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## EDUCATION

| | |
|---|---|
| 2008-2013 | Middle East Technical University, Scientific Computing, Ph.D. |
| 2006-2008 | Middle East Technical University, Scientific Computing, M.Sc. |
| 2001-2005 | Ankara University, Mathematics, B.S. |

## ACADEMIC POSITIONS

| | |
|---|---|
| **09/2017 - present** | Assistant Professor, Department of Industrial Engineering, Atılım University, Turkey |
| **09/2016 - 01/2017** | Part-time Lecturer, Department of Statistics, Middle East Technical University, Turkey |
| **02/2015 - 02/2016** | Postdoc Researcher, Department of Industrial and Systems Engineering, Lehigh University, USA. |
| **02/2014 - 06/2014** | Part-time Lecturer, Department of Statistics, Middle East Technical University, Turkey |

## ADMINISTRATIVE DUTIES

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|---|---|
| **01/2018 - 01/2022** | Double Major and Minor Program Coordinator, Atılım University |
| **06/2020 - present** | Placement Score-based Transfer and Inter-Institutional Transfer Coordinator, Atılım University |

## HONORS&AWARDS

| | |
|---|---|
| **1** | 2013-2014 METU Thesis of The Year Award by METU Prof. Dr. Mustafa N. PARLAR Education and Research Foundation, awarded to PhD. Thesis. |
| **2** | 2008-2009 METU Thesis of The Year Award by Graduate School of Natural and Applied Sciences in METU, awarded to MSc. Thesis. |
| **3** | TUBİTAK postdoctoral scholarship (2014-2015). |
| **4** | TUBİTAK higher education scholarship for PhD. Degree (2008-2013). |
| **5** | TUBİTAK higher education scholarship for MSc. Degree (2006-2008). |

## RESEARCH INTERESTS

| | |
|---|---|
| **1** | Mathematical Modeling |
| **2** | Numerical Optimization |
| **3** | Data Mining |
| **4** | Computational Statistics |

