

# CURRICULUM VITA

## Rahul A. Parsa

Professor of Teaching  
College of Business, 2200 Gerdin Building  
2167 Union Drive, Ames, IA 50011-2027

### Education

- 1985-1990                      Ph.D. (August, 1990): Statistics, Department of Statistics  
Texas A & M University, College Station, TX  
Dissertation Title: *Analysis of Contingency Tables with Structural  
Zeros and Ordered Categories.*
- 1979-1981                      Master of Science: Applied Mathematics  
Osmania University, Hyderabad, India.
- 1976-1979                      Bachelor of Science (Honors): Mathematics  
Osmania University, Hyderabad, India.
- 1983-1985                      Additional graduate study:  
Pittsburgh State University, Kansas.  
University of Arkansas, Fayetteville.

### Experience

#### **Ivy College of Business, Iowa State University, Iowa**

- 2019 -                              Professor of Teaching
- 2015 - 2019                      Senior Lecturer/Fellow of Des Moines Programs

#### **College of Business and Public Administration, Drake University, Iowa**

- 2010 - 2015                      Principal Financial Group Distinguished Professor of Actuarial  
Science and Statistics  
Department of Information Management and Business Analytics
- 2009-2014                      Director, Actuarial Science Program
- 2002-                              Professor
- August, 1999-2000              Chairperson,  
Department of Statistics and Actuarial Sciences  
Department of Insurance
- 1996-02                              Associate Professor

1990-96 Assistant Professor

**College of Public Health, The University of Iowa**

1999-02 Adjunct Associate Professor  
Responsibilities include advising students, serving on committees, and collaborate with faculty on research.

**Department of Statistics, Texas A & M University**

1989-1990 Research Assistant

1988-1989 Teaching Assistant (lecture)  
Taught: Sample Survey Techniques and Principles of Statistics

1987-1988 Assistant Lecturer  
Taught: Statistical Methods.

1985-1987 Taught: Statistical Methods (laboratory assistant)

**Department of Mathematics, University of Arkansas**

1983-1985 Teaching Assistant: (Lecture)  
Taught: Finite Mathematics, College Algebra and Trigonometry

## Teaching

- **QUANTITATIVE BUSINESS ANALYSIS AND DECISION MAKING:** This is part of the MBA core. It is a course in statistical methods and simulation
- **INSURANCE ANALYTICS:** A course in Analytics focused on insurance and in particular, it is based on one of the actuarial exams.
- **BUSINESS ANALYTICS FOUNDATION:** Introductory course on Analytics required of all the Master of Business Analytics majors
- **ADVANCED BUSINESS SOFTWARE DEVELOPMENT:** A course on SAS programming required of all IS majors
- **INTRODUCTION TO PROBABILITY I:** Mathematical Statistics course required of all actuarial Science majors. It prepares them for Exam P given by SOA/CAS.
- **INTRODUCTION TO PROBABILITY II:** Classifying and creating discrete and continuous distributions; frequency and severity with coverage modifications; aggregate loss models and ruin theory.
- **LOSS MODELS/DATA ANALYSIS:** Statistical techniques of estimation, both point and confidence intervals; theory of hypothesis tests; goodness-of-fit tests and model selection
- **CREDIBILITY AND SIMULATION:** Limited fluctuation and greatest accuracy credibility; empirical Bayes estimation of credibility factors. Methods of simulation and their application to evaluating probabilities, the bootstrap, and financial economics.

- STATISTICS I & II: An introductory Statistics course required of all undergraduate business students,
- DATA ANALYSIS FOR BUSINESS DECISION MAKING: A Statistics course required of all graduate (MBA) students, and
- DATA MINING: An elective course for the MBA students.
- STATISTICS FOR LIFE SCIENCES: This is an introductory course required of all pharmacy majors.
- STATISTICS FOR SOCIAL SCIENCES: Descriptive and inferential statistics most often used in social research are examined, with an emphasis on statistics as communication tools; includes development of skills in formula reading, interpreting statistical outcomes and selecting appropriate statistics for analysis of various research questions and data.

