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**Personal:**

**Date of Birth** : 10.02.1978  
**Place of Birth** : Ankara, Turkey

**Education:**

2000-2002 Ankara University, Statistics, Ph.D.  
1999-2000 Ankara University, Statistics, M.S.  
1995-1999 Ankara University, Statistics, B.S.

**Academic Positions:**

September 2010-present Professor, Department of Industrial Engineering,  
Atilim University, Turkey

March 2017-May 2017 Visiting Professor, Department of Mathematical Sciences  
Durham University, UK

June 2009- September 2010 Professor, Department of Mathematics,  
Izmir University of Economics, Turkey

April 2004- June 2009 Associate Professor, Department of Mathematics,  
Izmir University of Economics, Turkey

July 2006- August 2006 Research Fellow, Department of Statistics,  
University of Manitoba, Canada

November 2002- April 2004 Assistant Professor, Department of Mathematics,  
Izmir University of Economics, Turkey

November 1999-October 2002 Research Assistant, Department of Statistics,  
Ankara University, Turkey

**Administrative Duties:**

July 2017-present Vice President, Atilim University

December 2011-October 2014 Chair, Department of Industrial Engineering, Atilim University

September 2006- September 2010 Director, Graduate School of Natural and Applied Sciences  
Izmir University of Economics

## **Honors & Awards:**

- TUBITAK Science Incentive Award, Engineering Sciences, 2017.
- Research grant by the Scientific and Technological Research Council of Turkey (TUBITAK), 2017.
- Research grant by the Scientific and Technological Research Council of Turkey (TUBITAK), 2006.
- Top ranked graduate of Faculty of Science with a GPA of 96.03/100, Ankara University, 1999.

## **Research Interests:**

- Applied probability
- Reliability engineering
- Stochastic processes/models
- Probabilistic modeling of renewable energy systems
- Actuarial risk models

## **Professional Service:**

**Serving as** Editorial Board Member of *Reliability Engineering and System Safety*

**Serving as** an Area Editor of *IIE Transactions, Focus Issue on Quality and Reliability Engineering*

**Served as** an Associate Editor of *IEEE Transactions on Reliability*

**Served as** a Guest Editor of *Methodology and Computing in Applied Probability*

**Serving as** a Technical Committee Co-Chair for *European Safety and Reliability Association*

**Served as a reviewer for:**

Reliability Engineering and System Safety, European Journal of Operational Research, Applied Mathematical Modeling, IEEE Transactions on Reliability, Naval Research Logistics, IIE Transactions, Computers and Industrial Engineering, Operations Research Letters, Applied Stochastic Models in Business and Industry, Journal of Applied Probability, Statistical Papers, Communications in Statistics: Theory and Methods, Communications in Statistics: Simulation and Computation, Discrete Mathematics, Annals of Combinatorics, Journal of Statistical Planning and Inference, Journal of Applied Statistics, Methodology and Computing in Applied Probability, Computational Statistics & Data Analysis, Annals of the Institute of Statistical Mathematics, Journal of Computational and Applied Mathematics, Mathematical Problems in Engineering, Statistics, Statistics & Probability Letters, Metrika, Proceedings of the Institution of Mechanical Engineers: Part O, Journal of Risk and Reliability

## **Conference Organizations:**

- Chair, 7<sup>th</sup> International Workshop on Applied Probability, Antalya, Turkey, 2014.
- Vice Chair, 14<sup>th</sup> International Congress on Computational and Applied Mathematics, Antalya, Turkey, 2009.
- Vice Chair, 13<sup>th</sup> International Congress on Insurance: Mathematics and Economics, İstanbul, Turkey, 2009
- Chair, Workshop on Statistical Methods in Reliability and Quality, Izmir, Turkey, 2008.

## Publications:

(Total number of publications in Web of Science indexed journals: 192, H-index: 29)

Note: In the following list, “\*” indicates a co-author who was my graduate student or my research assistant.

198. Eryilmaz, S. “Discussion of signature-based models of preventive maintenance”, ***Applied Stochastic Models in Business and Industry***, in press.
197. Chadjiconstantinidis, S. and Eryilmaz, S. “Reliability assessment for censored delta-shock models”, ***Methodology and Computing in Applied Probability***, in press.
196. Eryilmaz, S. and Tank, F. “Optimal age replacement policy for discrete time parallel systems”, ***TOP***, in press.
195. Chadjiconstantinidis, S. and Eryilmaz, S. “The Markov discrete time delta-shock reliability model and a waiting time problem”, ***Applied Stochastic Models in Business and Industry***, in press.
194. Chadjiconstantinidis, S. and Eryilmaz, S. “Computing waiting time probabilities related to  $(k_1, k_2, \dots, k_l)$  pattern”, ***Statistical Papers***, in press.
193. Eryilmaz, S., Bulanik, I\* and Devrim, Y. “Computing reliability indices of a wind power system via Markov chain modelling of wind speed”, ***Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability***, in press.
192. Chadjiconstantinidis, S., Tuncel, A. and Eryilmaz, S. “A new mixed delta shock model with a change in shock distribution”, ***TOP***, in press.
191. Kelkinname, M. and Eryilmaz, S. “Some reliability measures and maintenance policies for a coherent system composed of different types of components”, ***Metrika***, in press.
190. Eryilmaz, S. and Navarro, J. “A decision theoretic framework for reliability-based optimal wind turbine selection”, ***Reliability Engineering and System Safety***, 221, 108291, 2022.
189. Eryilmaz, S. and Finkelstein, M. “Reliability of the two-unit standby system revisited”, ***Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability***, 236, 1096-1103, 2022.
188. Eryilmaz, S. and Yalcin, F. “The number of failed components upon system failure when the lifetimes are discretely distributed”, ***Reliability Engineering and System Safety***, 225, 108632, 2022.
187. Kus, C., Tuncel, A. and Eryilmaz, S. “Assessment of shock models for a particular class of intershock time distributions”, ***Methodology and Computing in Applied Probability***, 24, 213-231, 2022.
186. Kus, C. and Eryilmaz, S. “Analysis of the two-unit cold standby repairable system with damage and repair time dependency via matrix-exponential distributions”, ***Quality Technology and Quantitative Management***, 18, 771-786, 2021.
185. Eryilmaz, S. and Ucum, K.A.\* “The lost capacity by the weighted-k-out-of-n system upon system failure”, ***Reliability Engineering and System Safety***, 216, 107914, 2021.