**PUBLICATIONS**

| | |
|---|---|
| **1** | T. Ö. Kurtulmuş, F. Yerlikaya–Özkurt and A. Askan, Modeling of kappa factor using multivariate adaptive regression splines: application to the western Türkiye ground motion dataset. Natural Hazards, 120, pp. 7817–7844, 2024. |
| **2** | Ş. Kılıçoğlu and F. Yerlikaya-Özkurt, A novel comparison of shrinkage methods based on multi criteria decision making in case of multicollinearity. Journal of Industrial and Management Optimization, 2024. |
| **3** | F. Yerlikaya-Özkurt and P. Taylan, Enhancing classification modeling through feature selection and smoothness: A conic-fused lasso approach integrated with mean shift outlier modelling. Journal of Dynamics and Games, 2024. |
| **4** | F. Yerlikaya-Özkurt, C. Yazıcı, and I. Batmaz, cmaRs: A powerful predictive data mining package in R. SoftwareX, 24, 101553, 2023. |
| **5** | G. Yörük, U. Bac, F. Yerlikaya-Özkurt and K. D. Ünlü, Strategic Electricity Production Planning of Turkey via Mixed Integer Programming Based on Time Series Forecasting. Mathematics, 11(8), 1865, 2023. |
| **6** | P. Taylan, F. Yerlikaya-Özkurt, B.-B Ucak and G.-W. Weber, A new outlier detection method based on convex optimization: application to diagnosis of Parkinson's disease, Journal of Applied Statistics, 48, 13-15, pp.2421-2440, 2021. |
| **7** | F. Yerlikaya-Özkurt, P. Taylan and M. Tez, Estimation in the partially nonlinear model by continuous optimization, Journal of Applied Statistics, 48, 13-15, pp.2826-2846, 2021. |
| **8** | F. Yerlikaya-Özkurt and A. Askan, Prediction of potential seismic damage using classification and regression trees: a case study on earthquake damage databases from Turkey, Natural Hazards, 103, 3, pp.3163-3180, 2020. |
| **9** | F. Yerlikaya-Özkurt and P. Taylan, New computational methods for classification problems in the existence of outliers based on conic quadratic optimization, Communications in Statistics-Simulation and Computation, 49, 3, pp.753-770, 2020. |
| **10** | S. Eryilmaz, F. Yerlikaya-Özkurt and T.-E. Erman, The number of failed components in series-parallel system and its application to optimal design, Computers & Industrial Engineering, 150, Article Number: 106879, 2020. |
| **11** | S. Yalaz, P. Taylan and F. Yerlikaya-Özkurt, A new approach to adaptive spline threshold autoregression by using Tikhonov regularization and continuous optimization, Journal of Statistics & Management Systems, 22, 6, pp.1127-1142, 2019. |
| **12** | F. Yerlikaya-Özkurt, A. Askan and G.-W. Weber, A hybrid computational method based on convex optimization for outlier problems: application to earthquake ground motion prediction, INFORMATICA, 27, 4, pp.893-910, 2016. |
| **13** | C. Yazıcı, F. Yerlikaya-Özkurt and İ.Batmaz, A computational approach to nonparametric regression: bootstrapping CMARS method, Machine Learning, 101, pp.211-230, 2015. |
| **14** | F. Yerlikaya-Özkurt, A. Askan and G.-W. Weber, An alternative approach to ground motion prediction problem by a non-parametric adaptive regression method, Engineering Optimization, 46, pp.1651-1668, 2014. |
| **15** | F. Yerlikaya-Özkurt, C. Vardar-Acar, Y. Yolcu-Okur and G.-W. Weber, Estimation of Hurst parameter of fractional Brownian motion using CMARS method, Journal of Computational and Applied Mathematics, 259, pp. 843-850, 2014. |
| **16** | P. Taylan, F. Yerlikaya-Özkurt and G.-W. Weber, An approach to mean shift outlier model (MSOM) by Tikhonov regularization and conic programming, Intelligent Data Analysis 18, pp.79-94, 2014. |
| **17** | F. Yerlikaya-Özkurt, İ. Batmaz and G.-W. Weber, A Review of Conic Multivariate Adaptive Regression Splines (CMARS): A Powerful Tool for Predictive Data Mining, chapter in book, Springer volume Modeling, |

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| | Optimization, Dynamics and Bioeconomy, series Springer Proceedings in Mathematics, D. Zilberman and A. Pinto, eds., 2013. |
| **18** | G.-W. Weber, I. Batmaz, G. Köksal, P. Taylan and F. Yerlikaya-Özkurt, CMARS: A new contribution to nonparametric regression with multivariate adaptive regression splines supported by continuous optimisation, Inverse Problems in Science and Engineering, 20, 3, pp. 371-400, 2012. |
| **19** | Ö. Sezgin-Alp, E. Büyükbebeci, A. Işcanoğlu-Çekiç, F. Yerlikaya-Özkurt, P. Taylan and G.- W. Weber, -CMARS and GAM and CQP- modern optimization methods applied to international credit default prediction, Journal of Computational and Applied Mathematics (JCAM) 235, pp. 4639-4651, 2011. |
| **20** | P. Taylan, G.-W.Weber and F. Yerlikaya-Özkurt, A new approach to multivariate adaptive regression splines by using Tikhonov regularization and continuous optimization, TOP (the Operational Research journal of SEIO (Spanish Statistics and Operations Research Society) 18, pp. 377– 395, 2010. |
| **21** | P. Taylan, G.-W. Weber, L. Liu and F. Yerlikaya-Özkurt, On foundations of parameter estimation for generalized partial linear models with B-splines and continuous optimization, Computers and Mathematics with Applications (CAMWA) 60, 1, pp. 134-143, 2010. |

