May 20, 2011.

"Hitting Streaks in Seasons Using Non-Constant Batting Averages,"
Poster Presentation with David Rockoff, New England Symposium on Statistics in Sports, Harvard University,
September 26, 2009.

"Chasing DiMaggio: Streaks in Simulated Seasons Using Non-Constant At-Bats," Poster Presentation, Northern California Symposium on Sports and Operations Research in Sports, Menlo College, October 18, 2008.

"Using Gibbs Sampling to Estimate the Situational Effects on OPS,"
Poster Presentation, New England Symposium on Statistics in Sports, Harvard University, September 2007.

Other Participation in Scholarly Meetings:

Judge, Undergraduate Statistics Project Competition (USPROC): Undergraduate Class Project Competition (USCLAP Intermediate Category), February 2019.

Judge, Statistics in Sports Undergraduate Research Competition, Joint Statistical Meetings, Vancouver, British Columbia, Canada, July 31, 2018.

Judge, SPEED Session: Teaching Statistics: Strategies and Applications, Joint Statistical Meetings, Vancouver, British Columbia, Canada, July 30, 2018.

Session Chair, "A Mathematician Teaches Statistics: The Road Less Traveled," Joint Mathematics Meeting, San Diego, California, January 10, 2018.

Panelist, "Evaluating Some Popular Introductory Applied Statistics Textbooks: What We Like About Them and What Would We Like Them to Do Differently'," Joint Statistical Meetings, Chicago, Illinois, August 3, 2016.

Judge, Student Poster Competition, New England Symposium on Statistics in Sports, Harvard University, September 26, 2015.

Session Chair, Probability, Hudson River Undergraduate Mathematics Conference, Union College, April 11, 2015.

Session Chair, "Geologic, Atmospheric, and Weather-Related Events," Joint Statistical Meetings, Montréal, Québec, Canada, August 4, 2013.

Session Chair, Statistics, Hudson River Undergraduate Mathematics Conference, Williams College, April 6, 2013.

Session Chair, Statistics, Hudson River Undergraduate Mathematics Conference, Western New England University, April 21, 2012.

Panelist, "Expanding the Job Search," Joint Statistical Meetings, San Diego, California, August 2, 2012.

Session Discussant, "From the Diamond to the Rink: Applications of Statistics in Sports," Joint Statistical Meetings, Miami, Florida, July 31, 2011.

Session Chair, Probability, Hudson River Undergraduate Mathematics Conference, Skidmore College, April 16, 2011.

Judge, Student Poster Session, Spring Meeting, Southern California-Nevada Section of the Mathematical Association of America, Harvey Mudd College, April 10, 2010.

Member, Student Attitudes Research Cluster, United States Conference on Teaching Statistics, The Ohio State University, June 25–27, 2009.

Judge, Student Poster Session, Spring Meeting, Southern California-Nevada Section of the Mathematical Association of America, California Lutheran University, March 21, 2009.

Facilitator, Probability & Statistics Breakout Session, Project NExT Meeting, University of Wisconsin, Madison, July 30, 2008.

Judge, Mathematical Association of America Poster Session for Undergraduates, Joint Mathematics Meetings, San Diego, California, January 8, 2008.

Invited Research Presentations:

"Where Have You Gone, Joe DiMaggio? Probability and Hitting Streaks," Presenter, Math Club Talk, DePaul University, February 16, 2018.

"&#%!@? – Censoring and the Analysis of Partially Known Data," Presenter, Pi Mu Epsilon Lecture, Saint Michael's College, October 2014.

"Where Have You Gone, Joe DiMaggio? Probability and Hitting Streaks," Presenter, The Governor's Institutes of Vermont, Mathematical Sciences, June 2014.

"Historic Floods and 1% Chance Flood Estimation," Presenter, Mathematics Colloquium, Norwich University, March 6, 2012.

