

RESUME
REFIK SOYER

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BORN: October 15, 1956

CITIZENSHIP STATUS: Resident Alien, 1985

EDUCATION

D. Sc. Operations Research, The George Washington University (USA), 1985

M. Sc. Operational Research, Sussex University (ENGLAND), 1979

B. A. Economics, Bogazici University (TURKEY), 1978

AREAS OF EXPERTISE

Stochastic Modeling, Time Series Analysis, Financial Econometrics, Reliability Analysis,
Bayesian Statistics and Decision Analysis.

EXPERIENCE

CHAIR, Department of Decision Sciences, The George Washington University, September 2011-
June 2015.

DIRECTOR, The Institute for Integrating Statistics in Decision Sciences, School of Business,
The George Washington University, January 2007 – Present.

DISTINGUISHED SCHOLAR, Mitch Blaser Distinguished Scholar in Business Analytics, The
George Washington University, January 1, 2013 – Present.

PROFESSOR, Department of Decision Sciences (joint appointment with Statistics Department),
The George Washington University, January 2006 – Present.

PROFESSOR, Department of Management Science,
The George Washington University, Sept. 1996 – December 2005.

ASSOCIATE PROFESSOR, Department of Management Science,
The George Washington University, Sept. 1990 - Sept. 1996.

PROGRAM DIRECTOR, Management Decision Making Program,
The George Washington University, September 1997 - July 1998.

PROGRAM DIRECTOR, Decision Systems Program,
The George Washington University, July 1990 - July 1994.

ASSISTANT PROFESSOR, Department of Management Science,
The George Washington University, Sept. 1987 - Sept. 1990.

RESEARCH ASSOCIATE, Institute for Reliability and Risk Analysis,
The George Washington University, May 1985 - present.

ASSISTANT PROFESSORIAL LECTURER, Department of Operations
Research, The George Washington University, Sept. 1985 - June 1987.

HONORS

Fellow, American Statistical Association (April 2006)
Fellow, Turkish Statistical Association (April 2003)
Elected Member, International Statistical Institute (1991)
Elected Member, Omega Rho (Operations Research Honor Society)
Elected Member, Sigma Xi (Scientists Honor Society)
Elected Member, Tau Beta Pi (Engineering Honor Society)
Dean Scholar 2006-2007, School of Business, George Washington University
Dean Scholar 2007-2008, School of Business, George Washington University
Dean Scholar 2007-2009, School of Business, George Washington University
Visiting Scholar, ISDS, Duke University, September – December 1994.
Visiting Scholar, Duke University Medical Center, January - March 2002
Visiting Scholar, IE Department, Bogazici University, Istanbul, April 2002.
Visiting Scholar, Statistics Department, Trinity College, Dublin, March 2011.
Visiting Professor, IE Department, Koc University, Istanbul, April-June, 2011.
Visiting Professor, Dept. of Decision Sciences, Bocconi University, Milano, February 2016.
Research Associate, Info-Metrics Institute, American University, Feb. 2013 – present.

PROFESSIONAL SOCIETIES

Member, American Statistical Association (ASA)
Member, International Statistical Institute (ISI)
Member, Institute of Mathematical Statistics (IMS)
Member, International Society for Bayesian Analysis (ISBA)
Member, Institute for Operations Research and the Management Sciences (INFORMS)

EDITORIAL ACTIVITIES

Guest Editor: Special Issue of Reliability Engineering and System Safety Decision Analysis on
“Games and Decisions in Reliability and Risk”, 2016.

Guest Editor: Special Issue of Decision Analysis on “Games and Decisions in Reliability and
Risk Analysis”, 2012, Volume 9, No.2.

Guest Editor: Special Issue of the Applied Stochastic Models in Business and Industry on
“Games and Decisions in Reliability and Risk Analysis”, 2011, Volume 27, No. 2.

Associate Editor: Journal of the American Statistical Association, Theory and Methods,
January 1992 - January 1994.

Associate Editor: Applied Stochastic Models in Business and Industry, January 2008 – Present.

Associate Editor: ISTATISTIK, Journal of the Turkish Statistical Association, January 2012 - Present.

Associate Editor: Journal of Statistical Research, January 2004 - Present.

Associate Editor: Hacettepe Journal of Mathematics and Statistics, April 2008 - Present.

Section Editor: Encyclopedia of Quality and Reliability, Wiley, October 2005 - Present.

Topical Editor: Risk Analysis, Encyclopedia of Operations Research and Management Science, Wiley, July 2012 - Present.

PROFESSIONAL ACTIVITIES

Founding Chair: ISBA Industrial Statistics Section, July 2012 – December 31, 2014.

Vice-President: The International Association for Statistical Computing, September 1, 2001 - August 31, 2003.

Chair, Program Committee: The Fourth Symposium on Games and Decisions in Reliability and Risk, Istanbul, Turkey, June 17 - 19, 2015.

Chair: 2014 ISBA-George Box Research Workshop on Frontiers of Statistics, The George Washington University, Washington, D.C. May 21 - 22, 2014.

Chair: The First Symposium on Games and Decisions in Reliability and Risk, The George Washington University, Washington, D.C. May 27 - 28, 2009.

Chair: The 40th Meeting of the NBER - NSF Seminar on Bayesian Inference in Econometrics and Statistics, The George Washington University, Washington, D.C. May 4 - 5, 1990.

Co-chair, Organizing Committee: The Fourth Symposium on Games and Decisions in Reliability and Risk, Istanbul, Turkey, June 17 - 19, 2015.

Co-chair: The Second Symposium on Games and Decisions in Reliability and Risk, Lake Maggiore, Italy, May 19-21, 2011.

Co-chair: Yeditepe International Research Conference on Bayesian Learning, Istanbul, Turkey, June 15-17, 2011.

Co-Chair: Program Committee of the Fifth World Meeting of the International Society for Bayesian Analysis (ISBA), Istanbul, Turkey, August, 16-18, 1997.

Co-Chair: Washington Statistical Society Physical and Engineering Sciences Section, June 1987 - June 1990, July 1992 - June 1994.

Chair: Bayesian Statistics Cluster, EURO/INFORMS Joint International Meeting, Istanbul, Turkey, July 6-10, 2003.

Member: Finance Committee of International Society for Bayesian Analysis (ISBA), January, 2015- Present.

