

# James H. Albert

Emeritus Distinguished University Professor

Department of Mathematics and Statistics, Bowling Green State University

albert@bgsu.edu · bayesball.github.io

---

## ACADEMIC POSITIONS & DEGREES

**2020–present** Emeritus Professor, Bowling Green State University

**2018–2020** Professor, Bowling Green State University

**1994–1995** Visiting Professor, Institute of Statistics and Decision Sciences, Duke University

**1990–2018** Professor of Mathematics and Statistics, Bowling Green State University

**1986–1987** Visiting Fellow, Faculty of Mathematical Studies, University of Southampton

**1979–1985** Assistant Professor of Mathematics and Statistics, Bowling Green State University

*Ph.D., Statistics, Purdue University, 1979 · M.S., Mathematical Statistics, Purdue University, 1977 · B.S., Mathematics, Bucknell University, 1975*

## HONORS & AWARDS

**2018** Distinguished University Professor, Bowling Green State University

**2015** Founders Award, American Statistical Association

**2004** Significant Contributor to Statistics in Sports, ASA Section on Statistics in Sports

**2001** The Sporting News–SABR Baseball Research Award for *Curve Ball*

**2000** Fellow of the American Statistical Association

## CITATION IMPACT

As of June 2024, publications have received **10,529 total citations (2,454 since 2019)**. The article “*Bayesian analysis of binary and polychotomous response data*” (JASA 1993, with S. Chib) has received **4,298 citations** and was ranked #13 among the most-cited statistics papers since 1993 (Ryan & Woodall, 2005, *Journal of Applied Statistics*).

## BOOKS

### Authored Books

**2025** *Analyzing Baseball Data with R*, 3rd ed. (with B. Baumer & M. Marchi). CRC Press.

**2019** *Probability and Bayesian Modeling* (with M. Hu). Chapman and Hall/CRC.

**2017** *Visualizing Baseball*. CRC Press (ASA–CRC Series on Statistical Reasoning in Science and Society).

**2017** *Teaching Statistics Using Baseball*, 2nd ed. Mathematical Association of America.

**2013** *Analyzing Baseball Data with R*, 1st ed. (with M. Marchi). CRC Press. [2nd ed. with B. Baumer, 2019]

**2011** *R by Example* (with M. Rizzo). Springer.

**2011** *Data Analysis and Probability for Teachers*.

**2009** *Bayesian Computation with R*, 2nd ed. Springer. [Japanese translation, 2010]

- 2003** *Teaching Statistics Using Baseball*. Mathematical Association of America.
- 2001** *Curve Ball: Baseball, Statistics, and the Role of Chance in the Game* (with J. Bennett). Copernicus Books. [Revised paperback, 2003; Japanese translation, 2004]
- 2001** *Workshop Statistics: Discovery with Data, A Bayesian Approach* (with A. J. Rossman). Key College Press.
- 1999** *Ordinal Data Modeling* (with V. Johnson). Springer-Verlag.
- 1996** *Bayesian Computation Using Minitab*. Duxbury Press.

### Edited Volumes

- 2017** *Handbook of Statistics in Sports* (with M. Glickman, R. Koning & T. Swartz). CRC Press.
- 2017** *Anthology of Statistics in Sports II* (with J. Bennett & J. Cochran). Oxford University Press.
- 2007** *Statistical Thinking in Sports* (with R. Koning). CRC Press.
- 2005** *Anthology of Statistics in Sports* (with J. Bennett & J. Cochran). SIAM.

### SELECTED PEER-REVIEWED JOURNAL ARTICLES

---

*Highly cited and representative articles are listed first, followed by a full chronological list.*

#### Highly Cited & Landmark Articles

- 1993** Albert, J. H. & Chib, S. Bayesian regression analysis of binary and polychotomous response data. *Journal of the American Statistical Association*, 88, 657–667. [**4,298 citations**]
- 1993** Albert, J. H. & Chib, S. Bayesian inference of autoregressive time series with mean and variance subject to Markov jumps. *Journal of Business and Economic Statistics*, 11, 1–15.
- 1997** Albert, J. H. & Chib, S. Bayesian tests and model diagnostics in conditionally independent hierarchical models. *Journal of the American Statistical Association*, 92, 916–925.
- 1997** Albert, J. H. & Chib, S. Bayesian testing and estimation of association in a two-way contingency table. *Journal of the American Statistical Association*, 92, 685–693.
- 1995** Albert, J. H. & Chib, S. Bayesian residual analysis for binary response regression models. *Biometrika*, 82, 747–759.
- 1992** Albert, J. H. Bayesian estimation of normal ogive response curves using Gibbs sampling. *Journal of Educational Statistics*, 17, 251–269.
- 1992** Albert, J. H. A Bayesian analysis of a Poisson random effects model for home run hitters. *The American Statistician*, 46, 246–253.
- 1994** Albert, J. H. Exploring baseball hitting data: what about those breakdown statistics? *Journal of the American Statistical Association*, 89, 1066–1074.