## Awards

- 2022 Term Faculty Superior Service in Teaching Award
- 2017 Our paper “Pricing Cyber Security Insurance using Copulas” by Jacqueline Rees-Ulmer, Rahul A. Parsa, and Ramona Lee received the Best Paper award, ASTIN AFIR/ERM Colloquium, Panama City, Panama.
- 2013 Nominated for *Madelyn Levitt Mentor Award* given by Drake University.
- 2012 *David B. Lawrence Undergraduate Teacher of the Year Award* given by the College of Business and Public Administration, Drake University
- 2011 The Brooks Faculty Excellence Award given by the College of Business and Public Administration, Drake University
- 2010 *CBPA Faculty Service Award* given by the College of Business and Public Administration, Drake University
- 2006 *Teacher of the Year Award* given by the International Students Association, Drake University
- 2005 *Teacher of the Year Award* given by the International Students Association, Drake University
- 2004 Received *Harry Wolk Researcher of the Year Award* given by the College of Business and Public Administration, Drake University
- 2003 Fulbright Scholarship award.
- 1994 *Teacher of the Year Award* given by the International Students Association, Drake University

## Grants

- 1994 Received a grant from Drake University for \$3,500 for Curriculum Development.

- 2001 Received a grant from SAS Institute for \$30,780 to develop and teach a course on Data Mining using SAS Enterprise Miner.
- 2005 Received a grant from the Board of Regents, State of Iowa (Title IIA Grant) for \$100,000 to expose Des Moines Elementary students to inquiry-based science teaching in an effort to improve learning and leadership skills, P.I. Dr. Jack Gerlovich, my role: Statistician.
- 2005 Received a grant from Pioneer Hi-Bred International, Inc. for \$10,000. P.I. Jack Gerlovich, my role: Statistician
- 2005 Received a grant from Community Pharmacy Foundation for \$37,500. P.I. Dr. June Johnson, my role: Statistician.
- 2005 Received a grant from Fragile X foundation to study Side Effects Experienced with Psychotropic Medication Use in Fragile X. P.I. Maria Valdovinos, my role: Statistician.
- 2006 Received a grant for three years from the Board of Regents, State of Iowa (Title II Grant) for \$450,000 to expose Green Valley AEA teachers and elementary students to Inquiry based science teaching and learning: "Iowa Pioneers Professional Development Program," P.I. Dr. Jack Gerlovich, my role: Statistician.
- 2007 Reproductive and Behavioral Effects of Genistein for \$150,000. Funded by National Institute of Health. P.I. Dr. Craige Wrenn, my role: Statistician.
- 2009 Received a grant from SOA for \$11,812 for research on Copula Regression. I am working on this project with Stuart Klugman but I am the only recipient of the money.
- 2012 Received a grant from American Academy of Actuaries for \$15,000 to conduct a survey on ethics. This project is a joint work with Prof. Garry Frank.
- 2013 Received a grant from CAS for \$15,000 for research on Transformed Linear Approximation to Copula Regression. I am working on this project with Paul Ferrara.
- 2014 Received a grant from Casualty Actuarial Society for \$6,000 for research on Risk Measurement based on Available Information. I am working on this project with Dr. Yiqing Chen.
- 2015 Received a grant from Janssen Pharmaceutical for \$ 26,200 for research on Prescribing patterns for canagliflozin (Invokana) in a specialty endocrinology group practice: Patient characteristics and outcomes. PI: June Johnson, Drake University. My Role: Statistician.
- 2017 Received Professional Development grant from the Provost's office for \$500

## **Research Interests**

- Copulas and Correspondence Analysis,
- Data Perturbation and Data Mining
- Cyber-Security