184. Finkelstein, M. and Eryilmaz, S. "On optimal maintenance of degrading multi-state systems with state-dependent cost of repair", ***Applied Stochastic Models in Business and Industry***, 37, 790-801, 2021.
183. Eryilmaz, S. and Tank, F. "Computing minimal signature of coherent systems through matrix-geometric distributions", ***Journal of Applied Probability***, 58, 621-636, 2021.
182. Kan, C. and Eryilmaz, S. "Reliability assessment of a discrete time cold standby repairable system", ***TOP***, 29, 613-628, 2021.
181. Eryilmaz, S. and Kan, C. "Reliability assessment for discrete time shock models via phase-type distributions", ***Applied Stochastic Models in Business and Industry***, 37, 513-524, 2021.
180. Eryilmaz, S. "Revisiting discrete time age replacement policy for phase-type lifetime distributions", ***European Journal of Operational Research***, 295, 699-704, 2021.
179. Dembinska, A. and Eryilmaz, S. "Discrete time series-parallel system and its optimal configuration", ***Reliability Engineering and System Safety***, 215, 107832, 2021.
178. Eryilmaz, S. and Kan, C. "A new shock model with a change in shock size distribution", ***Probability in the Engineering and Informational Sciences***, 35, 381-395, 2021.
177. Devrim, Y. and Eryilmaz, S. "Reliability based evaluation of hybrid wind-solar energy system", ***Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability***, 235, 136-143, 2021.
176. Eryilmaz, S., Bulanik, I.\* and Devrim, Y. "Reliability based modeling of hybrid solar/wind power system for long term performance assessment", ***Reliability Engineering and System Safety***, 209, 107478, 2021.
175. Eryilmaz, S. "Age-based preventive maintenance for coherent systems with applications to consecutive-k-out-of-n and related systems", ***Reliability Engineering and System Safety***, 204, 107143, 2020.
174. Kan, C., Devrim, Y. and Eryilmaz, S. "On the theoretical distribution of the wind farm power when there is a correlation between wind speed and wind turbine availability", ***Reliability Engineering and System Safety***, 203, 107115, 2020.
173. Eryilmaz, S., Ozkurt, F.Y. and Erkan, T.E. "The number of failed components in series-parallel system and its application to optimal design", ***Computers and Industrial Engineering***, 150, 106879, 2020.
172. Eryilmaz, S. and Kan, C. "Reliability based modelling and analysis for a wind power system integrated by two wind farms considering wind speed dependence", ***Reliability Engineering and System Safety***, 203, 107077, 2020.
171. Eryilmaz, S. and Ozkut, M. "Optimization problems for a parallel system with multiple types of dependent components", ***Reliability Engineering and System Safety***, 199, 106911, 2020.
170. Eryilmaz, S. and Pekalp, M.H. "On optimal age replacement policy for a class of coherent systems", ***Journal of Computational and Applied Mathematics***, 377, 112888, 2020.
169. Gong, M., Eryilmaz, S. and Xie, M. "Reliability assessment of system under a generalized cumulative shock model", ***Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability***, 234, 129-137, 2020.

168. Bozbulut, A.R. and Eryilmaz, S. "Generalized extreme shock models and their applications", ***Communications in Statistics: Simulation and Computation***, 49, 110-120, 2020.
167. Tank, F. and Eryilmaz, S. "On bivariate compound sums", ***Journal of Computational and Applied Mathematics***, 365, 112371, 2020.
166. Eryilmaz, S. and Bozbulut, A.R. "Reliability analysis of weighted-k-out-of-n system consisting of three-state components", ***Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability***, 233, 972-977, 2019.
165. Eryilmaz, S. "Statistical inference for a class of start-up demonstration tests", ***Journal of Quality Technology***, 51, 314-324, 2019.
164. Gebizlioglu, O.L. and Eryilmaz, S. "The maximum surplus in a finite-time interval for a discrete-time risk model with exchangeable, dependent claim occurrences", ***Applied Stochastic Models in Business and Industry***, 35, 858-870, 2019.
163. Eryilmaz, S. and Kan, C. "Reliability and optimal replacement policy for an extreme shock model with a change point", ***Reliability Engineering and System Safety***, 190, 2019.
162. Eryilmaz, S. "Modeling systems with two dependent components under bivariate shock models", ***Communications in Statistics: Simulation and Computation***, 48, 1714-1728, 2019.
161. Eryilmaz, S. and Devrim, Y. "Reliability and optimal replacement policy for a k-out-of-n system subject to shocks", ***Reliability Engineering and System Safety***, 188, 393-397, 2019.
160. Eryilmaz, S. and Tekin, M\*. "Reliability evaluation of a system under a mixed shock model", ***Journal of Computational and Applied Mathematics***, 352, 255-261, 2019.
159. Eryilmaz, S. and Devrim, Y. "Theoretical derivation of wind plant power distribution with the consideration of wind turbine reliability", ***Reliability Engineering and System Safety***, 185, 192-197, 2019.
158. Eryilmaz, S. "( $k_1, k_2, \dots, k_m$ )-out-of-n system and its reliability", ***Journal of Computational and Applied Mathematics***, 346, 591-598, 2019.
157. Ozkut, M. and Eryilmaz, S. "Reliability analysis under Marshall-Olkin run shock model", ***Journal of Computational and Applied Mathematics***, 349, 52-59, 2019.
156. Yalcin, F., Eryilmaz, S. and Bozbulut, A.R. "A generalized class of correlated run shock models", ***Dependence Modeling***, 6, 131-138, 2018.
155. Tuncel, A. and Eryilmaz, S. "System reliability under delta-shock model", ***Communications in Statistics Theory and Methods***, 47, 4872-4880, 2018.
154. Eryilmaz, S. "The number of failed components in a k-out-of-n system consisting of multiple types of components", ***Reliability Engineering and System Safety***, 175, 246-250, 2018.
153. Eryilmaz, S., Coolen, F.P.A. and Coolen-Maturi, T. "Mean residual life of coherent systems consisting of multiple types of components", ***Naval Research Logistics***, 65, 86-97, 2018.
152. Eryilmaz, S., Erkan, T.E. "Coherent system with standby components", ***Applied Stochastic Models in Business and Industry***, 34, 395-406, 2018.
151. Eryilmaz, S. "Stochastic ordering among success runs statistics in a sequence of exchangeable binary trials", ***Methodology and Computing in Applied Probability***, 20,