"Instructor Characteristics Associated with Improved Student Attitudes Toward Statistics," Presenter, Statistics Colloquium, The University of Vermont, November 30, 2010.

"How High's the Water, Mama? Statistical Methods for Flood Frequency Distributions," Presenter, Mathematics REU Colloquium, The Claremont Colleges, July 1, 2010.

"Methods for the Analysis of Flood Frequency Distributions," Presenter, Mathematics Colloquium, California State University, San Bernardino, April 16, 2008.

"Methods for the Analysis of Flood Frequency Distributions," Presenter, Statistics Colloquium, Pomona College, April 1, 2008.

"Cost-Effectiveness of Treatments for First-Time Ankle Sprains." Graduate Student Research Day, The University of Vermont, 1999

Other Invited Presentations:

"Statistics Teaching at the University Level: Improving Inclusion and Student Success," Roundtable Talk, DePaul University Teaching and Learning Conference, May 17, 2019.

"Revolutionizing How We Teach Statistics in Psychology, Mathematical Sciences, and Across the University for the Benefit of All," Panelist, DePaul University, Informal Teaching and Professional Development Seminar, February 7, 2019.

Session Chair and Panelist, "Faculty Recruitment and Retention," Pedagogy Day, Saint Michael's College, 2016.

Panelist, "A Frabjuous Day! A panel celebrating the 150th anniversary of Lewis Carroll's *Alice's Adventures in Wonderland*," Saint Michael's College, October 11, 2015.

Host, Moneyball, Saint Michael's College Film Series, 2012.

"Technology for the K-12 Classroom: Using Microsoft Excel for Teaching Math," Presenter, San Gabriel Valley California Mathematics Project, California State Polytechnic University, Pomona, May, 8, 2010.

Panelist, "Path to Ph.D. Programs," Department of Mathematics and Statistics, California State Polytechnic University, Pomona, 2010.

Service

DePaul University:

University

- o Faculty/Staff Alumni Committee, 2020
- o New Student Convocation Planning Group Member, March 2019-May 2019
- o Institutional Review Board Member, September 2018-August 2021 (three-year term)
- o University Honors Program Committee Member, 2018–2021 (three-year term)
 - Member, Honors Director Appointment Committee, 2020
 - Member, Honors Assessment Committee, 2019

College

- o Editorial Board, DePaul Discoveries, 2019–2022 (three-year term)
- o College of Science & Health, Assessment Committee Member, 2018–2021 (three-year term)
- o STEM Center Advisory Committee Member, 2019–2020

Department

- o Undergraduate Curriculum Committee Member, Department of Mathematical Sciences, 2019-present
- o Academic Program Review Self-Study Team Member, Department of Mathematical Sciences, 2019–2021
- o Advising Committee Member, Department of Mathematical Sciences, 2019-present
- o Search Committee Member, Department of Mathematical Sciences, 2018–2019
- o Coordinator, Bachelor of Arts in Data Science, 2017-present
- o Assessment Committee Member, Department of Mathematical Sciences, 2017-present
- o Adjunct Personnel Committee Member, Department of Mathematical Sciences, 2017–2018
- o Online Teaching Evaluation Committee Member, Department of Mathematical Sciences, 2017

Saint Michael's College:

College

- o Institutional Animal Care and Use Committee Member, 2011 2017
 - Interim Chair, 2014
- o Dispute Resolution Panel, 2015 2017
- o Faculty Advisor, WWPV 92.5 FM The Mike, 2015 2017
 - DJ, WWPV 92.5 FM The Mike, 2010 2012, 2015 2017
- o Faculty Welfare Committee Member, 2016 2017
 - Budget Review Committee Representative, 2016 2017
- o Institutional Review Board Member, 2011 2016
 - Chair, 2014 2016
- o Davis Fellow for Liberal Studies Curriculum Assessment, Quantitative Reasoning, 2014 2016
- o Faculty Affiliate, Men's Tennis Team, 2011 2014
- o Faculty Affiliate, Men's Cross Country Team, 2011 2012
- o Community Manners Planning Committee, 2012
- o Film Series Planning Committee, 2012 present
- o United Way Campaign Planning Committee, 2013