Member: Scientific Program Committee of the Ninth Workshop on Bayesian Inference in Stochastic Processes, Istanbul, Turkey, June, 14-17, 2015.

Member: Program Committee of the Third Symposium on Games and Decisions in Reliability and Risk, Kinsale, Cork, Ireland, July 8-10, 2013.

Member: Scientific Program Committee of the Eighth Workshop on Bayesian Inference in Stochastic Processes, Milano, Italy, June, 6-8, 2013.

Member: Scientific Program Committee of the Sixth Workshop on Bayesian Inference in Stochastic Processes, Bressanone, Italy, June, 18-20, 2009.

Member: Scientific Program Committee of the Third Workshop on Bayesian Inference in Stochastic Processes, La Manga, Spain, May, 15-18, 2003.

Member: Publications Committee, The International Association for Statistical Computing Council, September 1, 2001 - August 31, 2003.

Member: The International Association for Statistical Computing Council, May 1, 1997 - September 1, 2001.

Member: Organizing Committee of International Conference in Reliability and Survival Analysis, De Kalb, Illinois, USA, May, 21-24, 1998.

Member: Organizing Committee of The Fifth World Meeting of the International Society for Bayesian Analysis (ISBA), Istanbul, Turkey, August, 16-18, 1997.

Member: Nominating Committee of International Society for Bayesian Analysis (ISBA), January, 1997- December 1997.

Member: Program Committee of North America Meeting of the International Society for Bayesian Analysis (ISBA), Chicago, August 2-3, 1996.

Member: Program Committee of The Third World Meeting of the International Society for Bayesian Analysis (ISBA), Oxaca, Mexico, September 29-30, 1995.

Member: Research Subcommittee of the American Statistical Association Committee on Quality and Productivity, July 1985 - June 1988.

Member: Program Committee for the International Research Conference on Reliability and Quality Control, Columbia, Missouri, May 17-19, 1988.

RESEARCH GRANTS AND CONSULTING

Co-Principal Investigator: National Science Foundation, September 1, 2009 – August 31, 2013.

Principal Investigator: National Science Foundation, August 15, 1996 - July 31, 2000.

Principal Investigator: Dupont Educational Aid Grant, July 1, 1996 - July 1, 1998.

Principal Investigator: The George Washington University Facilitating Fund: July 1, 1989 - August 31, 1989.

Principal Investigator: U. S. Army Natick Research, Development, and Engineering Center. Funded by Battelle for Army Research Office: April 19, 1990 - October 18, 1990.

Consultant: Bose Corporation, October 2000-May 2001.

Consultant: Grand Manor Psychiatric Institute, January 1995-September 1999.

Consultant: Technology Development Foundation of Turkey, March 1995-May 1996.

Consultant: Ford Motor Company, North American Automotive Operations, June 1989-Sept. 1989.

Consultant: U. S. Army Natick Research, Development, and Engineering Center, July 31, 1986 - December 31, 1986.

Consultant: American Association of Railroads, Summer 1982 and Summer 1983.

BOOKS AND EDITED VOLUMES

Co-editor, *Mathematical Reliability: An Expository Perspective*, (R. Soyer, T. A. Mazzuchi, and N. D. Singpurwalla, Eds.), 2004, Kluwer.

PAPERS UNDER REVIEW FOR PUBLICATION

[4] “Sequential Bayesian Analysis of Multivariate Poisson Count Data”, (with T. Aktekin and N. G. Polson), 2016, submitted to *Journal of Bayesian Analysis*.

[3] “On the Use of the Concentration Function in Medical Fraud Assessment”, (with F. Ieva, T. Ekin, and F. Ruggeri), 2016, submitted to *American Statistician*.

[2] “From Signal Processing to Particle Filtering: An Incredible Journey”, (with N. D. Singpurwalla and N. G. Polson), 2015, submitted to *Technometrics*.

[1] “Simulation-based Stochastic Programming with Decision Dependent Uncertainty”, (with T. Ekin and N. G. Polson), 2015, under revision to be resubmitted to *European Journal of Operational Research*.

REFEREED PUBLICATIONS

- [69] “Semiparametric Bayesian Optimal Replacement Policies: Application to Railroad Tracks”, (with J. Merrick), 2016, conditionally accepted to *Applied Stochastic Models for Business & Industry*.
- [68] “Risk Model of Bacterial Co-infection in Children with Severe Viral Bronchiolitis,” (with M. Spaeder), 2016, forthcoming, *Journal of Pediatric Intensive Care*.
- [67] “Bayesian Modeling of Time Series of Counts with Business Applications,” (with T. Aktekin and B. Kim), 2015, *Handbook of Discrete-Valued Time Series*, (R. Davis, S. Holan, R. Lund and N. Ravishanker, Eds), pp. 245-266.
- [66] “Information Theory and Bayesian Reliability Analysis: Recent Advances,” (with N. Ebrahimi and E. S. Soofi), 2015, *Advances in Complex Data Modeling and Computational Methods in Statistics*, Springer-Verlag. (A. Paganoni and P. Secchi, Eds), pp. 87-102.
- [65] “Simulation-based Two-stage Stochastic Programming with Recourse”, (with T. Ekin and N. G. Polson), 2014, *Decision Analysis*, Vol. 11, pp. 250-264.
- [64] "Value of Information in Estimating Group Priorities", (with R. M. Musal), 2014, *Journal of Multicriteria Decision Analysis*, Vol. 21, pp. 173-181.
- [63] “Importance of Components for a System”, (with N. Ebrahimi, N. Y. Jalali and E. S. Soofi), *Econometric Reviews*, 2014, Vol. 33, pp. 395-420.
- [62] “Bayesian Analysis of Abandonment in Call Center Operations”, (with T. Aktekin), 2014, *Applied Stochastic Models for Business & Industry*, Vol. 30, pp. 141-156.
- [61] “Urban water demand forecasting: A state-of-the-art review,” (with E. A. Donkor, T. A. Mazzuchi, and J. A. Robinson), 2014, *Journal of Water Resources Planning and Management*, Vol. 140, pp. 146-159.
- [60] “Application of Bayesian Methods in Detection of Healthcare Fraud”, (with F. Ieva, T. Ekin, and F. Ruggeri), 2014, *Chemical Engineering Transactions*, Vol. 33, pp. 151-156.
- [59] “Assessment of Mortgage Default Risk via Bayesian State-Space Models”, (with T. Aktekin and F. Xu), 2013, *Annals of Applied Statistics*, Vol. 7, pp. 1450-1473.
- [58] “Bayesian Dynamic Probit Models for Analysis of Longitudinal Data”, (with M. Sung), 2013, *Computational Statistics and Data Analysis*, Vol. 68, pp. 388-398.
- [57] “A Markov Modulated Poisson Model for Software Reliability”, (with J. Landon and S. Ozekici), 2013, *European Journal of Operational Research*, Vol. 229, pp. 404-410.
- [56] “When are Observed Failures More Informative than Observed Survivals?”, (with N. Ebrahimi and E. S. Soofi), 2013, *Naval Research Logistics*, Vol. 60, pp. 102-110.
- [55] “Bayesian Analysis of Queues with Impatient Customers: Applications to Call Centers”, (with T. Aktekin), 2012, *Naval Research Logistics*, Vol. 59, pp. 441- 457.