563-573, 2018.

150. Eryilmaz, S. "Phase type stress-strength models with reliability applications", ***Communications in Statistics: Simulation and Computation***, 47, 954-963, 2018.
149. Eryilmaz, S. "On the first time of ruin in two dimensional discrete time risk model with dependent claim occurrences", ***Communications in Statistics Theory and Methods***, 47, 2251-2258, 2018.
148. Eryilmaz, S. "Reliability analysis of multi-state system with three-state components and its application to wind energy", ***Reliability Engineering and System Safety***, 172, 58-63, 2018.
147. Eryilmaz, S., Coolen, F.P.A. and Coolen-Maturi, T. "Marginal and joint reliability importance based on survival signature", ***Reliability Engineering and System Safety***, 172, 118-128, 2018.
146. Eryilmaz, S. "On success runs in a sequence of dependent trials with a change point", ***Statistics & Probability Letters***, 132, 91-98, 2018.
145. Eryilmaz, S. "A new class of bivariate lifetime distributions", ***Communications in Statistics: Theory and Methods***, 46, 12324-12335, 2017.
144. Eryilmaz, S. "Reliability analysis of systems with components having two dependent subcomponents", ***Communications in Statistics: Simulation and Computation***, 46, 8005-8013, 2017.
143. Eryilmaz, S. "A note on optimization problems of a parallel system with a random number of units", ***International Journal of Reliability, Quality, and Safety Engineering***, 24, 1750022-1, 1750022-9, 2017.
142. Eryilmaz, S. " $\delta$ -shock model based on Polya process and its optimal replacement policy", ***European Journal of Operational Research***, 263, 690-697, 2017.
141. Eryilmaz, S. "The effectiveness of adding cold standby redundancy to a coherent system at system and component levels", ***Reliability Engineering and System Safety***, 165, 331-335, 2017.
140. Franko, C., Tutuncu, G.Y. and Eryilmaz, S. "Reliability of weighted-k-out-of-n:G systems consisting of two types of components and a cold standby component", ***Communications in Statistics: Simulation and Computation***, 46, 4067-4081, 2017.
139. Koutras, M.V. and Eryilmaz, S. "Compound geometric distribution of order k", ***Methodology and Computing in Applied Probability***, 19, 377-393, 2017.
138. Eryilmaz, S. "The concept of weak exchangeability and its applications", ***Metrika***, 80, 259-271, 2017.
137. Eryilmaz, S. "On compound sums under dependence", ***Insurance: Mathematics and Economics***, 72, 228-234, 2017.
136. Eryilmaz, S. "Computing optimal replacement time and mean residual life in reliability shock models", ***Computers & Industrial Engineering***, 103, 40-45, 2017.
135. Eryilmaz, S. and Gebizlioglu, O.L. "Computing finite time non-ruin probability and some joint distributions in discrete time risk model with exchangeable claim occurrences", ***Journal of Computational and Applied Mathematics***, 313, 235-242, 2017.