#### Journal Articles — Chronological

- 1981** Simultaneous estimation of Poisson means. *Journal of Multivariate Analysis*, 11, 400–417.
- 1981** Pseudo-Bayes estimation of multinomial proportions. *Communications in Statistics, A*, 10, 1587–1611.
- 1982** Mixtures of Dirichlet distributions and estimation in contingency tables (with A. K. Gupta). *Annals of Statistics*, 10, 1261–1268.
- 1983** Estimation in contingency tables using prior information (with A. K. Gupta). *Journal of the Royal Statistical Society, Series B*, 45, 60–69.
- 1983** Bayesian estimation methods for 2×2 contingency tables using mixtures of Dirichlet distributions (with A. K. Gupta). *Journal of the American Statistical Association*, 78, 708–717.

- 1984 Empirical Bayes estimation of a set of binomial probabilities. *Journal of Statistical Computation and Simulation*, 20, 129–144.
- 1985 Bayesian methods for binomial data with applications to a nonresponse problem (with A. K. Gupta). *Journal of the American Statistical Association*, 80, 167–173.
- 1987 Empirical Bayes estimation in contingency tables. *Communications in Statistics, A*, 16, 2459–2485.
- 1988 Computational methods using a Bayesian hierarchical generalized linear model. *Journal of the American Statistical Association*, 83, 1037–1045.
- 1989 Nuisance parameters and the use of exploratory graphical methods in a Bayesian analysis. *The American Statistician*, 43, 191–196.
- 1989 A Bayesian approach to some overdispersion models (with P. A. Pepple). *Canadian Journal of Statistics*, 17, 333–344.
- 1990 A Bayesian test for a two-way contingency table using independence priors. *Canadian Journal of Statistics*, 18, 347–363.
- 1992 Using a probability plot to summarize a unimodal posterior density. *Computational Statistics and Data Analysis*, 14, 193–205.
- 1992 A Bayesian analysis of a Poisson random effects model for home run hitters. *The American Statistician*, 46, 246–253.
- 1992 Bayesian estimation of normal ogive response curves using Gibbs sampling. *Journal of Educational Statistics*, 17, 251–269.
- 1993 Bayesian inference of autoregressive time series with mean and variance subject to Markov jumps (with S. Chib). *Journal of Business and Economic Statistics*, 11, 1–15.
- 1993 Bayesian regression analysis of binary and polychotomous response data (with S. Chib). *Journal of the American Statistical Association*, 88, 657–667.
- 1993 Teaching Bayesian statistics using sampling methods and MINITAB. *The American Statistician*, 47, 182–191.
- 1994 A Bayesian approach to estimation of GPAs of University of Iowa freshmen under order restrictions. *Journal of Educational Statistics*, 19, 1–22.
- 1994 Exploring baseball hitting data: what about those breakdown statistics? *Journal of the American Statistical Association*, 89, 1066–1074.
- 1995 Bayesian residual analysis for binary response regression models (with S. Chib). *Biometrika*, 82, 747–759.
- 1995 Teaching inference about proportions using Bayes and discrete models. *Journal of Statistical Education*, 3(3).
- 1996 A MCMC algorithm to fit a general exchangeable model. *Communications in Statistics — Simulation and Computation*, 25, 575–592.
- 1996 Bayesian selection of log-linear models. *Canadian Journal of Statistics*, 24, 327–347.
- 1997 Bayesian tests and model diagnostics in conditionally independent hierarchical models (with S. Chib). *Journal of the American Statistical Association*, 92, 916–925.
- 1997 Bayesian testing and estimation of association in a two-way contingency table. *Journal of the American Statistical Association*, 92, 685–693.
- 1997 Teaching Bayes' rule: a data-oriented approach. *The American Statistician*, 51, 247–253.
- 1998 The home run hitting of Mike Schmidt. *Chance*, 11, 3–11.
- 1999 Criticism of a hierarchical model using Bayes factors. *Statistics in Medicine*, 18(3), 287–305.
- 2000 Using a sample survey project to assess the Bayesian approach for teaching statistical inference. *Journal of Statistics Education*, 8(1).
- 2001 Using model/data simulations to detect streakiness (with P. Pepple). *The American Statistician*, 55, 41–50.
- 2001 Sequential ordinal modeling with applications to survival data (with S. Chib). *Biometrics*, 57(3).
- 2002 Teaching statistics using baseball. *Journal of Statistics Education*.
- 2003 Concepts of probability of college students. *The American Statistician*, 57.
- 2004 Streakiness in team performance. *Chance*, 17, 37–43.
- 2006 Pitching statistics, talent and luck, and the best strikeout seasons of all time. *Journal of Quantitative Analysis of Sports*, 2.
- 2007 Streaky hitting in baseball. *Journal of Quantitative Analysis of Sports*.