- [54] "A Bayesian Hidden Markov Model for Imperfect Debugging", (with "Pievatolo, A., and Ruggeri, F), 2012, *Reliability Engineering and Systems Safety*, Vol. 103, pp. 11-21.
- [53] "Estimating the Population Utility Function: A Parametric Bayesian Approach", (with R. M. Musal, C. McCabe and S. A. Kharroubi), 2012, *European Journal of Operational Research*, Vol. 218, pp. 538-547.
- [52] "Software Reliability", 2011, *Wiley Interdisciplinary Reviews: Computational Statistics*, Vol. 3, pp. 269-281.
- [51] "Markov and Hidden Markov Models", 2011, *Encyclopedia of ORMS*, (J. J. Cochran, Ed.), Vol.5, pp. 3034-3053.
- [50] "Call Center Modeling: A Bayesian State Space Approach", (with T. Aktekin), 2011, *Naval Research Logistics*, Vol. 58, pp. 28-42.
- [49] "On the Sample Information about Parameter and Prediction", (with N. Ebrahimi and E. S. Soofi), 2010, *Statistical Science*, Vol. 25, pp. 348-367.
- [48] "Information Measures in Perspective", (with N. Ebrahimi and E. S. Soofi), 2010, *International Statistical Review*, Vol. 78, pp. 383-412.
- [47] "Assessment of Mortgage Default Risk via Bayesian Reliability Models", (with F. Xu), 2010, *Applied Stochastic Models for Business & Industry*, Vol. 26, pp. 308-330.
- [46] "Modeling Latent Sources in Call Center Arrival Data", (with J. Landon, F. Ruggeri, and M. Tarimcilar, 2010, *European Journal of Operational Research*, Vol. 204, pp. 597-603.
- [45] "Information Importance of Predictors: Concept, Measures, Bayes Inference and Applications", (with J. J. Retzer and E. S. Soofi), 2009, *Computational Statistics and Data Analysis*, Vol. 53, pp. 2363-2377.
- [44] "Multivariate Maximum Entropy Identification, Transformation and Dependence", (with N. Ebrahimi and E. S. Soofi), 2008, *Journal of Multivariate Analysis*, Vol. 99, pp. 1217-1231.
- [43] "Bayes Estimate and Inference for Entropy and Information Index of Fit", (with T. A. Mazzuchi and E. Soofi), 2008, *Econometric Reviews*, Vol. 27, pp. 428-456.
- [42] "Modeling and Analysis of Call Center Arrival Data: A Bayesian Approach", (with M. Tarimcilar), 2008, *Management Science*, Vol. 54, pp. 266-278.
- [41] "Accelerated Life Tests: Bayesian Models", (with A. Erkanli and J. R. Merrick), 2007, *The Encyclopedia of Statistics in Quality and Reliability* (Eds. F. Ruggeri, R. S. Kenett and F. W. Faltin), Vol. 1, pp. 20-30, John Wiley & Sons, UK.
- [40] "Accelerated Life Tests: Bayesian Design", 2007, *The Encyclopedia of Statistics in Quality and Reliability* (Eds. F. Ruggeri, R. S. Kenett and F. W. Faltin), Vol. 1, pp. 12-20, John Wiley & Sons, UK.
- [39] "Bayesian Analysis of Nonhomogeneous Markov Chains: Applications to Mental Health Data", (with M. Sung and N. Nhan), 2007, *Statistics in Medicine*, Vol. 26, pp: 3000-3017.

- [38] "Information Measures for Generalized Gamma Family", (with A. Dadpay and E. S. Soofi), 2007, *Journal of Econometrics*, Vol. 138, pp. 568-585.
- [37] "A Bayesian Approach to Signal Analysis of Pulse Trains", (with M. Hock), 2006, *Bayesian Monitoring, Control and Optimization*, (B. M. Colosimo and E. del Castillo, Eds.), pp. 215-243.
- [36] "Semi-Markov Modulated Poisson Process: Probabilistic and Statistical Analysis", (with S. Ozekici), 2006, *Mathematical Methods of Operations Research*, Vol. 64, pp. 125-144.
- [35] "Bayesian Portfolio Selection with Multivariate Random Variance Models" (with K. Tanyeri), 2006, *European Journal of Operational Research*, Vol. 171, pp. 977-990.
- [34] "Are Maintenance Practices for Railroad Tracks Effective ? " (with J. R. Merrick and T. A. Mazzuchi), 2005, *Journal of the American Statistical Association*, Vol. 100, pp. 17-25.
- [33] "Network Reliability Assessment in a Random Environment", (with S. Ozekici), 2003, *Naval Research Logistics*, Vol. 50, pp. 574-591.
- [32] "Stochastic Process Models for Reliability in Dynamic Environments", (with T. A. Mazzuchi, S. Ozekici and N. D. Singpurwalla), 2003, *Handbook of Statistics: Statistics in Industry*, (C. R. Rao and R. Khattree, Eds.), Vol. 22, pp. 1109- 1129.
- [31] "Reliability of Software with an Operational Profile", (with S. Ozekici), 2003, *European Journal of Operational Research*, Vol. 149, pp. 459-474.
- [30] "Bayesian Analysis of Markov Modulated Bernoulli Processes", (with S. Ozekici), 2003, *Mathematical Methods of Operations Research*, Vol. 57, pp. 125-140.
- [29] "A Bayesian Semi-parametric Analysis of the Reliability and Maintenance of Machine Tools (with J. R. Merrick and T. A. Mazzuchi), 2003, *Technometrics*, Vol. 48, pp. 58-69.
- [28] "Optimal Stopping Rules for Software Testing", (with N. Morali), 2003, *Naval Research Logistics*, Vol. 50, pp. 88-104.
- [27] "Bayesian Testing Strategies for Software with an Operational Profile", (with S. Ozekici), 2001, *Naval Research Logistics*, Vol. 48, pp. 747-763.
- [26] "Bayesian Analyses of Longitudinal Binary Data using Markov Regression Models of Unknown Order (with A. Erkanli and A. Angold), 2001, *Statistics in Medicine*, Vol. 20, pp. 755-770.
- [25] "Simulation Based Designs for Accelerated Life Tests", (with A. Erkanli), 2000, *Journal of Statistical Planning and Inference*, Vol. 90, 335-348.
- [24] "Computation and Applications of Maximum Entropy Dirichlet Procedure", (with T. A. Mazzuchi and E. S. Soofi), 2000, *Computational Statistics and Data Analysis*, Vol. 32, pp. 361-378.
- [23] "Bayesian Inference for Prevalence in Longitudinal Two-Phase Studies", (with A. Erkanli and E. J. Costello), *Biometrics*, 1999, Vol. 55, pp. 1145-1150.

