

# Iain Pardoe

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## Work and experience

- 1/10-present **Open Learning Faculty Member.** I teach *Principles of Math for Teachers*, *Math for Computing Science*, and *Biostatistics* online for **Thompson Rivers University Open Learning**, BC. I have also taught *Applied Math and Science* in the *Water and Wastewater Technology Program* and designed and written course material for *Introduction to Probability and Statistics*, *Principles of Math for Teachers*, *Biostatistics*, *Statistics for Business and Economics*, *Math for Computing Science*, and *Managerial Statistics*. I am also an **Assessor** for Prior Learning Assessment and Recognition (PLAR).
- 10/08-present **Online Instructor.** I teach *Regression Analysis* for **Statistics.com**, an online provider of professional development courses in statistics based in the United States.
- 5/13-8/22 **Online Instructor.** I taught graduate *Regression Methods* online for **The Pennsylvania State University World Campus**. I also taught *Applied Statistics* and *Applied Data Mining* and designed and wrote course material for *Regression Methods* and *Applied Data Mining*.
- 1/16-9/16 **Curriculum Developer.** zyBooks, California. Developed interactive web-based learning material for undergraduate statistics courses.
- 4/09-7/10 **Online Mathematics Tutor/Mentor.** Self Design High Online School, BC.
- 1/09-4/10 **Statistics Instructor and Mathematics Tutor.** School of University Arts and Sciences, Selkirk College, BC.
- 9/07-6/09 **Associate Professor** (with indefinite tenure). Department of Decision Sciences, Charles H. Lundquist College of Business, University of Oregon.  
Areas of research interest: Bayesian analysis, multilevel modeling, graphical methods, diagnostics and validation, and choice modeling.  
Courses taught: business statistics (intermediate regression course for undergraduates), multivariate statistical methods (elective for MBAs, advanced undergraduates), information analysis for managerial decisions (elective for MBAs, advanced undergraduates).
- 9/01-9/07 **Assistant Professor.** Department of Decision Sciences, Charles H. Lundquist College of Business, University of Oregon.
- 4/05-6/05 **Statistical Consultant.** Department of Decision Sciences, Charles H. Lundquist College of Business, University of Oregon.  
Provided consulting on statistical validation of shipyard scheduling software.
- 5/01-8/01 **Statistical Consultant.** School of Statistics, University of Minnesota.  
Provided statistical consulting on experimental design, data analysis and interpretation of results to graduate student and faculty researchers.
- 9/00-5/01 **Research Assistant.** School of Statistics, University of Minnesota.  
Worked with R. D. Cook on graphical techniques for regression and discriminant analysis.
- 5/00-8/00 **Statistical Consultant Intern.** 3M, St. Paul, Minnesota.  
Worked with supply chain planners and 3M statisticians to improve their monthly forecasts of product demand.
- 1/00-5/00 **Instructor.** School of Statistics, University of Minnesota.  
Taught an intermediate level class on applied statistical inference and computing.
- 9/96-12/99 **Teaching Assistant.** School of Statistics, University of Minnesota.  
Taught lab sessions, graded, tutored, maintained websites for undergraduate and graduate statistics classes in applied regression, categorical data, introduction to statistics, and statistical analysis.
- 6/97-6/99 **Research Assistant.** School of Statistics, University of Minnesota.  
Worked with S. Weisberg and R. D. Cook on regression textbook and accompanying software.
- 8/93-9/96 **Assistant Statistician.** Department of the Environment, London, UK.  
Civil Service Fast Stream (accelerated promotion) statistician working on environmental policy and government finance.

## Education

- 8/01 **PhD in Statistics.** University of Minnesota, Minneapolis, Minnesota.  
Thesis: A Bayesian approach to regression diagnostics. Advisor: R. Dennis Cook.
- 10/98 **MSc in Statistics.** University of Minnesota, Minneapolis, Minnesota. Advisor: Sanford Weisberg.
- 6/92 **BSocSc in Economics and Statistics** (first class). University of Birmingham, UK.