134. Eryilmaz, S. and Tuncel, A. "Generalizing the survival signature to unrepairable homogeneous multi-state systems", *Naval Research Logistics*, 63, 593-599, 2016.
133. Eryilmaz, S. "Consecutive k-out-of-n lines with a change point", *Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability*, 230, 545-550, 2016.
132. Koutras, M.V., Triantafyllou, I.S. and Eryilmaz, S. "Stochastic comparisons between lifetimes of reliability systems with exchangeable components", *Methodology and Computing in Applied Probability*, 18, 1081-1095, 2016.
131. Eryilmaz, S. "Discrete time cold standby repairable system: Combinatorial analysis", *Communications in Statistics: Theory and Methods*, 45, 7399-7405, 2016.
130. Eryilmaz, S., Oruc, O. and Oger, V. "Joint reliability importance in coherent systems with exchangeable dependent components", *IEEE Transactions on Reliability*, 65, 1562-1570, 2016.
129. Eryilmaz, S. "A reliability model for a three-state degraded system having random degradation rates", *Reliability Engineering and System Safety*, 156, 59-63, 2016.
128. Eryilmaz, S. "On an application of concomitants of order statistics", *Communications in Statistics: Theory and Methods*, 45, 5628-5636, 2016.
127. Eryilmaz, S., Gong, M. and Xie, M. "Generalized sooner waiting time problems in a sequence of trinary trials", *Statistics and Probability Letters*, 115, 70-78, 2016.
126. Eryilmaz, S., Koutras, M.V. and Triantafyllou, I.S. "Mixed three-state k-out-of-n systems with components entering at different performance levels", *IEEE Transactions on Reliability*, 65, 969-972, 2016.
125. Eryilmaz, S. "Reliability of systems with multiple types of dependent components", *IEEE Transactions on Reliability*, 65, 1022-1029, 2016.
124. Eryilmaz, S. "Computing Barlow-Prochan importance in combined systems", *IEEE Transactions on Reliability*, 65, 159-163, 2016.
123. Eryilmaz, S. "Generalized waiting time distributions associated with runs", *Metrika*, 79, 357-368, 2016.
122. Eryilmaz, S. "Discrete time shocks models in a Markovian environment", *IEEE Transactions on Reliability*, 65, 141-146, 2016.
121. Eryilmaz, S. "A new class of lifetime distributions", *Statistics & Probability Letters*, 112, 63-71, 2016.
120. Eryilmaz, S. "Compound Markov negative binomial distribution", *Journal of Computational and Applied Mathematics*, 292, 1-6, 2016.
119. Eryilmaz, S. "On the mean number of remaining components in three-state k-out-of-n system", *Operations Research Letters*, 43, 616-621, 2015.
118. Eryilmaz, S. "Component importance in coherent systems with exchangeable components", *Journal of Applied Probability*, 52, 851-863, 2015.
117. Tank, F. and Eryilmaz, S. "The distributions of sum, minima and maxima of generalized geometric random variables", *Statistical Papers*, 56, 1191-1203, 2015.

116. Eryilmaz, S. "Discrete time shock models involving runs", ***Statistics & Probability Letters***, 107, 93-100, 2015.
115. Eryilmaz, S. "Systems composed of two types of nonidentical and dependent components," ***Naval Research Logistics***, 62, 388-394, 2015.
114. Eryilmaz, S. "Assesment of a multi-state system under a shock model", ***Applied Mathematics and Computation***, 269, 1-8, 2015.
113. Eryilmaz, S. "Mixture representations for three-state systems with three-state components", ***IEEE Transactions on Reliability***, 64, 829-834, 2015.
112. Eryilmaz, S. and Tuncel, A. "Computing the signature of a generalized k-out-of-n system", ***IEEE Transactions on Reliability***, 64, 766-771, 2015.
111. Eryilmaz, S. "Mean time to failure of weighted k-out-of-n:G systems", ***Communications in Statistics- Simulation and Computation***, 44, 2705-2713, 2015.
110. Eryilmaz, S. "Dynamic assessment of multi-state systems using phase-type modeling", ***Reliability Engineering and System Safety***, 140, 71-77, 2015.
109. Eryilmaz, S. and Tutuncu, G.Y. "Relative behavior of a coherent system with respect to another coherent system", ***Statistical Papers***, 56, 519-529, 2015.
108. Bairamov, I. and Eryilmaz, S. "Order statistics of dependent sequences consisting of two different sets of exchangeable variables", ***Journal of Computational and Applied Mathematics***, 286, 1-6, 2015.
107. Eryilmaz, S. and Tutuncu, G.Y. "Stress-strength reliability in the presence of fuzziness", ***Journal of Computational and Applied Mathematics***, 282, 262-267, 2015.
106. Eryilmaz, S. "Capacity loss and residual capacity in weighted k-out-of-n:G systems", ***Reliability Engineering and System Safety***, 136, 140-144, 2015.
105. Eryilmaz, S. "Lifetime of multi-state k-out-of-n systems", ***Quality and Reliability Engineering International***, 30, 1015-1022, 2014.
104. Mahmoud, B. and Eryilmaz, S. "Joint reliability importance in a binary k-out-of-n:G system with exchangeable dependent components", ***Quality Technology & Quantitative Management***, 11, 453-460, 2014.
103. Eryilmaz, S. "Modeling dependence between two multi-state components via copulas", ***IEEE Transactions on Reliability***, 63, 715-720, 2014.
102. Eryilmaz, S. and Bayramoglu, K. "Life behavior of  $\delta$ -shock models for uniformly distributed interarrival times", ***Statistical Papers***, 55, 841-852, 2014.
101. Eryilmaz, S. "Discussion of 'Start-up demonstration tests: models, methods and applications, with some unifications'", ***Applied Stochastic Models in Business and Industry***, 30, 414-416, 2014.
100. Eryilmaz, S. and Bozbulut, A.R\*. "An algorithmic approach for the dynamic reliability analysis of non-repairable multi-state weighted-k-out-of-n:G system", ***Reliability Engineering and System Safety***, 131, 61-65, 2014.

