

*Curriculum Vitae*  
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**JOHANNES LEDOLTER**

**Present Position**

Robert Thomas Holmes Professor of Business, University of Iowa  
Professor of Management Sciences                      Professor of Statistics and Actuarial Science  
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**Education**

Ph.D., Statistics    University of Wisconsin-Madison, 1975  
M.S., Statistics    University of Wisconsin-Madison, 1972  
M.S., Social and Economic Statistics                      University of Vienna, 1974

**Honors**

Elected Fellow, American Society for Quality, 2010  
Elected Fellow, American Statistical Association, 1991  
Elected Member, International Statistical Institute, 1991  
Fulbright Scholar, 1971-1974

**Professional Experience**

Professor of Management Sciences and Professor of Statistics/Actuarial Science,  
University of Iowa    1987 –  
Associate Investigator, Center for the Prevention and Treatment of Visual Loss,  
Iowa City VA Health Care System    2011 –  
Professor of Statistics (tenured), Vienna University of Economics and Business,  
Austria; emeritus since 9/2015    2002–2015  
Professor (o. Univ. Prof.) and Chair, Department of Statistics, Vienna University  
of Economics and Business, Austria    1997–2002  
Visiting Professor of Statistics, Stanford University (summer term)    2014  
Visiting Professor of Econometrics and Statistics, University of Chicago Booth  
School of Business (winter and spring terms)    2011  
Visiting Professor of Statistics, Yale University    1994–1995  
Associate Professor of Statistics/Actuarial Science and Management Sciences,  
University of Iowa    1982–1987  
Visiting Associate Professor, Princeton University    1985–1986  
Visiting Professor, Institute for Advanced Studies, Vienna, Austria    1985

Assistant Professor of Statistics/Actuarial Science and Management Sciences, University of Iowa	1978–1982
Research Associate, University of Wisconsin, Madison	1977–1978
Research Scholar, International Institute for Applied Systems Analysis (IIASA)	1976–1977
Consultant, Austrian Institute of Economic Research, Vienna, Austria	1976–1977

### **Grants and Fellowships**

Austrian National Bank, 1976-1978  
 NIH Junior Faculty Seed Grant, 1979  
 US Environmental Protection Agency, 1980-1981  
 Old Gold Fellowships, University of Iowa  
 US Department of Navy, 1985-1988  
 Ford Motor Company, 1988-1989  
 US Department of Health & Human Services, 1988-1990  
 Midwest Transportation Center, 1990-1991  
 US National Science Foundation, 1990-1991  
 Austrian National Bank, July 1999 - July 2001  
 Austrian National Science Foundation, 2000-2002  
 US Department of Health & Human Services, 2005-2008  
 US Department of Veterans Affairs, 5/2011-8/2011, 7/2012-12/2012, 7/2013-5/2014, 7/2014-5/2015

### **Dissertation Supervision**

Sushila Umashankar, 1980 (University of Arizona)  
 Mark L. Power, 1981 (Iowa State University)  
 Douglas R. Kahl, 1981 (University of Akron)  
 Mookda Manmin, 1983 (University of Thammasat, Thailand)  
 Richard Anderson-Sprecher, 1990 (University of Wyoming)  
 Chang-Soo Lee, 1991 (Soong Sil University, Korea)  
 Michael T. Suelzer, 1991 (Technical Director, Baxter Healthcare Corp)  
 Carmen Arteaga, 1993 (Winona State University)  
 John Tsimikas, 1994 (University of the Aegean, Greece)  
 Patricia Neri, 1995 (United Parcel Service)  
 Alessandra Alfieri, 2001 (United Nations)

### **Books**

- [B1] Ledolter, J., Schebeck, F. and Thury, G.: Forecasting Using Leading Indicators: Some Empirical Evidence for Austria, Vandenhoeck and Ruprecht, Göttingen, 1981 (110 pages).
- [B2] Abraham, B. and Ledolter, J.: Statistical Methods for Forecasting, Wiley & Sons, 1983. Second edition, 2005 (445 pages).
- [B3] Hogg, R. V. and Ledolter, J.: Engineering Statistics, Macmillan, 1987 (420 pages).  
 Hogg, R. V. and Ledolter, J.: Solutions Manual for Engineering Statistics, Macmillan,

1987 (52 pages).