## Publications

### Refereed papers

- Durham, C. A., C. A. Roheim and I. Pardoe (2012). Picking Apples: Can multi-attribute ecolabels compete? *Journal of Agricultural & Food Industrial Organization* 10(1), online.
- Pardoe, I. (2008). Modeling home prices using realtor data. *Journal of Statistics Education* 16(2), online.
- Pardoe, I. and D. K. Simonton (2008). Applying discrete choice models to predict Academy Award winners. *Journal of the Royal Statistical Society: Series A (Statistics in Society)* 171(2), 375-394.
- Gelman, A. and I. Pardoe (2007). Average predictive comparisons for models with nonlinearity, interactions, and variance components. *Sociological Methodology* 37(1), 23-51.
- Pardoe, I. and R. D. Cook (2007). A graphical diagnostic for variance functions. *Australian & New Zealand Journal of Statistics* 49(3), 241-250.
- Pardoe, I., X. Yin, and R. D. Cook (2007). Graphical tools for quadratic discriminant analysis. *Technometrics* 49(2), 172-183.
- Gelman, A. and I. Pardoe (2006). Bayesian measures of explained variance and pooling in multilevel (hierarchical) models. *Technometrics* 48(2), 241-251.
- Pardoe, I. and R. R. Weidner (2006). Sentencing convicted felons in the United States: a Bayesian analysis using multilevel covariates. *Journal of Statistical Planning and Inference* 136(4), 1433-1472.
- Pardoe, I. (2005). Just how predictable are the Oscars? *Chance* 18(4), 32-39.
- Pardoe, I. (2004). Multidimensional scaling for selecting small groups in college courses. *The American Statistician* 58(4), 317-321.
- Durham, C. A., I. Pardoe, and E. Vega (2004). A methodology for evaluating how product characteristics impact choice in retail settings with many zero observations: an application to restaurant wine purchase. *Journal of Agricultural and Resource Economics* 29(1), 112-131.
- Pardoe, I. (2004). Model assessment plots for multilevel logistic regression. *Computational Statistics and Data Analysis* 46(2), 295-307.
- Weidner, R. R., R. Frase, and I. Pardoe (2004). Explaining sentence severity in large urban counties: a multilevel analysis of contextual and case-level factors. *The Prison Journal* 84(2), 184-207.
- Pardoe, I. and R. D. Cook (2002). A graphical method for assessing the fit of a logistic regression model. *The American Statistician* 56(4), 263-272.
- Pardoe, I. (2001). A Bayesian sampling approach to regression model checking. *Journal of Computational and Graphical Statistics* 10(4), 617-627. (Winning entry in the 2000 Student Paper Competition sponsored by the Statistical Computing Section of the American Statistical Association.)
- Cook, R. D. and I. Pardoe (2000). Comment on "Bayesian backfitting" by T. J. Hastie and R. J. Tibshirani. *Statistical Science* 15(3), 213-216.
- Pardoe, I. and R. D. Cook (2000). Sampling to assess the fit of regression models. *Joint Newsletter for the Section on Physical and Engineering Sciences and the Quality and Productivity Section of the American Statistical Association* 6(1), 10-11.

### Conference proceedings

- Dain, O., M. Ginsberg, E. Keenan, I. Pardoe, J. Pyle, T. Smith, and A. Stoneman (2006). Stochastic shipyard simulation with SimYard. In *Proceedings of the 2006 Winter Simulation Conference*, Piscataway, NJ. Institute of Electrical and Electronics Engineers.
- Pardoe, I. (2006). Designing a stated choice survey to study food product eco-labels. In *Proceedings of the 2006 Joint Statistical Meetings*, Alexandria, VA. American Statistical Association.
- Pardoe, I. (2006). Forming small class groups using multidimensional scaling. In *Proceedings of the 7th International Conference on Teaching Statistics*, Voorburg, Netherlands. International Statistical Institute, International Association for Statistical Education.