## Professional Interests

- Academic Correspondent, Casualty Actuarial Society

## Publications

- 1) "Contingency Tables with Structural Zeros," W.B. Smith and Rahul A. Parsa in *Communications in Statistics*, 1990, pages 4485-4496.
- 2) "Minimum Distance Estimation," Stuart Klugman and Rahul A. Parsa, *Proceedings of the Casualty Actuarial Society*, 1993, Vol 80, pages 250-270.
- 3) "Some Aspects of the Maximum Likelihood Estimation of Multistage Cancer Dose-Response Models with Applications," Hussein Al-Khalidi and Rahul A. Parsa, in *Communications in Statistics*, 1993 Vol. 22, Issue 12, pages 3377-3392.
- 4) "Scoring Under Order Constraints in Contingency Tables," Rahul A. Parsa, and W.B. Smith in *Communications in Statistics*, 1993 Vol. 22, Issue 12, pages 3537-3552.
- 5) "Power-laws and Applications to Earthquake Populations," Rahul A. Parsa, and Gurajada Suryanarayana Murty, in *Pure and Applied Geophysics*, 1996 Vol. 147, No. 3, pages 455-466.
- 6) "The Spread of Statistical Significance Testing in Psychology: The case of the *Journal of Applied Psychology*, 1917-94," Raymond Hubbard, Rahul A. Parsa, and Michael R. Luthy, in *Theory and Psychology*, 1997, Vol.7, No. 4, pages 545-554.
- 7) "Safety Issues and Iowa Teachers," Jack A. Gerlovich, Ed Wilson, and Rahul A. Parsa, in *Journal of Iowa Academy of Sciences*, 1998, Vol 105, No. 4, pages 152-157.
- 8) "A General Linear Perturbation Method for Database Security," Krishnamurty Muralidhar, Rathindra Sarathy, and Rahul A. Parsa in *Management Science*, 1999, Vol. 45, No. 10, pages 1399-1415.
- 9) "Fitting Bivariate Loss Distributions with Copulas," Stuart A. Klugman, and Rahul A. Parsa in *Insurance: Mathematics and Economics*, 1999, Vol 24, pages 139-148.
- 10) "Surveying Safety: How Researchers Addressed Safety in Science Classrooms in Wisconsin," Jack Gerlovich, John Whitsett, Shelly Lee, and Rahul A. Parsa in *The Science Teacher*, April 2001, Vol 68, No. 4 pages 31-35.
- 11) "An Improved Security Requirement for Data Perturbation with Implications for E-Commerce" Krishnamurty Muralidhar, Rathindra Sarathy, and Rahul A. Parsa, in *Decision Sciences* Fall 2001, Vol 32, NO 4, pages 683-698.

- 12) "Surveying Science Safety: NSTA Analyzes Safety in the Classroom" Jack Gerlovich, and Rahul Parsa, in *The Science Teacher*, October 2002, Vol 69, No 7, pages 52-56.
- 13) "Perturbing Non-Normal Confidential Attributes: The Copula Approach" Rathindra Sarathy, Krishnamurthy Muralidhar, and Rahul Parsa, *Management Science*, December 2002, Vol 48, No 12, pages 1612-1627.
- 14) "Science Safety Status in Iowa Schools" Jack Gerlovich, Rahul A. Parsa, Bruce Frana, Valerie Drew, and Theresa Stiner, in *The Journal of Iowa Academy of Sciences*, September-December 2002, Vol 109, No 3,4, pages 61-65.
- 15) "The 2003 Status of Science Safety in Tennessee Secondary Schools," Jack Grelovich, Rahul Parsa, and Linda Jordan, *Journal of the Tennessee Academy of Sciences*, October 2004, Vol. 79, No 4, pages 83-90.
- 16) "Prevalence of Voice Disorders in Teachers and the General Population," Nelson Roy, Ray M. Merrill, Susan Thibault, Rahul Parsa, Steven Gray, and Elaine Smith, *Journal of Speech, Language, and Hearing Research*, April 2004, Vol. 47, pages 281-293.
- 17) "National School Science Safety Indexing Project: A Beginning," Jack Gerlovich, Rahul Parsa, Dennis McElroy, and Brian Wazlaw, *The Science Teacher*, September 2005 Vol. 72, No 6, pages 43-45.
- 18) "The Status of the Science Safety Initiatives in Missouri Secondary Schools: A Progress Report," David Yates, Jack Gerlovich, Dennis McElroy, Rahul Parsa, and Russell Thomson, *Missouri Science News*, December 2006, Vol 11, No 4, Pages 20-48.
- 19) "School Science Safety Education and Laboratory Safety Report," Jack A. Gerlovich, Dennis W. McElroy, David L. Yates, Rahul Parsa, and Russell Thomson, *Transactions of the Missouri Academy of Science*, 2007, Vol 41, pages 1-7.
- 20) "Bone Health Screening, Education, and Referral Project in Northwest Iowa: Creating a Model for Community Pharmacies," June F. Johnson, Carrie Koeningsfeld, Laurie Hughell, Rahul A. Parsa, and Susan Bravard, *Journal of the American Pharmacists Association*, 2008, Vol 48, No 3 pages 379-387.
- 21) "The Status of Science Safety in Kentucky Secondary Schools," Jack A. Gerlovich, Dennis McElroy, Rahul Parsa, and Karen Kidwell, *Journal of the Kentucky Academy of Science*, 2008, Vol 69, No 1, pages 19-28.
- 22) "Results of a Nation-Wide Survey Evaluating Psychotropic Medication use in Fragile X Syndrome," Maria G. Valdovinos, Rahul A. Parsa, and Michelle L. Alexander, *Journal of Developmental Disabilities*, 2009, Vol 21, pages 23-37.
- 23) "Marketing's "Oscars": a Citation Analysis of Award-Winning Articles," Raymond Hubbard, Andrew T. Norman, and Rahul A. Parsa, *Marketing Intelligence & Planning*, 2010, Vol 28, No. 5.
- 24) "Copula Regression," Rahul A. Parsa and Stuart A. Klugman, *Variance*, 2011, Vol 05, Issue 01, pages 32-35.