- [22] "Optimal Design for Quantal Bioassay via Monte Carlo Methods", (with L. Kuo and F. Wang), *Bayesian Statistics 6*, (J. O. Berger, J. M. Bernardo, A. P. Dawid and A. F. M. Smith, Eds.), 1999, pp. 795-802.
- [21] "Information Concepts and Pairwise Comparison Matrices", (with P. P. Sanchez), *Information Processing Letters*, 1998, Vol. 68, pp. 185-188.
- [20] "Bayesian Reliability Modeling and Inference under Ordering Restrictions", (with T. A. Mazzuchi), *Frontiers in Reliability Analysis*, (A. P. Basu, S. K. Basu and S. Ukhopadhyay, Eds.), 1998, pp. 217-230.
- [19] "Bayesian Computations for a Class of Reliability Growth Models", (with A. Erkanli and T. A. Mazzuchi), *Technometrics*, 1998, Vol. 40, pp. 14-23.
- [18] "Optimal Bayesian Two-Phase Designs for Prevalence Estimation", (with A. Erkanli and A. Angold), *Journal of Statistical Planning and Inference*, 1998, Vol. 66, pp. 175-191.
- [17] "Sequential Inference and Decision Making for Single Mission Systems Development (with J. R. van Dorp and T. A. Mazzuchi), *Journal of Statistical Planning and Inference*, 1997, Vol. 62, pp. 207-218.
- [16] "Hierarchical Bayesian Analysis for Prevalence Estimation", (with A. Erkanli and D. Stangl), *Case Studies in Bayesian Statistics, Volume 3*, (C. Gatsonis, J. Hodges, R. Kass and N.D. Singpurwalla, Eds.), 1997, pp. 325-346.
- [15] "Linear Bayesian Inference for Accelerated Weibull Model", (with T. A. Mazzuchi and A. L. Vopatek), *LifeTime Data Analysis*, 1997, Vol. 3, pp. 63-75.
- [14] "Bayesian Inference in Two-Phase Prevalence Studies", (with A. Erkanli and D. Stangl), 1997, *Statistics in Medicine*, Vol. 16, pp. 1121-1133.
- [13] "Analysis of Software Failure Data", *Reliability and Maintenance of Complex Systems*, (S. Ozekici, Ed.), 1996, Springer Verlag, pp. 345-367.
- [12] "Assessing the Reliability of Software: An Overview", (with N. D. Singpurwalla), *Reliability and Maintenance of Complex Systems*, (S. Ozekici, Ed.), 1996, Springer Verlag, pp. 389-408.
- [11] "A Bayesian Perspective on some Replacement Strategies", (with T. A. Mazzuchi), *Reliability Engineering and System Safety*, 1996, Vol. 51, pp. 295-303.
- [10] "Adaptive Bayesian Replacement Strategies", (with T. A. Mazzuchi), *Bayesian Statistics 5*, (J. O. Berger, J. M. Bernardo, A. P. Dawid and A. F. M. Smith, Eds.), 1996, pp. 667-674.
- [9] "Adaptive Bayesian Designs for Accelerated Life Testing", (with A. L. Vopatek), *Adaptive Designs*, (N. Flournoy and W. F. Rosenberger, Eds.), Institute of Mathematical Statistics, Lecture Notes, Vol. 25, 1995, pp. 263-275.
- [8] "A Bayes Method for Assessing Product-Reliability During Development Testing", (with T. A. Mazzuchi), *IEEE Transactions on Reliability*, Vol. 42, 1993, pp. 503-510.

[7]"Determination of Stopping Criteria During Development", (with T. A. Mazzuchi), *Advances in Reliability*, (A. P. Basu, Ed.), 1993, North Holland, pp. 269-280.

[6]"Nonhomogeneous Autoregressive Processes for Tracking Reliability Growth, and their Bayesian Analysis", (with N. D. Singpurwalla), *Journal of the Royal Statistical Society, Series B*, Vol. 54, 1992, pp. 145-156.

[5] "A Dynamic General Linear Model for Inference from Accelerated Life Tests", (with T. A. Mazzuchi), *Naval Research Logistics Quarterly*, Vol. 39, No. 6, 1992, pp. 757-773.

[4]"Assessment of Machine Tool Reliability Using a Proportional Hazards Model", (with T. A. Mazzuchi), *Naval Research Logistics Quarterly*, 1989, Vol. 36, pp. 765-777.

[3]"A Bayes Empirical Bayes Model for Software Reliability", (with T. A. Mazzuchi), *IEEE Transactions on Reliability*, Vol. 37, 1988, pp. 248-254.