99. Eryilmaz, S. "Multivariate copula based dynamic reliability modeling with application to weighted-k-out-of-n systems of dependent components", ***Structural Safety***, 51, 23-28, 2014.
98. Eryilmaz, S. and Xie, M. "Dynamic reliability modeling of general three-state k-out-of-n:G systems: Permanent-based computational results", ***Journal of Computational and Applied Mathematics***, 272, 97-106, 2014.
97. Eryilmaz, S. "Geometric distribution of order k with a reward", ***Statistics & Probability Letters***, 92, 53-58, 2014.
96. Eryilmaz, S. and Bozbulut, A.R\*. "Computing marginal and joint Birnbaum, and Barlow-Prochan importances in weighted-k-out-of-n:G systems", ***Computers & Industrial Engineering***, 72, 255-260, 2014.
95. Yalcin, F. and Eryilmaz, S. "q-Geometric and q-Binomial distributions of order k", ***Journal of Computational and Applied Mathematics***, 27, 31-38, 2014.
94. Eryilmaz, S. and Sarikaya, K\*. "Modeling and analysis of weighted-k-out-of-n:G system consisting of two different types of components", ***Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability***, 228, 265-271, 2014.
93. Eryilmaz, S. "A study on reliability of coherent systems equipped with a cold standby component", ***Metrika***, 77, 349-359, 2014.
92. Eryilmaz, S. "On distributions of runs in compound binomial risk model", ***Methodology and Computing in Applied Probability***, 16, 149-159, 2014.
91. Eryilmaz, S. "A new look at dynamic behavior of binary coherent system from a state-level perspective", ***Annals of Operations Research***, 212, 115-125, 2014.
90. Eryilmaz, S. "Parallel and consecutive k-out-of-n:F systems under stochastic deterioration", ***Applied Mathematics and Computation***, 227, 19-26, 2014.
89. Eryilmaz, S. "On signatures of series and parallel systems consisting of modules with arbitrary structures", ***Communications in Statistics- Simulation and Computation***, 43, 1202-1211, 2014.
88. Eryilmaz, S. "Computing reliability indices of repairable systems via signature", ***Journal of Computational and Applied Mathematics***, 260, 229-235, 2014.
87. Eryilmaz, S. "Joint reliability importance in linear m-consecutive-k-out-of-n:F systems", ***IEEE Transactions on Reliability***, 62, 862-869, 2013.
86. Eryilmaz, S. "Mean instantaneous performance of a system with weighted components that have arbitrarily distributed lifetimes", ***Reliability Engineering and System Safety***, 119, 290-293, 2013.
85. Eryilmaz, S. "On reliability of a k-out-of-n system equipped with a single warm standby component", ***IEEE Transactions on Reliability***, 62, 499-503, 2013.
84. Eryilmaz, S. "On stress-strength reliability with a time-dependent strength", ***Journal of Quality and Reliability Engineering***, Article ID: 417818, 2013.
83. Eryilmaz, S. "On the sums of distributions of order statistics from exchangeable random variables", ***Journal of Computational and Applied Mathematics***, 253, 204-207, 2013.

82. Eryilmaz, S. "Component importance for linear consecutive-k-out-of-n and m-consecutive-k-out-of-n systems with exchangeable components", *Naval Research Logistics*, 60, 313-320, 2013.
81. Eryilmaz, S. "On mean residual life of discrete time multi-state systems", *Quality Technology & Quantitative Management*, 10, 241-249, 2013.
80. Eryilmaz, S. and Rouyendegh, B.D. "On profust reliability of coherent systems: Signature based expressions", *Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability*, 227, 173-178, 2013.
79. Eryilmaz, S. "On residual lifetime of coherent systems after the  $r$ th failure", *Statistical Papers*, 54, 243-250, 2013.
78. Eryilmaz, S. "On reliability analysis of a k-out-of-n system with components having random weights", *Reliability Engineering and System Safety*, 109, 41-44, 2013.
77. Eryilmaz, S. "On the lifetime behavior of a discrete time shock model", *Journal of Computational and Applied Mathematics*, 237, 384-388, 2013.
76. Eryilmaz, S. "Life behavior of a system under discrete shock model," *Discrete Dynamics in Nature and Society*, Article ID: 238641, 2012.
75. Eryilmaz, S. and Mahmoud, B. "Linear m-consecutive-k,l-out-of-n:F system", *IEEE Transactions on Reliability*, 61, 787-791, 2012.
74. Eryilmaz, S. and Bayramoglu, K. "Residual lifetime of consecutive k-out-of-n systems under double monitoring", *IEEE Transactions on Reliability*, 61, 792-797, 2012.
73. Eryilmaz, S. "Reliability properties of systems with two exchangeable log-logistic components", *Communications in Statistics- Theory and Methods*, 41, 3416-3427, 2012.
72. Eryilmaz, S. "On the mean residual life of a k-out-of-n:G system with a single cold standby component", *European Journal of Operational Research*, 222, 273-277, 2012.
71. Eryilmaz, S. and Bayramoglu, I. "On extreme residual lives after the failure of the system", *Mathematical Problems in Engineering*, Article ID: 342940, 2012.
70. Eryilmaz, S. "The number of failed components in a coherent system with exchangeable components", *IEEE Transactions on Reliability*, 61, 203-207, 2012.
69. Eryilmaz, S. "Reliability of combined m-consecutive-k-out-of-n:F & consecutive kc-out-of-n systems", *IEEE Transactions on Reliability*, 61, 215-219, 2012.
68. Yalcin, F\* and Eryilmaz, S. "Start-up demonstration test based on total successes and total failures with dependent start-ups", *IEEE Transactions on Reliability*, 61, 227-230, 2012.
67. Eryilmaz, S. and Tank, F. "On reliability analysis of a two-dependent-unit series system with a standby unit", *Applied Mathematics and Computation*, 218, 7792-7797, 2012.
66. Salehi, E., Asadi, M. and Eryilmaz, S. "On the mean residual lifetime of consecutive k-out-of-n systems", *Test*, 21, 93-115, 2012.
65. Eryilmaz, S. "m-consecutive-k-out-of-n:F system with overlapping runs: Signature-based reliability analysis", *International Journal of Operational Research*, 15, 64-73, 2012.
64. Eryilmaz, S. and Navarro, J. "Failure rates of consecutive k-out-of-n systems", *Journal of the Korean Statistical Society*, 41, 1-11, 2012.