- 25) "Consumer Behavior in Hospitality: Assessment of Restaurant Attributes and Consumer Patronage in India," Dutta, K., H.G. Parsa, Rahul A. Parsa and M. Bujisic (2014). *Journal of Quality Assurance in Hospitality and Tourism*, (15),2.
- 26) "Assessing Faculty Productivity by Research Impact: Introducing New Dp2 Index," Dev, C.S., H.G. Parsa, R. A. Parsa, and M. Bujisic (2015), *Journal of Teaching in Travel and Tourism*.
- 27) "Why Restaurants Fail? Part IV: Rate of Restaurant Failures and Demographic Factors, Results from a Secondary Data Analysis," Parsa, H.G. J.P van der rest, S. Smith, R. A. Parsa and M. Bujisic (2015). *Cornell Hospitality Quarterly*, 56 (1) 80-90. (a SSCI Journal).
- 28) "Characteristic Function for the Truncated Triangular Distribution" Rahul A. Parsa, Jay Kim, and M.R. Srinivasan, Vol. 36, No 2, 2014, *The Journal Of The Indian Academy Of Mathematics*.
- 29) "A Linear Approximation to Copula Regression," Paul G. Ferrara, Rahul A. Parsa, and Bryce A. Weaver, *Variance* 9:2, 2015, pp. 256-269.
- 30) "Real world clinical outcomes and patient characteristics for Canagliflozin treated patients in a specialty diabetes clinic," June Felice Johnson, Rahul Parsa & Robert Bailey, *Current Medical Research and Opinion*, 33:1, 77-84, DOI:10.1080/03007995.2016.1238354  
Link to this article: <http://dx.doi.org/10.1080/03007995.2016.1238354>
- 31) "Real-world Clinical Outcomes Among Patients With Type 2 Diabetes Receiving Canagliflozin at a Specialty Diabetes Clinic: Subgroup Analysis by Baseline HbA1c and Age," June Felice Johnson, Rahul Parsa, and Robert A. Bailey, *Clinical Therapeutics*/Volume 39, Number 6, 2017
- 32) "Extension and Application of Credibility Models in Predicting Claim Frequency," Yuan-tao Xie, Zheng-xiao Li, and Rahul Parsa, *Mathematical Problems in Engineering*, Vol 2018, Article ID 6250686, Hindawi, <https://doi.org/10.1155/2018/6250686>
- 33) "The Limited Role of Formal Statistical Inference in Scientific Inference," Raymond Hubbard, Brian D. Haig & Rahul A. Parsa, *American Statistician*, Volume 73, 2019 - Issue sup1: Statistical Inference in the 21st Century: A World , Pages 91-98  
<https://www.tandfonline.com/doi/full/10.1080/00031305.2018.1464947>
- 34) "Insider trading ahead of cyber breach announcements," Zhaoxin Lin, Travis R.A. Sapp, Jackie Rees Ulmer, and Rahul Parsa, *Journal of Financial Markets*, Vol 50, September 2020.
- 35) "Pricing Cyber Security Insurance," Zhaoxin Lin, Travis R.A. Sapp, Rahul Parsa, Jackie Rees Ulmer, and Chengxin Cao, *Journal of Mathematical Finance*, January, 2022.