- [B4] Hogg, R. V. and Ledolter, J.: Applied Statistics for Engineers and Physical Scientists, Macmillan, 1992 (472 pages).  
Hogg, R. V. and Ledolter, J.: Solutions Manual Applied Statistics for Engineers and Physical Scientists, Macmillan, 1992 (99 pages).
- [B5] Ledolter, J. and Burrill, C. W.: Statistical Quality Control: Strategies and Tools for Continual Improvement, Wiley & Sons, 1999 (526 pages)  
Ledolter, J. and Burrill, C. W.: Instructor's Manual for Statistical Quality Control: Strategies and Tools for Continual Improvement, Wiley & Sons, 1999 (99 pages).
- [B6] Burrill, C. W. and Ledolter, J.: Achieving Quality Through Continual Improvement, Wiley & Sons, 1999 (630 pages).  
Burrill, C. W. and Ledolter, J.: Instructor's Manual for Achieving Quality Through Continual Improvement, Wiley & Sons, 1999 (187 pages).
- [B7] Abraham, B. and Ledolter, J.: Introduction to Regression Modeling, Duxbury Press, 2006 (433 pages).  
Abraham, B. and Ledolter, J.: Student Solutions Manual for Introduction to Regression Modeling, Duxbury Press, 2006 (120 pages).
- [B8] Ledolter, J. and Swersey, A.J.: Testing 1 – 2 – 3: Experimental Design with Applications in Marketing and Service Operations, Stanford University Press, 2007 (300 pages).
- [B9] Ledolter, J. and Hogg, R. V.: Applied Statistics for Engineers and Physical Scientists, Third Edition, Prentice Hall, 2010 (589 pages).  
Ledolter, J.: Student's Solutions Manual for Applied Statistics for Engineers and Physical Scientists, Third Edition, Prentice Hall, 2010 (120 pages).
- [B10] Ledolter, J.: Data Mining and Business Analytics with R. Wiley & Sons, June 2013 (351 pages). Chinese translation, 2015.

### **Journal Articles and Book Chapters**

- [J1] Ledolter, J., Thury, G., and Schebeck, F.: "Box-Jenkins Methoden: Alternative Verfahren zur Prognose Ökonomischer Zeitreihen" (in German), Empirica (1977), 25-55.
- [J2] Ledolter, J.: "Adaptivity and Stability of Time Series Models," Empirica (1977), 179-195.
- [J3] Ledolter, J.: "A Multivariate Time Series Approach to Modelling Macroeconomic Sequences," Empirical Economics, 2(1977), 225-243.
- [J4] Ledolter, J.: "A General Class of Stochastic Models for Hydrological Sequences," Journal of Hydrology, 36(1978), 309-325.

- [J5] Ledolter, J.: "The Analysis of Multivariate Time Series with a View to Applications in Hydrology," Journal of Hydrology, 36(1978), 327-352.
- [J6] Ledolter, J. and Box, G.E.P.: "Conditions for the Optimality of Exponential Smoothing Forecast Procedures," Metrika, 25(1978), 77-93.
- [J7] Ledolter, J.: "Inference Robustness of ARIMA Models under Non-normality: Special Application to Stock Price Data," Metrika, 26(1979), 43-56.
- [J8] Abraham, B. and Ledolter, J.: "A Note on the Multiple Indicator-Multiple Cause Model with Several Latent Variables," Metrika, 26(1979), 215-217.
- [J9] Ledolter, J.: "A Note on the Estimation of Polynomial Distributed Lags," Behavioral Science, 24(1979), 221-222.
- [J10] Ledolter, J.: "A Recursive Approach to Parameter Estimation in Regression and Time Series Models," Communications in Statistics, A8(1979), 1227-1245.
- [J11] Ledolter, J. and Tiao, G. C.: "Statistical Models for Ambient Air Pollutants, with Special Reference to the Los Angeles Catalyst Study (LACS) Data," Environmental Science & Technology, 13(1979), 1233-1240.
- [J12] Ledolter, J. and Tiao, G. C.: "A Statistical Analysis of New Jersey CO Data," Quality Assurance in Air Pollution Measurement, (Air Pollution Control Association, publisher), 1979, 282-291.
- [J13] Ledolter, J.: "Recursive Estimation and Adaptive Forecasting in ARIMA Models with Time Varying Coefficients," Applied Time Series II, (D.F. Findley, editor), Academic Press, 1981, 449-472.
- [J14] Ledolter, J. and Abraham, B.: "Parsimony and its Importance in Time Series Forecasting," Technometrics, 23(1981), 411-414.
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- [J17] Abraham, B. and Ledolter, J.: "Forecast Efficiency of Systematically Sampled Time Series," Communications in Statistics, A11(1982), 2857-2868.
- [J18] Umashankar, S. and Ledolter, J.: "Forecasting with Diagonal Multiple Time Series Models: An Extension of Univariate Models," J. of Marketing Research, 20(1983), 58-63.