[2]"The Use of Expert Opinion in Reliability: A Survey" (with N. D. Singpurwalla), *Accelerated Life Testing and Experts' Opinion in Reliability*, (C. A. Clariotti and D. V. Lindley, Eds.), 1988, pp. 105-115, North Holland.

[1]"Assessing (Software) Reliability Growth Using a Random Coefficient Autoregressive Process and its Ramifications", (with N. D. Singpurwalla), *IEEE Transactions on Software Engineering*, Vol. SE-11, 1985, pp. 1456-1464.

OTHER PUBLICATIONS

[46] "Games and Decisions in Reliability and Risk Analysis", (with J. R. W. Merrick, F. and R. L. Keller, *Decision Analysis*, 2012, Vol. 9, pp. 81-85.

[45] "Bayesian Modeling of Health State Preferences", (with R. Musal.), 2010, *Mathematical and Statistical Methods in Reliability*, (N. Balakrishnan, M. S. Nikulin, and V. Rykov, Eds.), Birkhauser, pp. 391-399.

[44] "Review of Bayesian Networks and Probabilistic Inference in Forensic Science by F. Tarconi, C. Aitken, P. Garbolino and A. Biedermann", 2009, *Technometrics*, Vol. 51, pp. 99-100.

[43] "Advances in Bayesian Software Reliability Modeling", with (F. Ruggeri), 2008, in *Advances in Mathematical Modeling for Reliability*, (Eds. T. Bedford, J. Quigley, L. Walls, B. Alkali, A. Daneshkhah and G. Hardman), pp. 165-176, IOS Press, Amsterdam, Netherlands.

[42] "Review of Bayesian Methods for Nonlinear Classification and Regression, by D. G. T. Denison, C. C. Holmes, B. K. Mallick and A. F. M. Smith", 2004, *Technometrics*, Vol. 49, No. 2.

[41] "Reliability Modeling and Analysis under Random Environments", (with S. Ozekici), 2004, in *Mathematical Reliability: An Expository Perspective*, (R. Soyer, T. A. Mazzuchi, and N. D. Singpurwalla, Eds.), pp. 249-273.

- [40] "Bayesian Portfolio Selection in Random Variance Models", (with K. Tanyeri), 2001, *Bayesian Methods with Applications to Science, Policy and Official Statistics*, (Edward George, Ed.), pp. 527-535.
- [39] "Bayesian Analysis of Nonhomogeneous Markov Chains", (with M. Sung), 2001, *Bayesian Methods with Applications to Science, Policy and Official Statistics*, (Edward George, Ed.), pp. 517-526.
- [38] "Dirichlet Distribution under Moment Constraints", (with T. A. Mazzuchi and E. S. Soofi), 2001, *The Proceedings of 53rd Session of ISI*, Book 2, pp. 137-140.
- [37] "Maximum Entropy Dirichlet Modeling of Consumer Choice", (with T. A. Mazzuchi, E. Soofi and J. J. Retzer), *Proceedings of the ASA Section on Bayesian Statistical Science*, 2000, pp. 56-61.
- [36] "Mapping Uncertainty of Logit Models", (with T. A. Mazzuchi and E. S. Soofi), *The Proceedings of 52nd Session of ISI*, 1999, Book 2, pp. 139-142.
- [35] "Bayesian Learning in Project Management Networks", (with Z. Covaliu), *Proceedings of the ASA Section on Bayesian Statistical Science*, 1997, pp. 257- 260.
- [34] "Computation and Applications of Maximum Entropy Dirichlet Procedure", (with T. A. Mazzuchi and E. S. Soofi), *Computing Science and Statistics*, (E. J. Wegman and S. P. Azen, Eds.), 1997, Vol. 29, pp. 373-382.
- [33] "Optimal Stopping Rules for Software Testing", (with N. Morali), *The Proceedings of 51th Session of ISI*, 1997, Book 2, pp. 259-260.
- [32] "Bayesian Project Management", (with Z. Covaliu), *Proceedings of the ASA Section on Bayesian Statistical Science*, 1996, pp. 208-213.
- [31] "The Analytic Hierarchy Process Applied to Business and Other Applications", (with E. Forman), *Advances in Social Science and Computers*, (S. S. Nagel and G. D. Garson, Eds.), 1996, Vol. 4, pp. 235-266.
- [30] "Optimal Bayesian Two-Phase Designs for Screening Tests", (with A. Erkanli), *Proceedings of the ASA Section on Bayesian Statistical Science*, 1995, pp.101-104.
- [29] "Review of Ensuring Software Reliability by A. M. Neufelder", *Technometrics*, Vol. 37, 1995, pp. 122-123.
- [28] "Information Technologies in Decision Making", (with E. H. Forman), *Advances in Telematics*, Vol. 3, 1995, pp. 81-120.
- [27] "Lifetime Modeling via Bayesian Information Distinguishability", (with T. A. Mazzuchi and E. S. Soofi), *Proceedings of the ASA Section on Bayesian Statistical Science*, 1994, pp. 238-245.
- [26] "Information Concepts and AHP", (with P. P. Sanchez), *The Proceedings of the Third International Symposium on Analytic Hierarchy Process*, 1994, pp. 67-73.