## CONFERENCE PRESENTATIONS

| | |
|---|---|
| **1** | F. Yerlikaya-Özkurt, A computational method with density based clustering approach for the data in the existence of outlier, The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat'2020), Bedlewo, August 30–September 3, 2021. |
| **2** | F. Yerlikaya-Özkurt, P. Taylan, Feature selection for mean shift outlier model via the conic-fused Lasso, The International Conference on Trends and Perspectives in Linear Statistical Inference (LinStat'2020), Bedlewo, August 30–September 3, 2021. |
| **3** | F. Yerlikaya-Özkurt, P. Taylan, A New outlier detection method based on convex optimization: Application to diagnosis of parkinson's disease, Recent Advances in Probability & Statistics(RAPS 2019) "An International Conference in Honor of Ismihan Bayramoglu (Bairamov) for His 60th Birthday", Istanbul, June 24-25, 2019. |
| **4** | F. Yerlikaya-Özkurt, P. Taylan, A New Computational Method For Classification Problems Within The Existence of Outliers Based On Convex Optimization, 39. Yöneylem Araştırması ve Endüstri Mühendisligi Ulusal kongresi (YA/EM'2019), 12-14 Haziran, Ankara, 2019. |
| **5** | F. Yerlikaya-Özkurt, A. Askan and G.-W. Weber, A Hybrid Computational Method based on Convex Optimization for Outlier Problems, 2015 INFORMS Annual Meeting, Philadelphia, November 1-4, 2015. |
| **6** | F. Yerlikaya-Özkurt, A. Askan and G.-W. Weber, A Novel Nonparametric Adaptive Regression Methodology for Ground Motion Prediction, EURO XXVI 2013 EUROINFORMS Joint International Conference, Rome, Italy, July 1-4, 2013. |
| **7** | F. Yerlikaya-Özkurt, C. Vardar-Acar, Y. Yolcu-Okur and G.-W. Weber, Estimation of Hurst parameter of fractional Brownian motion using CMARS method, Extended Abstract, to appear in Volume of Abstracts (Book of Abstracts) of ICACM - International Conference on Applied and Computational Mathematics Ankara, Turkey, October 3-6, 2012. |
| **8** | F. Yerlikaya-Özkurt and G.-W. Weber, Estimation of Multi-dimensional Stochastic Differential Equations with CMARS Method, EURO XXV 2012, Vilnius, Lithuania, July 8-11, 2012. |
| **9** | F. Yerlikaya-Özkurt, P. Taylan and G.-W. Weber, Mean Shift Outlier Model with MARS and Continuous Optimization, IFORS 2011, Melbourne, Australia, |

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| | July 10-15, 2011. |
| **10** | F. Yerlikaya-Özkurt, P. Taylan and G.-W. Weber, CMARS Method for Stochastic Differential Equations, OR 2011 Zurich, August 30 \| September 2, 2011, Zurich, Switzerland. |
| **11** | F. Yerlikaya-Özkurt, P. Taylan and G.-W. Weber, Parameter Estimation for Semiparametric Models with CMARS and Its Applications, EURO XXIV 2010, Lisbon, Portugal, July 11-14, 2010. |
| **12** | F. Yerlikaya-Özkurt, G.-W. Weber and P. Taylan, Parameter Estimation for Semiparametric Models with CMARS and Its Applications, distributed at 5th International Summer School Achievements and Applications of Contemporary Informatics, Mathematics and Physics, National University of Technology of the Ukraine, Kiev, Ukraine, August 3-15, 2010. |
| **13** | F. Yerlikaya-Özkurt, P. Taylan, I. Batmaz, G. Koksal and G.-W. Weber, A Modification of MARS by Tikhonov Regularization and Conic Quadratic Programming for Modeling Quality Data, EURO XXIII 2009, Bonn, Germany, July 5-8, 2009. |
| **14** | F. Yerlikaya-Özkurt, G.-W.Weber and A. Özmen, Robustification of CMARS, 14th International Congress on Computational and Applied Mathematics (ICCAM), Antalya, Turkey, September 29 - October 2, 2009. |
| **15** | F. Yerlikaya, G.-W. Weber, P. Taylan, İ. Batmaz and G. Köksal, CMARS ile Doğrusal Olmayan Veri Yapılarının Modellenmesi, YA/EM'09: Yöneylem Araştırması ve Endüstri Mühendisliği 29. Ulusal Kongresi. Ankara, 22-24 Haziran, 2009. |
| **16** | F. Yerlikaya, G.-W. Weber, P. Taylan, İ. Batmaz and G. Köksal, MARS Algoritmasında Tikhonov Düzenlemesi ve Çok Amaçlı Optimizasyon Kullanımı, YA/EM'08: Yöneylem Arşatırması ve Endüstri Mühendisliği 28. Ulusal Kongresi. İstanbul, Türkiye. 30 Haziran-2 Temmuz, 2008. |