## **Presentations**

- 1990 "Correspondence Analysis," presented at the Iowa Statistical Meetings held at Drake University, Des Moines, IA.
- 1992 "Some Aspects of the Maximum Likelihood Estimation of Multistage Cancer Dose-Response Models with Applications," Hussein Al-Khalidi, and Rahul A. Parsa presented at the meetings of the 25th Anniversary of Texas A & M Statistics Department held at College Station, TX.
- 1992 "Scoring Under Order Constraints in Contingency Tables," Rahul A. Parsa, and W.B.Smith, presented at the meetings of the 25th Anniversary of Texas A & M Statistics Department held at College Station, TX.
- 1996 "Maintaining the Relationship Between Confidential and Non-Confidential Attributes in Statistical Databases," with Krishnamurty Muralidhar, Rathindra Sarathy, and Rahul A. Parsa presented at the Proceedings of the 1996 Annual Meeting of the Decision Sciences Institute, Orlando FL.
- 1997 "A Comparison of Male and Female Attitudes in India and the United States About issues of Common Morality," R.Dean Wright and Rahul A. Parsa presented at the Midwest Sociological Meetings held at Des Moines, IA.
- 1997 "A General Method for Linear Data Perturbation," Rahul A. Parsa Krishnamurty Muralidhar and Rathindra Sarathy presented at the Joint Statistical Meetings held at Anaheim, CA.
- 1997 Presented a seminar on "Correspondence Analysis" at The University of Iowa Biostatistics Department.
- 1998 "Conditions for Maximum Security in Linear Data Perturbation," Rahul A. Parsa, Krishnamurty Muralidhar and Rathindra Sarathy presented at the Joint Statistical Meetings held at Dallas, TX.
- 1998 "Student Ethnocentrism and Attitudes Toward International Trade Agreements," Michael R. Luthy and Rahul A. Parsa presented at the Marketing Management Association held Chicago, IL.
- 1998 Presented a seminar on "Data Perturbation/Confidentiality" at The University of Iowa Biostatistics Department.
- 1999 Participated in a three-part series course on using public health data called "An Introduction to the Concept of Quantitative Data" with Dr. Jude Igbokwe, Dr. Robert Woolson, Dr. James Torner, Dr. Trudy Burns and others. The Iowa Department of Public Health sponsored it.
- 1999 "Optimal Bias and Security Conditions for Random Data Perturbation," Krishnamurty Muralidhar, Rahul A. Parsa, and Rathindra Sarathy, presented at the Proceedings of 1999 Annual Meeting of the Decision Sciences Institute, New Orleans, LA.



- 2000 Participated in a three-part series course on using public health data called “An Introduction to the Concept of Quantitative Data” with Dr. Jude Igbokwe, Dr. Robert Woolson, Dr. James Torner, Dr. Trudy Burns, Dr. Jane Pendergast and others. The Iowa Department of Public Health sponsored it.
- 2000 “Random Data Perturbation for Non-normal Data,” Krishnamurty Muralidhar, Rahul A. Parsa, and Rathindra Sarathy, presented at the Proceedings of the 2000 Annual Meeting of the Decision Sciences Institute, Orlando, FL.
- 2001 “Issues in Perturbing Non-Normal, Confidential Attributes,” Rathindra Sarathy, Krishnamurty Muralidhar, and Rahul Parsa, presented at the American Conference on Information Systems, Boston, MA.
- 2002 “Ketorolac Reduces Phentynyl Requirements in the Pediatric Post-Operative Cardiovascular Patients” Bala Napa, Richard Chemelli, and Rahul Parsa, presented at the Pediatric Critical Care Colloquium, San Diego, CA.
- 2003 “An Empirical Examination of Medical Waste Disposal: The Case of Iowa” C. Kenneth Meyer, Rahul A. Parsa, and Jeff Geerts, accepted for presentation at the 10<sup>th</sup> Annual Conference ASBBS.
- 2005 “Estimating of Missing Values Using Multivariate Normal Copula,” with Alain Desgagne, presented at the Joint Statistical Meetings held at Minneapolis, MN.
- 2009 “Copula Regression,” with Stuart A. Klugman, presented at the Actuarial Research Conference held at Madison, Wisconsin.
- 2009 “Truncated Triangular Distribution and its Properties,” with Jay J. Kim, and Myron Katzoff presented at the Joint Statistical Meetings held at Washington, D.C.
- 2009 “Application of the Truncated Distributions and Copulas in Masking Data,” with Jay J. Kim and Myron Katzoff presented at the Joint Statistical Meetings held at Washington, D.C.
- 2010 “Copula Regression” presented at the CAS regional conference held at Des Moines, IA.
- 2011 “Copula Regression,” with Stuart Klugman presented at the CAS Spring meetings held at Palm Springs, FL, May 15-18, 2011.
- 2012 “Transformed Regression vs. Copula Regression,” with Paul Ferrara presented at the Actuarial Research Conference held at Winnipeg, Canada, August 1-4, 2012.
- 2012 “Change in Consumer Patronage and Willingness to Pay at Different Levels of Service Attributes: A Study from India” with H.G. Parsa, and Kirti Dutta presented at the International Conference of Tourism Sciences, Ulsan, Korea.
- 2012 “Transformations in Regressions,” presented at the CAS regional conference held at Des Moines, Iowa.