- Pardoe, I. (2005). Predicting Academy Award winners using discrete choice modeling. In *Proceedings of the 2005 Joint Statistical Meetings*, Alexandria, VA. American Statistical Association.
- Gelman A. and I. Pardoe (2004). Measures of explained variance and pooling in multilevel models. In *Proceedings of the 2004 Joint Statistical Meetings*, Alexandria, VA. American Statistical Association.
- Pardoe, I. and C. A. Durham (2003). Model choice applied to consumer preferences. In *Proceedings of the 2003 Joint Statistical Meetings*, Alexandria, VA. American Statistical Association.
- Pardoe, I. (2002). Model assessment plots for logistic regression with multilevel covariates. In *Proceedings of the 2002 Joint Statistical Meetings*, Alexandria, VA. American Statistical Association.
- Pardoe, I. (2001). A graphical method for assessing the fit of a regression model. In *Proceedings of the 2001 Joint Statistical Meetings*, Alexandria, VA. American Statistical Association.

### Non-refereed articles

- Pardoe, I. and D. K. Simonton (2013). Which nominee seems most likely to win the Academy Award and why? In Kaufman, J. C. and D. K. Simonton, editors, *The Social Science of the Cinema*. New York: Oxford University Press.
- Pardoe, I. (2007). Predicting Oscar winners. *Significance* 4(4), 168-173.
- Dain, O., M. Ginsberg, E. Keenan, I. Pardoe, J. Pyle, T. Smith, and A. Stoneman (2005). Statistical validation of shipyard scheduling software. Technical Report, Lundquist College of Business, University of Oregon.
- Pardoe, I., D. Boush, and H. Okut (2003). Measuring consumer preference for socially responsible products: an application of the multinomial adjacent-categories logit random effects model. Technical Report, Lundquist College of Business, University of Oregon.
- Pardoe, I. (2002). User's manual for BMMP S-PLUS/R software (revision). Technical Report, Lundquist College of Business, University of Oregon.
- Pardoe, I. and S. Weisberg (2001). An introduction to bootstrap methods using Arc (revision). Technical Report 631, School of Statistics, University of Minnesota.
- Pardoe, I. (2001). User's manual for BMMP S-PLUS/R software. Technical Report 639, School of Statistics, University of Minnesota.
- Pardoe, I. and S. J. Janis (2000). An analysis of current demand forecasting methods used at 3M, and recommendations for improvements. Internal Report, 3M, St. Paul, Minnesota.
- Pardoe, I. (1999). An introduction to bootstrap methods using Arc. Technical Report 631, School of Statistics, University of Minnesota.

### Books

- Pardoe, I. (2023). *Mathematics for Elementary Statistics*. Montreal: Pressbooks. <https://mathforteachers.pressbooks.tru.ca>
- Pardoe, I. (2022). *Introduction to Probability and Statistics*. Montreal: Pressbooks. <https://introprobabilityandstatistics.pressbooks.tru.ca>
- Pardoe, I. (2021). *Applied Regression Modeling*, 3rd edition. New York: Wiley.
- Pardoe, I. (2012). *Applied Regression Modeling*, 2nd edition. New York: Wiley.
- Pardoe, I. (2006). *Applied Regression Modeling: A Business Approach*. New York: Wiley.
- Pardoe, I. (2012). *Instructor's Manual for "Applied Regression Modeling: A Business Approach" by I. Pardoe.*
- Pardoe, I. and J. de la Vega (2001). *Instructor's Manual for "Applied Regression Including Computing and Graphics" by R. D. Cook and S. Weisberg.*

### Presentations

- 8/18. Reflections on 10 years of teaching online. Contributed Session at the Joint Statistical Meetings in Vancouver, BC.
- 5/16. Assessing student engagement and improving course design using course data. Invited panel discussion at the 7th Annual Learning in Our Digital World Conference at Thompson Rivers University, Kamloops, BC.
- 1/08. A Map of Bayesianity. Poster at the 3rd joint international meeting of the Institute of Mathematical Statistics and International Society for Bayesian Analysis (MCMSki II: Markov Chain Monte Carlo in Theory and Practice) in Bormio, Italy.