## CITATIONS

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| Sum of times cited without self-citations (ISI Web of Science): | 515 (As of June 2024) |
| H-index (ISI Web of Science): | 11 (As of June 2024) |

## PROJECTS

| | | |
|---|---|---|
| **1** | Project Manager, Atılım mPAD'e özel İstatistik Uygulaması: Probability & Statistrics (PS) Files, Atılım University, mPAD Projeleri Destek Programı, 2022. | |
| **2** | Project consultant, Sıfıraltı Sıcaklık Muhafaza Koşullarının Su Verilmiş 2024 Alüminyum Alaşımının Yaşlanma Davranışına ve Şekillendirilebilirliğine Etkisinin Araştırılması, TUSAŞ – Türk Havacılık ve Uzay Sanayii A.Ş., 2021-2022 | |
| **3** | Project Manager, Development of e-Applications of Statistical and Mathematical Modeling with use of Atılım mPAD for Educational Purposes, Atılım University BAD, July 2018 - January 2019. | |
| **4** | Project consultant, Work Load Forecasting and Development Decision Support System of the Design Projects, TAI and TÜBİTAK, September 2013 - January 2014. | |
| **5** | Project assistance, Use and Development of Data Mining Methods for Quality Control in Manufacturing, TÜBİTAK, 2007-2009. | |

## COURSES GIVEN

| | |
|---|---|
| **1** | IE122 Quantitative Analysis and Introduction to Modeling, Department of Industrial Engineering, Atılım University. |
| **2** | IE201 Probability and Statistics I, Department of Industrial Engineering, Atılım University. |
| **3** | IE220 Probability and Statistics for Engineers, Department of Industrial Engineering, Atılım University. |
| **4** | IE442 Statistical Applications in Industrial Engineering, Department of Industrial Engineering, Atılım University. |
| **5** | MED101 Introduction to Medicine (Biostatistics), Medical School, Atılım University. |
| **6** | MED104 Locomotion (Biostatistics), Medical School, Atılım University. |
| **7** | MED106 Public Health (Biostatistics), Medical School, Atılım University. |
| **8** | MED203 Fundamentals of Neuroscience (Biostatistics), Medical School, Atılım University. |
| **9** | MED204 Respiratory System (Biostatistics), Medical School, Atılım University. |
| **10** | IE401 Industrial Engineering Design I, Department of Industrial Engineering, Atılım University. |
| **11** | IE402 Industrial Engineering Design II, Department of Industrial Engineering, Atılım University. |
| **12** | STAT256 Numerical Methods, 2016-2017 Fall and 2013-2014 Spring, Department of Statistics, Middle East Technical University. |

## THESES SUPERVISED

| | |
|---|---|
| **1** | MSc Thesis, Co- Advisor, Ground motion to intensity conversion equations (GMICEs) for Türkiye: evaluation of regional differences with parametric and non-parametric regression methods, Kubilay Albayrak, METU, Department of Civil Engineering, 2023. |
| **2** | MSc Thesis, Advisor, Comparison and Assessment of Shrinkage Methods in Case of Multicollinearity Problem, Şevval Kılıçoğlu, Atılım University, Department of Industrial Engineering, 2022. |
| **3** | MSc Thesis, Co- Advisor, Strategic Energy Production Planning of Turkey Using Mixed Integer Programming Based on Electricity Demand Forecasting, Gökay Yörük, Atılım University, Department of Industrial Engineering, 2019-2021. |