- 2012 “Relationship between Restaurant Attributes and the Consumer Patronage: A Study from India,” Dutta, K., H.G. Parsa and R. A. Parsa (2012). Tourism Sciences Society of Korea (TOSOK) Conference, Ulsan, Korea. July 4-7.
- 2013 “A Transformed Linear approximation to Copula Regression, Research update,” with Paul Ferrara Presented at the Actuarial Research Conference held at Philadelphia, July 31 – August 3, 2013.
- 2013 “Relationship between Restaurant Failures and Demographic Factors: Results from a Secondary Data Analysis,” Parsa, H.G., J.P. van der Rest, S. Smith, R.A. Parsa and M. Bujisic. *EuroCHRIE – Annual Conference*, Heidelberg, Germany. October 16-19, 2013.
- 2013 “Relationship between Restaurant Failures and Demographic Factors: Results from a Secondary Data Analysis,” Smith, S. H.G. Parsa, R.A. Parsa, T. Webb and M. Bujisic. *Western CHRIE Conference*, Metro State University, Denver, CO, Feb 1-2, 2013.
- 2013 “Relationship between Restaurant Failures and Demographic Factors: Results from a Secondary Data Analysis Parsa,” H.G., J.P. van der Rest, S. Smith, R.A. Parsa and M. Bujisic. *EuroCHRIE – Annual Conference, Heidelberg*, Germany. October 16-19.
- 2013 “Relationship between Restaurant Failures and Demographic Factors: Results from a Secondary Data Analysis,” Smith, S. H.G. Parsa, R.A. Parsa, T. Webb and M. Bujisic. *Western Federation CHRIE Conference, Metro State University*, Denver, CO, Feb 1-2, 2013.
- 2014 “CTE Based Risk Measures Using Copula Regression,” Presented at the *8th Samos Conference in Actuarial Science and Finance*
- 2014 “Revenue Management and Hedonic Pricing Models in Restaurants: Understanding the Effects of Operational Attributes,” Parsa, H.G., C. Whitney, S. Smith and R. A. Parsa. *International CHRIE Conference*, San Diego, CA. July 2014
- 2017 “Pricing Cyber Security Insurance using Copulas” Jacqueline Rees-Ulmer, Rahul A. Parsa, and Ramona Lee, *ASTIN AFIR/ERM Colloquium*, Panama City, Panama, August, 2017.
- 2017 “The Limited Role of Formal Statistical Inference in Scientific Inference” Raymmond Hubbard, Brian D. Haig, and Rahul A. Parsa, presented *ASA Symposium on Statistical Inference*, held at Bethesda, Maryland, October 2017.
- 2023 “Cyber Security Insurance Modeling for Small and Medium Enterprises,” Rahul Amba Parsa, Daniel Palardy, and Balaji Janamanchi, Presented at Southwest Decision Sciences Institute, in Houston, 2023

## Working Papers

1. Effect of climate change on insurance claims.

## Service

Iowa State University:

President, ISU Faculty Senate

As president of the faculty senate, I closely work with Senate Executive Board, the Provost, and the president. I run the Senate meetings and participate in numerous campus activities.