- 11/07. Discrete choice modeling of food product eco-labels. Invited research seminar at the Department of Statistics, Oregon State University, Corvallis, OR.
- 7/07. Discrete choice modelling of food product eco-labels. Contributed Paper at the Royal Statistical Society 2007 Conference in York, UK.
- 8/06. Designing a stated choice survey to study food product eco-labels. Contributed Session at the Joint Statistical Meetings in Seattle, WA.
- 7/06. Forming small class groups using multidimensional scaling. Contributed Paper at the 7th International Conference on Teaching Statistics in Salvador, Brazil.
- 8/05. Predicting Academy Award winners using discrete choice modeling. Topic Contributed Session at the Joint Statistical Meetings in Minneapolis, MN.
- 4/05. Tools for understanding multilevel (hierarchical) regressions. Contributed Paper at the 55th Session of the International Statistical Institute in Sydney, Australia.
- 9/04. Average predictive effects for models with nonlinearity, interactions, and variance components. Conference Theme Session at the Royal Statistical Society 2004 Conference in Manchester, UK.
- 8/04. Measures of explained variance and pooling in multilevel models. Topic Contributed Session at the Joint Statistical Meetings in Toronto, ON.
- 6/04. Average predictive effects for models with nonlinearity, interactions, and variance components. Invited presentation at the International Chinese Statistical Association 2004 Applied Statistics Symposium in San Diego, CA.
- 6/04. Average predictive effects for models with nonlinearity, interactions, and variance components. Invited research seminar at the Center for Statistics and the Social Sciences, University of Washington, Seattle, WA.
- 5/04. Average predictive effects for models with nonlinearity, interactions, and variance components. Research seminar at the Department of Decision Sciences, University of Oregon, Eugene, OR.
- 8/03. Model choice applied to consumer preferences. Topic Contributed Session at the Joint Statistical Meetings in San Francisco, CA.
- 7/03. Measuring consumer preference for socially responsible products: an application of the multinomial adjacent-categories logit random effects model. Invited presentation at the Institute of Mathematical Statistics Sixth North American Meeting of New Researchers in Davis, CA.
- 3/03. Measuring consumer preference for socially responsible products: an application of the multinomial adjacent-categories logit random effects model. Invited presentation at a Sustainable Business Group Meeting, University of Oregon, Eugene, OR.
- 8/02. Model assessment plots for logistic regression with multilevel covariates. Topic Contributed Session at the Joint Statistical Meetings in New York, NY.
- 6/02. Sentencing convicted felons in the United States: a Bayesian analysis using multilevel covariates. The Seventh Valencia International Meeting on Bayesian Statistics in Tenerife, Spain.
- 4/02. A graphical method for assessing the fit of a logistic regression model. Invited research seminar at the Department of Statistics, Oregon State University, Corvallis, OR.
- 8/01. A graphical method for assessing the fit of a regression model. Topic Contributed Session at the Joint Statistical Meetings in Atlanta, GA.
- 8/00. A Bayesian sampling approach to regression model checking. Topic Contributed Session at the Joint Statistical Meetings in Indianapolis, IN.
- 8/00. An analysis of current demand forecasting methods used at 3M, and recommendations for improvements. Presentation to 3M Statistical Consulting Group, St. Paul, MN.

### Awards and honors

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| 2010      | <b>Thompson Rivers University.</b> Recipient of Outstanding Service Award from Open Learning                               |
| 2007      | <b>Royal Statistical Society.</b> Recipient of a conference grant to attend the Royal Statistical Society 2007 Conference. |
| 2006-2007 | <b>University of Oregon.</b> Recipient of the Goulet Research Excellence Award from the Lundquist College of Business.     |
| 2002-2007 | <b>University of Oregon.</b> Recognized for excellent teaching by the Lundquist College of Business.                       |