63. Eryilmaz, S. "Consecutive k-within-m-out-of-n:F system with nonidentical components", ***Mathematical Problems in Engineering***, Article ID: 106359, 2012.
62. Eryilmaz, S. "Generalized  $\delta$ -shock model via runs", ***Statistics & Probability Letters***, 82, 326-331, 2012.
61. Eryilmaz, S. and Yalcin, F\*. "On the mean and extreme distances between failures in Markovian binary sequences", ***Journal of Computational and Applied Mathematics***, 236, 1502-1510, 2011.
60. Eryilmaz, S., Gebizlioglu, O.L. and Tank, F. "Modeling of claim exceedances over random thresholds for related insurance portfolios", ***Insurance: Mathematics and Economics***, 49, 496-500, 2011.
59. Eryilmaz, S. "On the lifetime of a random binary sequence", ***Discrete Applied Mathematics***, 159, 1646-1649, 2011.
58. Eryilmaz, S. "The behavior of warm standby components with respect to a coherent system", ***Statistics & Probability Letters***, 81, 1319-1325, 2011.
57. Eryilmaz, S., Koutras, M.V. and Triantafyllou, I.S. "Signature based analysis of m-consecutive k-out-of-n:F systems with exchangeable components", ***Naval Research Logistics***, 58, 344-354, 2011.
56. Salehi, E.T., Asadi, M. Eryilmaz, S. "Reliability analysis of consecutive k-out-of-n systems with non-identical components lifetimes", ***Journal of Statistical Planning and Inference***, 141, 2920-2932, 2011.
55. Eryilmaz, S. and Yalcin, F\*. "Distribution of run statistics in partially exchangeable processes", ***Metrika***, 73, 293-304, 2011.
54. Eryilmaz, S. "Estimation in coherent reliability systems through copulas", ***Reliability Engineering and System Safety***, 96, 564-568, 2011.
53. Eryilmaz, S. "Dynamic behavior of k-out-of-n:G systems", ***Operations Research Letters***, 39, 155-159, 2011.
52. Eryilmaz, S. "Dynamic reliability and performance evaluation of multi-state systems with two components", ***Hacettepe Journal of Mathematics and Statistics***, 40, 125-133, 2011.
51. Eryilmaz, S. and Kan, C\*. "Dynamic reliability evaluation of consecutive k-within-m-out-of-n:F system", ***Communications in Statistics- Simulation and Computation***, 40, 70-83, 2011.
50. Eryilmaz, S. "A new perspective to stress-strength models", ***Annals of the Institute of Statistical Mathematics***, 63, 101-115, 2011.
49. Eryilmaz, S. "Joint distribution of run statistics in partially exchangeable processes", ***Statistics & Probability Letters***, 81, 163-168, 2011.
48. Eryilmaz, S. "Circular consecutive k-out-of-n systems with exchangeable dependent components", ***Journal of Statistical Planning and Inference***, 141, 725-733, 2011.
47. Eryilmaz, S. and Iscioglu, F\*. "Reliability evaluation for a multi-state system under stress-strength setup", ***Communications in Statistics- Theory and Methods***, 40, 547-558, 2011.
46. Eryilmaz, S. "Discrete scan statistics generated by exchangeable binary trials", ***Journal of Applied Probability***, 47, 1084-1092, 2010.

45. Demir, S\*. and Eryilmaz, S. "Run statistics in a sequence of arbitrarily dependent binary trials", ***Statistical Papers***, 51, 959-973, 2010.
44. Eryilmaz, S. "Mean residual and mean past lifetime of multi-state systems with identical components", ***IEEE Transactions on Reliability***, 59, 644-649, 2010.
43. Eryilmaz, S. "Start-up demonstration tests under Markov dependence", ***Pakistan Journal of Statistics***, 26, 637-647, 2010.
42. Eryilmaz, S. "Review of recent advances in reliability of consecutive k-out-of-n and related systems", ***Proceedings of the Institution of Mechanical Engineers, Part O, Journal of Risk and Reliability***, 224, 225-237, 2010.
41. Eryilmaz, S. and Aksoy, T\*. "Reliability of linear (n,f,k) systems with weighted components", ***Journal of Systems Science and Systems Engineering***, 19, 277-284, 2010.
40. Eryilmaz, S. and Zuo, M. "Computing and applying the signature of a system with two common failure criteria", ***IEEE Transactions on Reliability***, 59, 576-580, 2010.
39. Eryilmaz, S. and Zuo, M. "Constrained (k,d)-out-of-n systems", ***International Journal of Systems Science***, 41, 679-685, 2010.
38. Eryilmaz, S. "Number of working components in consecutive k-out-of-n system while it is working", ***Communications in Statistics- Simulation and Computation***, 39, 683-692, 2010.
37. Eryilmaz, S. "On system reliability in stress-strength setup", ***Statistics & Probability Letters***, 80, 834-839, 2010.
36. Eryilmaz, S. "Conditional lifetimes of consecutive k-out-of-n systems", ***IEEE Transactions on Reliability***, 59, 178-182, 2010.
35. Eryilmaz, S. "Mixture representations for the reliability of consecutive-k systems", ***Mathematical & Computer Modelling***, 51, 405-412, 2010.
34. Eryilmaz, S. and Tutuncu, G.Y. "Reliability evaluation of linear consecutive-weighted-k-out-of-n:F system", ***Asia-Pacific Journal of Operational Research***, 26, 805-816, 2009.
33. Eryilmaz, S., Kan, C\*, and Akici, F\*. "Consecutive k-within-m-out-of-n:F system with exchangeable components", ***Naval Research Logistics***, 56, 503-510, 2009.
32. Bairamov, I. and Eryilmaz, S. "Waiting times of exceedances in random threshold models", ***Statistics & Probability Letters***, 79, 676-683, 2009.
31. Chakraborti, S., Eryilmaz, S. and Human, S. W. "A Phase II nonparametric control chart based on precedence statistics with runs-type signaling rules", ***Computational Statistics and Data Analysis***, 53, 1054-1065, 2009.
30. Eryilmaz, S. "Reliability properties of consecutive k-out-of-n systems of arbitrarily dependent components", ***Reliability Engineering and System Safety***, 94, 350-356, 2009.
29. Eryilmaz, S. "Mean success run length", ***Journal of the Korean Statistical Society***, 38, 65-71, 2009.
28. Eryilmaz, S. "Run statistics defined on the multi-color urn model", ***Journal of Applied Probability***, 45, 1007-1023, 2008.