- [J19] Kahl, D. R. and Ledolter, J.: "A Recursive Kalman Filter Forecasting Approach," Management Science, 29(1983), 1325-1333.
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- [J21] Ledolter, J. and Abraham, B.: "Some Comments on the Initialization of Exponential Smoothing," J. of Forecasting, 3(1984), 79-84.
- [J22] Ledolter, J. and Kahl, D.R.: "Adaptive Filtering: An Empirical Evaluation," J. of the Operational Research Society, 35(1984), 337-345.
- [J23] Ledolter, J. and Power, M.L.: "A Study of ERISA's Impact on Private Retirement Plan Growth," Journal of Risk and Insurance, 51(1984), 225-243. (Feature Article Award for 1984)
- [J24] Abraham, B. and Ledolter, J.: "A Note on Inverse Autocorrelations," Biometrika, 71(1984), 609-614.
- [J25] Ledolter, J.: "Prediction and Forecasting," Encyclopedia of Statistical Sciences, Vol. 7, Wiley & Sons, 1986, 148-158.
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- [J113] Dexter, F., Ledolter, J. and Hindman, B.: “Quantifying the Diversity and Similarity of Surgical Procedures among Hospitals and Anesthesia Providers.” Anesthesia & Analgesia, Vol. 122 (2016), 251-263.
- [J114] Ledolter, J. and Dexter, F.: “Reciprocity of Connections in Weighted and Unweighted Networks.” Communications in Statistics: Theory and Methods, 2016 (forthcoming).
- [J115] Goins, K.M., Kitzmann, A.S., Greiner, M.A., Kwon, Y.H., Alward, W.L., Ledolter, J., and Wagoner, M.D.: “Boston Type 1 Keratoprosthesis: Visual Outcomes, Device Retention, and Complications.” Cornea: The Journal of Cornea and External Diseases, 2016 (forthcoming).
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Neuropathy and Its Spatial Relationship to Retinal Ganglion Cell Layer Thickness.”  
IOVS: Investigative Ophthalmology and Visual Science, 2016 (forthcoming).