- [25]"A Bayesian Perspective on Quality Assurance", (with T. A. Mazzuchi, N. D. Singpurwalla and T. Z. Irony), *Proceedings of 49th Session of ISI*, 1993, Book 3, pp. 207-215.
- [24]"Bayesian Estimation of Entropy", (with T. A. Mazzuchi and E. S. Soofi), *Proceedings of the ASA Section on Bayesian Statistical Science*, 1993, pp. 12-17.
- [23]"Information Diagnostics for Bayesian Reliability Modeling", (with T. A. Mazzuchi and E. S. Soofi), *Proceedings of the ASA Section on Bayesian Statistical Science*, 1993, pp. 173-178.
- [22]"Bayesian Perspectives on Attribute Reliability Growth Modeling", (with T. A. Mazzuchi), *Institute of Environmental Sciences Proceedings*, Vol. 2, 1992, pp. 422-426.
- [21]"Reliability Assessment and Prediction during Product Development, (with T. A. Mazzuchi), *Proceedings of Annual Reliability and Maintainability Symposium*, 1992, pp. 468-474.
- [20]"Monitoring Software Reliability Using NonGaussian Dynamic Models", *Proceedings of the Engineering Systems Design and Analysis Conference*, Vol. 1, 1992, pp. 419-423.
- [19]"Modeling Machine Tool Reliability: A Bayesian Approach", (with T. A. Mazzuchi) *Proceedings of the Engineering Systems Design and Analysis Conference*, Vol. 1, 1992, pp. 413-418.
- [18]"Evaluation of Soldier Integrated Protective Ensembles Using Analytic Hierarchy Process", (with R. V. Spring), *The Proceedings of the Second International Symposium on the Analytic Hierarchy Process*, 1991, pp. 415-427.
- [17]"A Stopping Rule for Software Testing, (with N. D. Singpurwalla), *The Proceedings of the 48th Session of ISI*, Book 2, 1991, pp. 624-625.
- [16]"Assessing (Software) Reliability Growth Using a Random Coefficient Autoregressive Process and Its Ramifications", (with N. D. Singpurwalla), *Software Reliability Models: Theoretical Developments, Evaluation & Applications*, (Y. K. Malaiya and P. K. Srimani, Eds.), 1991, pp. 78-86.
- [15]"A Bayesian Attribute Reliability Growth Model", (with T. A. Mazzuchi). *Proceedings of Annual Reliability and Maintainability Symposium*, 1991, pp. 322-25.
- [14]"Reliability Engineering", (with T. A. Mazzuchi), *The Automated Factory Handbook: Technology and Management*, (D. I. Cleland and B. Bidanda, Eds.), 1990, pp. 633-651.
- [13]"Dynamic Models for Inference from Accelerated Life Tests", (with T. A. Mazzuchi), *Proceedings of Annual Reliability and Maintainability Symposium*, 1990, pp. 67-70.
- [12] "Bayesian Proportional Hazards Analysis" (with T. A. Mazzuchi and R. Spring), *American Statistical Association Proceedings of the Computing Section*, 1989, pp. 253-258.
- [11]"Applications of the Analytic Hierarchy Process", (with E. Forman), *Proceedings of the International Conference on Multiple Criteria Decision Making*, (V. Chankong and M. T. Tabucanon, Eds.), 1989, pp. 833-847.

- [10]"Dynamic Models for Software Reliability Assessment", *Proceedings of TENCON IEEE International Conference*, 1989, pp. 400-403.
- [9]"Using Expert Opinion in Reliability Assessment", (with K. Aboura and N. D. Singpurwalla), *Reliability Review*, 1989, Vol. 9, pp. 11-12.
- [8]"Intelligent Systems for Reliability", (with K. Aboura and N. D. Singpurwalla), *Proceedings of the 3rd IEEE International Symposium on Intelligent Control*, (H. E. Stephanou, Ed.), 1989, pp. 103-107.
- [7]"Software for Use of Expert Opinion in Reliability", (with K. Aboura and N. D. Singpurwalla), *ASQC Quality Congress Transactions*, 1989, pp. 527-532.
- [6]"The Proportional Hazards Model in Reliability" (with T. A. Mazzuchi and R. Spring), *Proceedings of Annual Reliability and Maintainability Symposium*, 1989, pp. 252-256.
- [5]"Application of Posterior Approximation Techniques for the Ordered Dirichlet Distribution", (with T. A. Mazzuchi), *Computer Science and Statistics: Proceedings of the 20th Symposium on the Interface*, (E. Wegman, D. Gantz and J. Miller, Eds.), 1988, pp. 511-515.
- [4]"Software Reliability Assessment Using Posterior Approximations", (with T. A. Mazzuchi), *Computer Science and Statistics: Proceedings of the 19th Symposium on the Interface*, (R. M. Heiberger, Ed.), 1987, pp. 400-405.
- [3]"Applications of Time Series Models to Software Reliability Analysis", *State of the Art Report on Software Reliability*, (A. Bendell and P. Mellor, Eds.), 1986, pp. 197-207.
- [2]"A Bayes Empirical Bayes Approach for (Software) Reliability Growth", (with M. Horigome and N. D. Singpurwalla), *Computer Science and Statistics: Proceedings of the 16th Symposium on the Interface*, (L. Billard, Ed.), 1984, pp. 47-56.
- [1] "The Design of a Quantal Response Experiment: An Empirical Approach", *Proceedings of the 29th Conference on the Design of Experiments in Army Research Development and Testing*, 1983, pp. 55-96.

RECENT PRESENTATIONS: (2005 - Present)

2016 "Bayesian Modeling and Analysis of Multivariate Time Series of Counts", Department of Decision Sciences, Bocconi University, Milan, Italy, February 11.

2015 "An Augmented Simulation Approach for Bayesian Design of Life Tests", INFORMS Annual Meeting, Philadelphia, PA, Nov. 1-4.

2015 "Bayesian Nonparametric Replacement Strategies", International Statistical Institute World Congress, Rio de Janeiro, Brazil, July 26-31.

2015 "Discussion of Sparse Bayesian Latent Factor Stochastic Volatility Models for High-Dimensional Financial Time Series", International Statistical Institute World Congress, Rio de Janeiro, Brazil, July 26-31.

2015 “State Space Modeling of Multivariate Time Series of Counts”, International Society for Business and Industrial Statistics Satellite Conference, IMECC, University of Campinas, Brazil, July 22-24.

2015 “Modeling Time Series of Counts: A Bayesian Approach”, International Symposium in Statistics, St. John’s, Canada, July 6-8.

2015 “Bayesian Replacement Strategies for Rail Tracks“, Quality and Productivity Research Conference, North Carolina State University, Raleigh, NC, June 10-12.

2015 “Bayesian Modeling of Time Series of Counts,” Department of Systems Engineering and Engineering Management, City University of Hong Kong, Hong Kong, March 10.

2015 “Modeling Time-series of Counts: A Bayesian Approach,” Department of Mathematics and Statistics, Georgetown University, February 13.

2015 “Markov Modulated Bayesian Queues,” CNR-IMATI, Milano, Italy, January 14.

2014 “Bayesian Nonparametric Replacement Strategies,” Department of Industrial Engineering, Rutgers University, NJ, October 28.

2014 “Bayesian Modeling of Time Series of Counts,” ENBIS-14, Linz, Austria, September 21-25.

2014 “Computational Issues in Bayesian Design of Life Tests,” ISBA World Meeting, Cancun, Mexico, July 14-18.