2005	<b>American Statistical Association.</b> Recipient of travel funds to attend the 55th Session of the International Statistical Institute.
2005	<b>University of Oregon.</b> Recipient of foreign travel funds to attend the 55th Session of the International Statistical Institute.
2003	<b>San Diego State University Foundation.</b> Recipient of travel funds to attend the Sixth North American Meeting of New Researchers.
2002	<b>International Society for Bayesian Analysis.</b> Winner of a Conference Travel Award for the Seventh Valencia International Meeting on Bayesian Statistics.
2002	<b>University of Oregon.</b> Recipient of foreign travel funds to attend the Seventh Valencia International Meeting on Bayesian Statistics.
2001	<b>University of Minnesota.</b> Recipient of a Graduate School Doctoral Dissertation Fellowship supplemental grant for the 2001 Joint Statistical Meetings.
2001	<b>American Statistical Association.</b> Winner of a Student Travel Award sponsored by the Section on Bayesian Statistical Science for the 2001 Joint Statistical Meetings.
2000-2001	<b>University of Minnesota.</b> Graduate School Doctoral Dissertation Fellowship.
2000	<b>American Statistical Association.</b> Winner of the Student Paper Competition sponsored by the Section on Statistical Computing.
1996-1998	<b>University of Minnesota.</b> British Universities North America Club BEST Scholarship.
1992	<b>University of Birmingham.</b> Highest scoring first class degree in the Economics Department and highest final examination marks in the Mathematics Department.
1989-1992	<b>University of Birmingham.</b> Brockhouse Scholarship

## Grants

2023	Math for elementary teachers open learning resources, Thompson Rivers University Open Learning, Innovation Fund. \$4,000.
2004-2007	Demand impacts and implementation of eco-labels for food products (with C. A. Durham, J. McCluskey, R. King, C. Roheim, and A. Johnson), US Department of Agriculture, National Research Initiative Grants Program. \$460,000.

## Professional Activities

Ad hoc reviewer for journals: *Annals of Epidemiology*, *Bayesian Analysis*, *Biometrics*, *Biostatistics*, *Computational Statistics and Data Analysis*, *INFORMS Transactions on Education*, *Journal of Computational and Graphical Statistics*, *Journal of Statistical Planning and Inference*; grant agencies: *National Science Foundation*; and publishers: *McGraw-Hill*, *Elsevier*.  
 Conference session chair: Joint Statistical Meetings (Toronto, 2004, San Francisco, 2003), International Conference on Teaching Statistics (Salvador, Brazil, 2006).  
 Conference session organizer: Joint Statistical Meetings (Minneapolis, 2005, Atlanta, 2001).  
 Member of the American Statistical Association and the Institute of Mathematical Statistics.

## Thompson Rivers University Service

Academic Integrity Committee, 2023-present.  
 Open Learning Advisory Committee, 2022-2023.  
 Integrated Strategic Planning Steering Committee, 2021-2022.  
 Senior Open Learning Faculty Member, 2018-2021.  
 Selection Panels for Calculus 1, 2, 3, Discrete Math, and Business Math for the Department of Mathematics and Statistics, 2015-2019.

## University of Oregon Service

Statistical/Research Design Support Committee, University of Oregon, 2006-2007.  
 Undergraduate Program Committee, Lundquist College of Business, 2005-2006.  
 Doctoral Dissertation Committee, Department of Economics, 2004-2006.  
 Clark Honors College Thesis Committee, 2006.  
 Summer Research Award Committee, University of Oregon, 2004-2006.  
 Undergraduate Core Coordinators Committee, Lundquist College of Business, 2003-2005.  
 Faculty Search Committee, Department of Accounting, 2002-2003.  
 Building Transition Committee, Lundquist College of Business, 2002-2003.

**Volunteering**

Ski resort mountain host, Whitewater Winter Resort, Nelson, BC, 2015-2023.

Soccer coach, Nelson Youth Soccer, Nelson, BC, 2009-2020.

Ski team treasurer, Whitewater Ski Team, Nelson, BC, 2010-2012, 2016-2020.

Movie theatre blogger, Civic Theatre, Nelson, BC, 2015-2020.