### **Book Reviews and Invited Comments**

- [R1] Ledolter, J.: Book review of Anderson, O.D.: Time Series Analysis and Forecasting. The Box-Jenkins Approach. Metrika, 24(1977), 56
- [R2] Ledolter, J.: Book review of Kendall, M. G.: Time Series. Metrika, 25(1978), 124-125
- [R3] Ledolter, J.: Book review of Klein, L. R. and Young, R. M.: An Introduction to Econometric Forecasting and Forecasting Models. Journal of the American Statistical Association, 76(1981), 749-750
- [R4] Ledolter, J.: Book review of Bowerman, B. L. and O'Connell, R. T.: Time Series and Forecasting: An Applied Approach. Journal of the American Statistical Association, 76(1981), 1017-1018
- [R5] Ledolter, J.: Comments on "Model Checking in Time Series Analysis," by Paul Newbold. In Proceedings of ASA-CENSUS-NBER Conference on Applied Time Series Analysis of Economic Data, (A. Zellner, ed.), 1983, 144-149
- [R6] Ledolter, J.: Book review of Gottman, J. M.: Time Series Analysis: A Comprehensive Introduction for Social Scientists. Contemporary Psychology, 28(1983), 157-158
- [R7] Ledolter, J.: Book review of Pankratz, A.: Forecasting with Univariate Box-Jenkins Models: Concepts and Cases. American Scientist, 1984
- [R8] Ledolter, J.: Comments on "A Unified View of Statistical Forecast Procedures," by A.C. Harvey. Journal of Forecasting, 3(1984), 278-281
- [R9] Ledolter, J.: Comments on "Leave-k-out Diagnostics for Time Series," by Bruce, A. and Martin, D. M., Journal of Royal Statistical Society, Series B, (1989), 413
- [R10] Hackl, P. and Ledolter, J.: Comments on "Teaching Experimental Design," Model-Oriented Data Analysis 5 (Atkinson, A.C., Pronzato L., Wynn, H.P., editors) Heidelberg: Physica Verlag, 1998, 283-284
- [R11] Ledolter, J.: Comment on "Assessing the Impact of Speed Limit Increases on Fatal Interstate Crashes," by S. Balkin and J.K. Ord. Journal of Transportation and Statistics, 4(2001), 13-16.
- [R12] Ledolter, J.: Book review of Ramsey, F. L. and Schafer, D. W.: The Statistical Sleuth: A Course in Methods of Data Analysis (Second edition). The American Statistician, 57(2003), 145-146
- [R13] Ledolter, J.: Comment on "Rethinking the Business Statistics Course by David S. Moore and The Statistical Thinking Approach to Learning and Using Statistics in

Business by Roger W. Hoerl and Ronald D. Snee.” Six Sigma Forum Magazine (American Society for Quality), Vol. 4 (2005), 44-46.

- [R14] Rautiainen, R., Ledolter, J., Ohsfeld, R., Donham, K., and Zwerling, C.: “Risk Factors for Serious Injury in Agriculture.” Proceedings of the 2007 Summer Conference of the National Institute for Farm Safety, Penticton, British Columbia, June 24-28, 2007.
- [R15] Ledolter, J.: Comment on the paper “An Overview of the Shainin System™ for Quality Improvement,” by Stefan H. Steiner, R. Jock MacKay, and John S. Ramberg. Quality Engineering, 20(2008), 38-39.

### **Work Submitted / Work in Progress**

- [P1] Swersey, A.J., Colberg, J., Evans, R., Kattan, M., Ledolter, J., and Parker, R.: “A Novel Approach for Distinguishing Minimal from Significant Prostate Cancer.” Submitted to The Canadian Journal of Urology, October 2015.
- [P2] Ledolter, J. and Kardon, R.H.: “Does testing more frequently shorten the time to detect disease progression?” Submitted to Statistics in Medicine, September 2015.
- [P3] Dexter, F., Epstein, R.H., Dutton, R.P., Kordylewski, H., Ledolter, J., Rosenberg, H., and Hindman, B.J.: “Diversity and similarity of anesthesia procedures in the United States during and among regular work hours, evenings, and weekends.” Submitted to Anesthesia & Analgesia, February 2016.
- [P4] Dexter, F., Ledolter, J., Epstein, R.H., and Hindman, B.J.: “Operating Room Anesthesia Subspecialization is Not Associated with Significantly Greater Quality of Supervision of Anesthesia Residents and Nurse Anesthetists.” Submitted to Anesthesia & Analgesia, March 2016.
- [P5] Dexter, F., Ledolter, J., and Hindman, B.J.: “Evaluation of Nurse Anesthetists’ Clinical Performance Using a Work Habits Scale Needs to Control for the Rating Anesthesiologists.” Submitted to Anesthesia & Analgesia, March 2016.
- [P6] Berman, G., Muttuvelu, D., Berman, D., Larsen, J.I., Ledolter, J., and Kardon, R.H.: “The Effect of Seasonal Daylight Hours and Depression on the Pupil Light Reflex.” Work in Progress, March 2016.
- [P7] Lorenzo, S.A., Kardon, R.H., Ledolter, J., Poolman, P., Schumacher, A.M., Potash, J.B., Full, J.M., Rice, O., Ketcham, A., Starkey, C., and Fiedorowicz, J.G.: “Irradiance measurement abnormalities in depressive disorders.” Submitted to Psychiatry Research, May 2016.