- 2009** Discrete Bayes with R. *Technology Innovations in Statistics Education*, 3(2).
- 2009** Comment on "Hierarchical Bayesian Modeling of Hitting Performance in Baseball" (with P. Birnbaum). *Bayesian Analysis*, 4(4), 653–660.
- 2010** Baseball data at season, play-by-play, and pitch-by-pitch levels. *Journal of Statistics Education*, 18(3).
- 2010** Using the count to measure pitching performance. *Journal of Quantitative Analysis of Sports*, 6(4).
- 2011** Discrepancy measures for item fit analysis in item response theory (with S. Toribio). *Journal of Statistical Computation and Simulation*.
- 2013** Using fun in the statistics classroom (with L. Lesser et al.). *Journal of Statistics Education*.
- 2013** Looking at spacings to assess streakiness. *Journal of Quantitative Analysis of Sports*, 9(2), 151–163.
- 2014** Streakiness in home run hitting. *CHANCE*, 27(3), 4–9.
- 2015** Beyond runs expectancy. *Journal of Sports Analytics*, 1, 1–16.
- 2015** Introduction to Bayesian item response modelling. *International Journal of Quantitative Research in Education*, 2(3–4), 178–193.
- 2015** Player evaluation using win probabilities in sports competitions. *Wiley Interdisciplinary Reviews: Computational Statistics*, 7(5), 316–325.
- 2016** Improved component predictions of batting and pitching measures. *Journal of Quantitative Analysis of Sports*, 12(2).
- 2017** A multilevel Bayesian approach for modelling server-specific time-to-serve in professional tennis (with S. Kovalchik). *Journal of Quantitative Analysis of Sports*, 13(2).
- 2017** The Do's and Don'ts of sports metrics: the Tennis ATP Leaderboard (with S. Kovalchik). *Chance*, February issue.
- 2018** Statistical modeling of sexual assault kit testing initiative case information (with J. Kerka et al.). *Journal of Forensic Sciences*, 63(4), 1122–1133.
- 2019** Developing statistical knowledge for teaching graphing of bivariate categorical data (with S. Casey & A. Ross). *Journal of Statistics Education*.
- 2019** Comparison of decision tree and logistic regression models for utilization in sexual assault kit processing (with J. Kerka et al.). *Journal of Forensic Sciences*.
- 2020** Online statistics teaching and learning (with M. Çetinkaya-Rundel & J. Hu). *Teaching and Learning Mathematics Online*, Chapman and Hall.
- 2020** Bayesian computing in the undergraduate statistics curriculum (with J. Hu). *Journal of Statistics Education*, 28(3), 236–247.
- 2020** The home run explosion. *Science Meets Sport*, Cambridge Scholars Publishing.
- 2023** Contributions of Carl Morris in sports analytics — a memoriam. *Journal of Quantitative Analysis in Sports*.

---

## EDITORIAL & PROFESSIONAL SERVICE

---

- 2021–** Editor, *Journal of Sports Analytics*
- 2015–** Editor, *Chance Magazine*
- 2015–** Associate Editor, *Journal of Quantitative Analysis of Sports*
- 2011–2014** Executive Editor, *Journal of Quantitative Analysis of Sports*
- 2009–** Associate Editor, *Journal of Statistics Education*
- 2003–2005** Executive Editor, *The American Statistician*
- 1996–2002** Associate Editor, *Journal of the American Statistical Association*

---

## STATISTICAL SOFTWARE & R PACKAGES

---

**LearnBayes** — R package to implement Bayesian calculations. Available on CRAN.

**ProbBayes** — R package companion to *Probability and Bayesian Modeling*. Available on CRAN.

**CalledStrike** — R package for collecting, manipulating, and visualizing Statcast pitch zone data.

**ShinyBaseball** — Collection of R Shiny apps for exploring baseball data.

**LearnEDA** — R package companion to the course on Exploratory Data Analysis.