27. Eryilmaz, S. "Distribution of runs in a sequence of exchangeable multi-state trials", ***Statistics & Probability Letters***, 78, 1505-1513, 2008.
26. Eryilmaz, S. and Chakraborti, S. "On start-up demonstration tests under exchangeability", ***IEEE Transactions on Reliability***, 57, 627-631, 2008.
25. Eryilmaz, S. "Lifetime of combined k-out-of-n and consecutive kc-out-of-n systems", ***IEEE Transactions on Reliability***, 57, 331-335, 2008.
24. Eryilmaz, S. "Consecutive k-out-of-n: G system in stress-strength setup", ***Communications in Statistics- Simulation and Computation***, 37, 579-589, 2008.
23. Eryilmaz, S. "Multivariate stress-strength reliability model and its evaluation for coherent structures ", ***Journal of Multivariate Analysis***, 99, 1878-1887, 2008.
22. Eryilmaz, S. and Stepanov, A. "Runs in an ordered sequence of random variables", ***Metrika***, 67, 299-313, 2008.
21. Eryilmaz, S. and Fu, J. "Runs in continuous valued sequences", ***Statistics & Probability Letters***, 78, 759-765, 2008.
20. Bairamov, I. and Eryilmaz, S. "Joint behaviour of precedences and exceedances in random threshold models", ***Australian & New Zealand Journal of Statistics***, 50, 209-216, 2008.
19. Eryilmaz, S. "On the lifetime distribution of consecutive k-out-of-n: F system", ***IEEE Transactions on Reliability***, 56, 35-39, 2007.
18. Eryilmaz, S. "Extension of runs to the continuous valued sequences", ***Statistics & Probability Letters***, 77, 383-388, 2007.
17. Eryilmaz, S. and Demir, S\*. "Success runs in a sequence of exchangeable binary trials", ***Journal of Statistical Planning and Inference***, 137, 2954-2963, 2007.
16. Navarro, J. and Eryilmaz, S. "Mean residual lifetimes of consecutive k-out-of-n: F systems", ***Journal of Applied Probability***, 44, 82-98, 2007.
15. Chakraborti, S. and Eryilmaz, S. "A nonparametric Shewart type signed-rank control chart based on runs", ***Communications in Statistics- Simulation and Computation***, 36, 335-356, 2007.
14. Eryilmaz, S. and Bekçi, M. "Runs in a bivariate sequence over the first coordinate", ***Communications in Statistics- Theory and Methods***, 36, 1389-1395, 2007.
13. Eryilmaz, S. "A note on runs of geometrically distributed random variables", ***Discrete Mathematics***, 306, 1765-1770, 2006.
12. Eryilmaz, S. "Some results associated with the longest run statistic in a sequence of Markov dependent trials", ***Applied Mathematics and Computation***, 175, 119-130, 2006.
11. Bairamov, I.G. and Eryilmaz, S. "Spacings, exceedances and concomitants in progressive type II censoring scheme", ***Journal of Statistical Planning and Inference***, 136, 527-536, 2006.
10. Eryilmaz, S. "Concomitants in a sequence of independent nonidentically distributed random vectors", ***Communications in Statistics- Theory and Methods***, 34, 1925-1933, 2005.
9. Eryilmaz, S. "On the distribution and expectation of success runs in nonhomogeneous Markov dependent trials", ***Statistical Papers***, 46, 1, 117-128, 2005.

8. Eryilmaz, S. "The longest run statistic associated with exchangeable binary variables", *Turkish Journal of Engineering and Environmental Sciences*, 29, 2, 105-111, 2005.
7. Bairamov, I.G. and Eryilmaz, S. "Characterization of symmetry and exceedance models in multivariate FGM distributions", *Journal of Applied Statistical Science*, 13, 2, 87-99, 2004.
6. Eryilmaz, S. "On the number of success runs of length  $k$  in exchangeable trials", *International Mathematical Journal*, 3, 989-1000, 2003.
5. Eryilmaz, S. and Bairamov, I.G. " On a new sample rank of an order statistic and its concomitant", *Statistics & Probability Letters*, 63, 123-131, 2003.
4. Eryilmaz, S. "Random threshold models based on multivariate observations", *Journal of Statistical Planning and Inference*, 113, 557-568, 2003.
3. Eryilmaz, S. "Records and exceedances when underlying distribution contains atoms", *Pakistan Journal of Statistics*, 19, 25-39, 2003.
2. Eryilmaz, S. and Tütüncü, G.Y. "Success run model based on records", *Journal of Statistical Theory and Applications*, 1, 75-81, 2002.
1. Bairamov, I.G. and Eryilmaz, S. "Distributional properties of statistics based on minimal spacing and record exceedance statistics", *Journal of Statistical Planning and Inference*, 90, 21-33, 2000.