### **Professional Service**

Finalist (one of four) for Rektor (University President), Vienna University of Economics and Business, Vienna, Austria, 2014

Associate Editor, Journal of Business and Economic Statistics, 2012 - 2015  
 Associate Editor, Quality Engineering, 2005 – 2013  
 Associate Editor, Statistical Modelling: An International Journal, 2000 - present  
 Associate Editor, Journal of the Austrian Statistical Society, 1996 - present  
 Associate Editor, Journal of Forecasting, 1989 - present  
 Departmental Editor, Journal of Forecasting, 1985-1988  
 Associate Editor, Journal of the American Statistical Association, 1989-1991  
 ASQ Shewhart Medal Committee, 2008 - 2015  
 Review team (World Bank Trust Fund for Statistical Capacity Building; ISI 2011 World Statistics Congress, Dublin)  
 Local Organizer/Scientific Steering Committee, NBER-NSF Seminar on Time Series Analysis, Vienna University of Economics and Business, Austria, September 2015  
 Local Organizer/Scientific Steering Committee, NBER-NSF Seminar on Time Series Analysis, University of Iowa, September 2007  
 Program Committee, Annual Conference on "Making Statistics More Effective in Schools of Business," 1989 -  
 Co-organizer of the 1998 Annual Conference on "Making Statistics More Effective in Schools of Business," Iowa City, June 1998  
 Steering Committee for Applications of Statistics, EURANDOM (Institute for Statistics, Probability, Operations Research and their Applications in Europe), Eindhoven, Netherlands, 1998.  
 Local Organizer (with T. Moore of Grinnell College), "Exploring Data Workshop for Elementary Classroom Teachers K-6," Grinnell College, June 1994.  
 Overall Program Chair, 1992 Joint Statistical Meetings, Boston  
 Program Chair, Business and Economic Statistics Section, American Statistical Association, Washington D.C., 1989  
 Short course (2-day) on "Forecasting and Applied Time Series Analysis," Joint Statistical Meetings, Philadelphia, 1984  
 Iowa Chapter President, American Statistical Association, 1983. Secretary, 1981, 1982  
 Executive Committee, Program in Quality Management and Productivity, University of Iowa, 1987 - 1997

### **Colloquia Presentations**

University of Wisconsin, Florida State University, American University, University of Iowa, University of Maryland, University of Chicago, University of Vienna, Technical University Vienna, Austrian Institute of Economic Research, International Institute for Applied Systems Analysis, Institute for Advanced Studies Vienna, Vanderbilt University, University of Waterloo, Grinnell College, University of Pennsylvania, Princeton University, Temple University, Southern Methodist University, Texas A&M University, New York University, Vienna University of Economics and Business Administration, Northern Illinois University, Winona State University, Case Western Reserve University, University of Hong Kong, Academia Sinica-Beijing, Yale University, Columbia University, Central European University in Budapest, University of Sao Paulo, ASA Milwaukee Chapter, University of Linz (Austria), Northern Iowa University, University of Peking (China), National Research University-Higher School of Economics (Moscow, Russia).