Department

- o Coordinator, MA 120: Elementary Statistics, 2010 2017
- o Chair, Search Committee, Mathematics Department, Assistant Professor, 2015 2017
- o Search Committee Member, Mathematics Department, Visiting Assistant Professor/Instructor, 2015
- o Supervisor, Putnam Mathematical Competition, Saint Michael's College Team, 2012

California State Polytechnic University, Pomona:

College

o Co-chair, Honorary Doctorate Committee, 2009

Department

- o Coordinator, Assessment Committee, 2008 2010
- o Advisor, Kappa Mu Epsilon Chapter/Math-Stat Club, 2008–2010
- o Recruitment Outreach Committee Member, 2007 2010
 - Co-chair, 2007 2008
- o Member, Statistics Group, 2007 2010
- o Chair Evaluation Committee Member, 2010

- o Supervisor, Putnam Mathematical Competition, Cal Poly Pomona Team, 2008 2009
- o Graduate Committee Member, 2007 2008

Community:

- o Judge, DataFest Chicago, 2019
- o Co-Organizer, DataFest Chicago, 2018
- o Co-Organizer, DataFest Vermont, 2016-2017
 - Judge, 2017
- o Various roles, MATHCOUNTS Competition, 2008-2015
 - Grader, Vermont State Chapter Competition, 2011
 - Grader, Northwest Vermont Chapter Competition, 2011–2015
 - Emcee, East San Gabriel Valley Chapter Competiton, 2008–2010
- o Member, California Partnership for Achieving Student Success (Cal-PASS) Mathematics Professional Learning Council, Los Angeles Consortium, 2007–2009

Professional Activities

Ad Hoc Reviewer:

- o Water, 2020
- o Journal of Applied Statistics, 2016-present
- o Perceptual & Motor Skills, 2015-present
- o Scandinavian Sports Studies Forum, 2014-present
- o Journal of Statistics Education, 2013-present
- o The Baseball Research Journal, 2012 -present
- o European Journal of Sports Science, 2011-present
- o PRIMUS: Problems, Resources, and Issues in Mathematics Undergraduate Studies, 2011-present
- o Journal of Quantitative Analysis in Sports, 2008-present

Textbook Reviewer:

- o John Wiley & Sons, Stats: Data and Analytics by Peter C. Bruce, 2013
- o Pearson Education, Practicing Statistics, 1st Edition by Shonda Kuiper, 2011
- o Elsevier Science/Academic Press, Statistical Modeling: A Fresh Approach by Daniel T. Kaplan, 2009

Professional Affiliations:

- o American Statistical Association
 - Chair, Statistics in Sports Section, 2020
 - Chair-Elect, Statistics in Sports Section, 2019
 - Treasurer, Statistics in Sports Section, 2016–2018 (two-year term)
- o American Geophysical Union
- o Mathematical Association of America
 - Chair-Elect, SIGMAA on Statistics Education, 2020
 - Member, Committee on SIGMAAs, 2018–2021 (three-year term)
 - Treasurer, SIGMAA on Statistics Education, 2016–2018 (two-year term)

Awards and Recognitions

- o Honorary Member, Vermont Alpha Chapter of Pi Mu Epsilon, 2014
- o Honorable Mention, CAUSE: Consortium for the Advancement of Undergraduate Statistics Education, A- μ -Sing! Competition, 2013

- o Honorary Member, California Delta Chapter of Kappa Mu Epsilon, 2008
- o Project NExT Fellow, Sun Dot, 2007-2008
- o Student Paper Competition Award, American Statistical Association, South Carolina Chapter Annual Meeting, University of South Carolina, 2004
- o Outstanding Statistics Graduate Teaching Assistant, University of South Carolina, 2001–2002, 2002–2003