#### **Talks given in conferences/seminars (Selected):**

- Eryilmaz, S. "Statistical aspects of wind energy", **Plenary Talk**, International Conference on Advances in Statistics, October 2020.
- Eryilmaz, S. "Compound sums", **Plenary Talk**, 11th International Statistics Days Conference, Mugla, Turkey, October 2018.
- Eryilmaz, S. "Reliability based evaluation of wind power systems", Seminar: Ihsan Dogramaci Bilkent University, Ankara, Turkey, December 2018.
- Eryilmaz, S. "Distributions of runs in a sequence of dependent trials with a change point", Invited Talk: International Workshop on Applied Probability, Budapest, June 2018.
- Eryilmaz, S. "The survival signature for a class of unrepairable multi-state systems", Invited Talk: Mathematical Methods in Reliability, Grenoble, France, 2017.
- Eryilmaz, S. "Systems with weighted components with application to energy", Seminar: Durham University, UK, May 2017.
- Eryilmaz, S. "Reliability analysis of systems with weighted components", Seminar: Liverpool University, UK, March 2017.
- Eryilmaz, S. "Generalized geometric distributions with reliability applications", Seminar: Durham University, UK, March 2017.
- Eryilmaz, S. "A new class of distributions for lifetime data", **Plenary talk**, LinStat 2016, International Conference on Trends and Perspectives in Linear Statistical Inference, Istanbul, Turkey, 2016.

- Eryilmaz, S. "Multi-state degraded systems with random degradation rates", **Plenary talk**, ALT 2016, 6th International Conference on Accelerated Life Testing and Degradation Models, Troyes, France, 2016.
- Eryilmaz, S. "Generalized waiting time distributions based on runs", European Meeting of Statisticians, Amsterdam, 2015.
- Eryilmaz, S. "Runs and extremes in discrete time risk model", Seminar: University of Piraeus, Greece, October 2014.
- Eryilmaz, S. "Dynamic reliability analysis of multi-state systems: A review and new perspectives", 26th European Conference on Operational Research, Rome, Italy, 2013.
- Eryilmaz, S. "Mathematical methods in engineering reliability", Seminar, METU, November 2012.
- Eryilmaz, S. "The concept of system signature and its application in engineering reliability", Seminar: Bilkent University, December 2011.
- Eryilmaz, S. "Recent advances in signature-based reliability analysis of consecutive- $k$  systems", Invited Talk: Mathematical Methods in Reliability, Beijing, China, June 2011.
- Eryilmaz, S. "Reliability Engineering: From Conventional Problems to New Challenges", Seminar: Izmir University of Economics, October 2011.
- Eryilmaz, S. "Dynamic reliability and performance analysis of multi-state systems", 28th European Meeting of Statisticians, University of Piraeus, Greece, August 2010.
- Eryilmaz, S. "Runs and scans in exchangeable trials with application to reliability", Invited Talk: International Workshop on Applied Probability, Universidad Carlos III De Madrid, Madrid, Spain, July 2010.
- Eryilmaz, S. "Descriptive statistics of run lengths", Invited Talk: International Workshop on Applied Probability, Universite de Technologie Compiègne, June 2008, France.
- Eryilmaz, S. "Reliability evaluation of consecutive  $k$ -out-of- $n$  systems in stress-strength setup", International Conference: Mathematical Methods in Reliability, July 2007, Glasgow, UK.
- Eryilmaz, S. "Runs in a sequence of exchangeable trials", Seminar: University of Manitoba, August 2006, Canada.
- Eryilmaz, S. "Runs in a sequence of continuous valued random variables", Invited Talk: International Workshop on Applied Probability, University of Connecticut, May 2006, USA.

### **Citations:**

- Sum of times cited without self-citations (Web of Science): 2324
- H-index (Web of Science): 29

### **Courses Given:**

- Stochastic Processes, Reliability, Stochastic Models, Discrete Mathematics, Theory of Statistics, Combinatorial Analysis, Probability and Statistics at *Undergraduate level*.

- Stochastic Processes, Copula theory and its application, Nonparametric Statistics, Theory of Statistics, Statistical Decision Theory, Applied Statistics, Reliability at *Graduate level*.

### **Theses Supervised:**

- PhD Thesis: “*Dynamic reliability analysis of multi-state systems with weighted components*” with A. Bozbulut, January 2015.
- PhD Thesis: “*Optimal reliability and design in systems with weighted components*” with K. Sarıkaya, January 2015.
- PhD Thesis: “*Signature based reliability analysis of systems*” with C. Kan, June 2015. (Co-advisor)
- PhD Thesis: “*Distribution theory of runs and run-related statistics in sequences of dependent trials*” with F. Yalçın, July 2013. (Co-advisor)
- PhD Thesis: “*Statistical reliability of multi-state systems*” with F. İşçioğlu , July 2010.
- PhD Thesis: “*Distribution theory of runs and patterns and their applications*” with S.Demir, October 2009.
- MS Thesis: “*The lost capacity by the weighted-k-out-of-n reliability system and its application to optimal design*” with K. A. Ucum, July 2021.
- MS Thesis: “*Reliability characteristics of a renewable hybrid energy system*” with I. Bulanik-Ozdemir, July 2021.
- MS Thesis: “*Some reliability optimization problems in k-out-of-n systems*” with S. Gul Ozdamar, August 2019.
- MS Thesis: “*Phase type distributions and their applications in reliability*” with M. Tekin, September 2018.
- MS Thesis: “*Reliability analysis of consecutive-k systems in stress-strength setup*” with F. Akıcı, June 2010.
- MS Thesis: “*The signature of coherent systems and its application to consecutive k-within-m-out-of-n systems*” with C. Kan, June 2009.
- MS Thesis: “*Reliability evaluation of systems with weighted components*” with T. Aksoy, June 2009.
- MS Thesis: “*Reliability of k-out-of-n systems*” with E. Gürsoy, May 2006.
- MS Thesis: “*Dependence structure and stochastic comparisons among concomitants of order statistics*” with F. Akdere, August 2005.
- MS Thesis: “*Run statistics and their applications*” with S. Demir, March 2005.