### **Conference Presentations**

World Congress of the Econometric Society, Toronto, 1975  
 European Meeting of the Econometric Society, Helsinki, 1976  
 International Meeting of the Institute of Management Sciences, Honolulu, 1979  
 Annual Meeting of American Association for the Advancement of Science, Houston, 1979  
 Applied Time Series Conference, Tulsa, 1980  
 IMS Regional Meeting, Iowa City, 1980  
 ASA/CENSUS/NBER Conference on Applied Time Series, Washington D.C., 1981  
 Environmetrics 81, Washington D.C., 1981  
 International Symposium on Forecasting, Quebec City, 1981  
 Joint Statistical Meetings, Houston, 1981  
 Annual Meeting of the American Institute of Decision Sciences, San Francisco, 1982  
 NBER/NSF Seminar on Time Series Analysis, Chicago, 1983  
 International Symposium on Forecasting, London, 1984  
 Joint Statistical Meetings, Philadelphia, 1984  
 Conf. on Statistical and Economic Identification of Structural Change, Lodz, Poland, 1985  
 ORSA/TIMS Meeting, Miami, 1986  
 Conference on Economic Growth and Structural Change, IIASA, Austria, 1986  
 Conference on "Making Statistics More Effective in Business Schools," NYU, 1987  
 Joint Statistical Meetings, San Francisco, 1987  
 Joint Statistical Meetings, New Orleans, 1988  
 Joint Statistical Meetings, Washington D.C., 1989  
 Conference on "Robustness and Diagnostics in Statistics," IMS, Minneapolis, 1989  
 Joint Statistical Meetings, Atlanta, 1991  
 Joint Statistical Meetings, Boston, 1992  
 NBER/NSF Seminar on Time Series Analysis, Vienna, 1993  
 Joint Iowa MAA and ASA Meeting, Grinnell College, 1994  
 International Symposium on Forecasting, Istanbul, 1996  
 Austrian Statistical Society, May 1998  
 International Workshop on Statistical Modelling, Bilbao, Spain, 2000  
 Workshop on Model-Oriented Design and Analysis (Moda6), Austria, 2001  
 Telecoms Market Forecasting Conference, Brussels (Belgium), 2001  
 Conference on Professional Science Master's Programs, University of Northern Iowa, 2004  
 Joint Statistical Meetings, Minneapolis, 2005  
 ENBIS 2010, Antwerp, 2010  
 ASQ Fall Technical Conference, St. Louis, 2012  
 Frontiers of Statistics and Forecasting in Celebration of the 80<sup>th</sup> Birthday of George C. Tiao, Taipei, 2013  
 Milwaukee Section of the American Statistical Association: "Data mining and business analytics with big and small data – it is not always size that matters". April 2014

### **Teaching and Consulting**

Academic teaching at the University of Iowa (Department of Statistics and Actuarial Science; Tippie College of Business); Vienna University of Business (WU Wien); Institute for Advanced Studies (Vienna); Princeton University; Yale University; University of Chicago Booth School of Business, Stanford University.



Courses on: Regression Analysis, Analysis and Design of Experiments I, Analysis and Design of Experiments II, Applied Time Series Analysis I, Applied Time Series Analysis II, Recent Topics in Time Series Analysis, Forecasting, Probability and Statistics, Biostatistics, Probability and Statistics for the Engineering and Physical Sciences, Mathematical Statistics, Statistics for Decision Making I, Statistics for Decision Making II, Application of Multivariate Statistical Techniques, Statistical Methods for Quality and Productivity Improvement, Introduction to Statistics for Undergraduate Business Students I and II, Applied Statistical Methods for Students in Forestry and Environmental Studies, Statistics within the Executive MBA Program, Business Analytics for MBA, Data Science for MBA, Design of Experiments for MBA, Introductory and Advanced Courses in Statistics (in German).

Numerous short courses for industry on Forecasting, Statistical Methods for Quality and Productivity Improvement, Statistical Design of Experiments, and Business Analytics and Decision Making with Large Data. Courses taught in US and Europe.

Extended consulting arrangements with US and European companies such as Ford Motor Company, Procter and Gamble, Northstar Steel, HON Industries, Meredith Publishing, Iowa Pork Producers, State of California, Ticona/Celanese, American Express, Bemis Corporation, Lenzing Fiber (Austria), Telekom Austria.

### **Teaching Awards**

Great Instructor of the Year Award. Executive MBA Program, Henry B. Tippie College of Business, University of Iowa, 1999  
Dean's Teaching Award, Henry B. Tippie College of Business, University of Iowa, 2005  
College of Business Nomination for the University of Iowa President/Provost Teaching Award, 2005