2014 “Bayesian Analysis of Markov Modulated Queues,” International Workshop in Applied Probability, Antalya, Turkey, June 16-19.

2013 “Bayesian Methods for Assessment of Health Care Fraud,” University of Wisconsin-Milwaukee, November 1.

2013 “An Information Theoretic Notion of Reliability Importance,” INFORMS Annual Meeting, Minneapolis, MN, October 6-9.

2013 “Information Theory and Bayesian Reliability Analysis: Advances and Computational Issues”, Complex Data Modeling and Computationally Intensive Statistical Methods, Milan, Italy, September 9-11.

2013 “Semiparametric Bayesian Models for Call Center Demand”, INFORMS Marketing Science, Istanbul, Turkey, July 11-13.

2013 “Importance of Components for a System”, Conference on Mathematical Methods in Reliability (MMR13), Stellenbosch, South Africa, July 1-4.

2013 “Multivariate Distributions Induced by Dynamic Environments and their Bayesian Analysis”, Regional Conference of ISBA South Africa, Grahamstown, South Africa, June 26-28.

2013 “Discussion: Bayesian Models for Stochastic and Economic Processes”, Bayesian Young Statisticians Meeting, Milan, Italy, June 5-6.

2013 “Assessment of Mortgage Default Risk via Bayesian State Space Models”, Department of Decision Sciences, Bocconi University, Milan, Italy, March 14.

2012 “Bayesian Methods for Assessment of Health Care Fraud”, MOX, Milano Politecnico, Milan, Italy, November 21.

2012 “When is Failure is Preferable to Survival ?”, American University, Department of Economics, Washington, DC, November 7.

2012 “Multivariate Distributions Induced by Dynamic Environments”, INFORMS Annual Meeting, Phoenix, AR, October 14-17.

2012 “Semiparametric Bayesian Replacement Models,“ Eighth World Congress in Probability and Statistics, Istanbul, Turkey, July 9-14.

2012 “Assessment of Mortgage Default Risk via Bayesian State Space Models”, MOX, Milano Politecnico, Milan, Italy, July 4.

2012 “To survive or to fail: what is the question?” ISBA World Meeting, Kyoto, Japan, June 25-29.

2012 “Modeling Health State Preferences: A Bayesian Approach,” Yeditepe International Research Conference on Business Strategies, Istanbul, Turkey, June 13-15.

2012 “Modeling a Population’s Health Preferences: A Bayesian Approach”, Sheldon B. Lubar School of Business, University of Wisconsin-Milwaukee, February 24.

2011 “Dynamic Probit Models”, INFORMS Annual Meeting, Charlotte, NC, November 13-16.

2011 “When is Failure Preferable to Survival ?” INFORMS Annual Meeting, Charlotte, NC, November 13-16.

2011 “Discussion of Adversarial Risk Analysis”, ISI Meeting, Dublin, Ireland, August 20-26.

2011 “To Survive or To Fail: What is the Question ?” ASA/IMS Joint Statistical Meetings, Miami, FL, July 31-August 4.

2011 “Markov Modulated Poisson Models for Software Reliability Assessment”, Mathematical Methods in Reliability, Beijing, China, June 20-24.

2011 “Poisson State Space Models and their Extensions”, Yeditepe International Research Conference on Bayesian Learning, Istanbul, Turkey, June 15-17.

2011 “Bayesian Modeling of Mortgage Default Risk”, Bilkent University, Department of Industrial Engineering, Ankara, Turkey, June 3.

2011 “Discrete Time Poisson Processes and Their Extensions”, Koc University, Department of Industrial Engineering, Istanbul, Turkey, June 2.

2011 “Bayesian Modeling of Mortgage Defaults”, New Developments in Theory and Applications of Statistics, Middle East Technical University, Ankara, Turkey, May 2-4.

2011 “Bayesian State Space Modeling of Mortgage Default Risk”, Department of Statistics, Trinity College, Dublin, Ireland, March 7.

2011 “To Survive or To Fail: What is the Question ?” CNR-IMATI, Milano, Italy, February 15.

2011 “Assesment of Mortgage Default Risk”, Sheldon B. Lubar School of Business, University of Wisconsin-Milwaukee, February 4.

2010 “Markov Modulated Bayesian (Software) Reliability Models”, INFORMS Annual Meeting, Austin, TX, November 7-10.

2010 “Computational Issues in Bayesian Design of (Accelerated) Life Tests”, ASA/IMS Joint Statistical Meetings, Vancouver, Canada, July 31-August 5.

2010 “Nonparametric Bayesian Replacement Strategies”, 30th National Congress on Operations Research and Industrial Engineering (YAEM 2010), Sabanci University, Istanbul, Turkey, June 30-July 2.

2010 “Bayesian ROC Curves and Sensor Evaluation”, DTRA/NSF Algorithm Workshop, Chapel Hill, NC, June 24.

2010 “Modeling Health Preferences”, Yeditepe University, Istanbul, Turkey, March 17.

2009 “Computations in Bayesian Design of Life Tests”, Complex Data Modeling and Computationally Intensive Statistical Methods for Estimation and Prediction, Milano, Italy, September 14-16.

2009 “Bayesian Analysis of Dynamic Probit Models”, ASA/IMS Joint Statistical Meetings, Washington, DC, August 1-6.

2009 “Bayesian Modeling of Health State Preferences”, Mathematical Methods in Reliability, Moscow, Russia, June 22-27.

2009 “Assessment of Mortgage Default Risk via Bayesian Duration Models”, (with F. Xu), Department of Computational and Data Sciences, George Mason University, May 1.

2009 “Information Importance of Predictors”, (with J. J. Retzer and E. S. Soofi), Department of Mathematics, University of Maryland, February 19.

2008 “Semiparametric Bayesian Replacement Strategies”, INFORMS Annual Meeting, Washington, DC, October 12-15.

2008 “Bayesian Reliability Models and Mortgage Default Risk”, International Society for Business and Industrial Statistics Meeting, Prague, Czech Republic, July 1-4.

2008 “Computational Issues in Semiparametric Bayesian Replacement Models”, International Conference on Multivariate Statistical Modeling and High Dimensional Data Mining, Kayseri, Turkey, June 19-22.

2008 “Modeling Latent Sources in Call Center Arrival Data”, EURO Working Group on Stochastic Modeling, Istanbul, Turkey, June 23-25.

2008 “Bayesian Mortgage Default Models”, IMST-2008, Memphis, TN, May 15-18.

2008 “Semiparametric Bayesian Decision Models for Optimal Replacement”, CNR-IMATI, Milano, Italy, January 8.

2007 “Computational Issues in the Analysis of Call Center Arrivals”, INFORMS Annual Meeting, Seattle, WA, November 4-7.

2007 “Semiparametric Bayesian Decision Models”, INFORMS Annual Meeting, Seattle, WA, November 4-7.

2007 “Modeling and Analysis of Call Center Arrival Data: A Bayesian Approach”, Seminar in Bayesian Inference in Stochastic Processes, València, Spain, June 14-16.

2007 “Modeling and Analysis of Call Center Arrival Data: A Bayesian Perspective”, Izzet Sahin Memorial Lecture, March 28, 2007, Sheldon B. Lubar School of Business, University of Wisconsin at Milwaukee.

2006 "Bayesian Modeling of Call Center Arrivals", INFORMS Annual Meeting, Pittsburgh, PA, November 5-8.

2006 "A Computational Approach for Bayesian Portfolio Selection", ASA/IMS Joint Statistical Meetings, Seattle, WA, August 6 - 10.

2005 "Bayesian Methods for Decision Sciences", Decision Sciences Institute Conference, San Francisco, CA, November 19-22.

2005 "Modeling and Analysis of Call Center Arrival Data: A Bayesian Approach", Decision Sciences Institute Conference, San Francisco, CA, November 19-22.

2005 "A Hidden Markov Model for Pulse Trains", YAEM 2005, Annual Meeting of Turkish OR Society, Istanbul, Turkey, July 4-6.

2005 "Assessment of Maintenance Practices for Railroad Tracks", ICSA Applied Statistical Symposium, Washington, DC, June 12-15.

DIRECTED DOCTORAL DISSERTATIONS:

[14] Director of Dissertation of Babak Zafari (Department of Decision Sciences, SB), “Essays in Modeling First Bid in Retail Secondary Market Online Auctions: A Bayesian Approach”, completed, August 2015.

- [13] Director of Dissertation of Bumsoo Kim (Department of Decision Sciences, SB), "Essays in Dynamic Bayesian Models in Marketing", completed, May 2013.
- [12] Director of Dissertation of Tahir Ekin (Department of Decision Sciences, SB), "Essays in Simulation-based Stochastic Programming", completed, May 2012.
- [11] Director of Dissertation of Toros Caglar (Department of Decision Sciences, SB), "Three Essays on the Analysis of Discrete Time Queueing Systems with Applications to Emergency Room Gridlocks", completed, April, 2011.
- [10] Director of Dissertation of Tevfik Aktekin (Department of Decision Sciences, SB), "Three Essays in Call Center Modeling: A Bayesian Perspective", completed, May, 2009.
- [9] Director of Dissertation of Feng Xu (Department of Decision Sciences, SB), "Bayesian Mortgage Default Models", completed, June, 2008.
- [8] Director of Dissertation of R. Muzaffer Musal (Department of Decision Sciences, SB), "Bayesian Modeling of Group Preferences and Population Utility Estimation", completed, January, 2007.
- [7] Co-Director of Dissertation of Kemal Cakicilar (Department of Decision Sciences, SB), "Assessment of Technology Acceptance in Web Portals: A Bayesian Framework", completed, December, 2006.
- [6] Director of Dissertation of Kadir Tanyeri (Department of Operations Research, SEAS), "Bayesian Portfolio Selection with Volatility Models", completed April 2004.
- [5] Director of Dissertation of Melinda Hock (Department of Operations Research, SEAS), "Bayesian Analysis of Pulse Trains with Hidden Missingness", completed October 2001.
- [4] Director of Dissertation of Minje Sung (Department of Management Science, SBPM), "Bayesian Analyses of Markov Chains: Applications to Longitudinal Data from Psychiatric Treatment Programs", completed May 2001.
- [3] Director of Dissertation of Eugene D. Hahn (Department of Management Science, SBPM), "Bayesian Multivariate Binary Response Models and their Application to Multiple-Response Data", completed March 2001.
- [2] Director of Dissertation of Jason R. Merrick (Department of Operations Research, SEAS), "Bayesian Analysis using Covariate Information: A Case Study in Reliability", completed December 1997.
- [1] Director of Dissertation of Anne L. Hillegas (Department of Operations Research, SEAS), "Design of Accelerated Life Tests: A Bayesian Approach", completed May 1992.

LIST OF COURSES TAUGHT:

Time Series Analysis and Forecasting Techniques I (OR 271) - Graduate
Time Series Analysis and Forecasting Techniques II (OR 371)- Doctoral
Probability and Statistics for Engineers (APSC 115)- Undergraduate
Mathematical Statistics for Engineers (APSC 116)- Undergraduate.
Acceptance Sampling and Quality Control (OR 282)- Graduate
Operations Management (MGT 218/MBad 231)- Graduate
Statistics for Managers (MGT 270/MBad 220)- Graduate
Executive Decision Making (MGT/DNSC 224)- Graduate
Analytical Models for Decision Making DNSC 220- Graduate
Applied Forecasting and Time Series Analysis (DNSC 6277)- Graduate
Statistical Modeling and Analysis (MGT 225/DNSC 274) - Graduate
Forecasting Models for Decision Support (EMBA 268)- Graduate
Financial Modeling and Econometrics (FINA 6271)- Graduate
Advanced Statistical Modeling and Analysis (MGT/DNSC 275)- Graduate
Special Topics in Management Decision Making (MGT/DNSC 229)- Graduate
Seminar: Introduction to Bayesian Statistics (DNSC 8328) - Doctoral
Advanced Topics in Forecasting and Time Series Analysis (DNSC 8397) - Doctoral
Applied Stochastic Models for Business (DNSC 8397) – Doctoral
Forecasting for Analytics (DNSC 6209) - Graduate
Stochastic Foundations for Analytics I (DNSC 6206) – Graduate
Statistics for Analytics (DNSC 6203) - Graduate
Bayesian Reliability Modeling (Bocconi University) – Doctoral