

Prof. Mehmet Hakan SATMAN

Personal Information

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International Researcher IDs

ScholarID: cEoU8j8AAAAJ

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Publons / Web Of Science ResearcherID: F-2897-2014

ScopusID: 36919352800

Yoksis Researcher ID: 39109

Education Information

Doctorate, Istanbul University, Institute of Social Sciences, Ekonometri, Turkey 2005 - 2008

Postgraduate, Istanbul University, Institute of Social Sciences, Ekonometri, Turkey 2002 - 2005

Undergraduate, Istanbul University, Faculty of Economics, İşletme, Turkey 1998 - 2002

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Ekonometrik Yöntem ve Sorunlara Genetik Algoritma Yaklaşımları ve İktisadi Uygulamalar, Istanbul University, Institute of Social Sciences, Ekonometri, 2008

Postgraduate, Doğrusal Regresyonda Aykırı Gözlemlerin Teşhis Yöntemleri, Istanbul University, Institute of Social Sciences, Ekonometri, 2005

Research Areas

Operational Research, Quantitative Methods, Simulation and Modelling, Evolutionary Computing, Software, Numerical Analysis, Statistics

Academic Titles / Tasks

Professor, Istanbul University, Faculty of Economics, Department of Econometrics, 2018 - Continues

Associate Professor, Istanbul University, Faculty of Economics, Department of Econometrics, 2013 - 2018

Assistant Professor, Istanbul University, Faculty of Economics, Department of Econometrics, 2010 - 2013

Research Assistant, Istanbul University, Faculty of Economics, Department of Econometrics, 2002 - 2010

Academic and Administrative Experience

Courses

Quantitative Techniques in Business, Undergraduate, 2023 - 2024
Yöneylem Araştırmaları I, Undergraduate, 2015 - 2016
Tedarik Zinciri Yönetiminde Modelleme, Postgraduate, 2015 - 2016
Yöneylem Araştırmaları, Undergraduate, 2015 - 2016
Matematik II, Undergraduate, 2015 - 2016
Matematik I, Undergraduate, 2015 - 2016
Bilgisayar Programlama 1, Undergraduate, 2015 - 2016
Java ile Nesneye Yönelik Programlama, Postgraduate, 2012 - 2013
Bilgisayar Programlama 2, Undergraduate, 2012 - 2013
Bilişim Sistemleri, Undergraduate, 2012 - 2013
Araştırma Teknikleri, Postgraduate, 2012 - 2013
Bilgisayar Programlama 1, Undergraduate, 2012 - 2013
Bilgisayar, Undergraduate, 2012 - 2013
Yöneylem Araştırmasına Giriş, Undergraduate, 2012 - 2013
Matematik I, Undergraduate, 2012 - 2013

Advising Theses

Satman M. H., Enerji optimizasyonu odaklı çoklu insansız hava ve kara araçları ile görev planlaması, Doctorate, A.GÜZEY(Student), 2024
Satman M. H., Investigating Cellular Genetic Algorithms and Improving the Performance, Doctorate, S.Akten(Student), 2024
Satman M. H., Doğrusal programlama yöntemi ile talep tahmini ve alüminyum sektöründe bir uygulama, Postgraduate, Ö.TEKİN(Student), 2018
Satman M. H., Ham verilerin genetik algoritmalarla ilişkisel veritabanlarına dönüştürülmesi ve bir uygulama, Doctorate, E.AKADAL(Student), 2017

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **WURS: a simulation software for university rankings-software review**
Siniksaran E., SATMAN M. H.
SCIENTOMETRICS, vol.122, no.1, pp.701-717, 2020 (SCI-Expanded)
- II. **Reducing errors-in-variables bias in linear regression using compact genetic algorithms**
Satman M. H., Diyarbakirlioglu E.
JOURNAL OF STATISTICAL COMPUTATION AND SIMULATION, vol.85, no.16, pp.3216-3235, 2015 (SCI-Expanded)
- III. **A Genetic Algorithm Based Modification on the LTS Algorithm for Large Data Sets**
Satman M. H.
COMMUNICATIONS IN STATISTICS-SIMULATION AND COMPUTATION, vol.41, no.5, pp.644-652, 2012 (SCI-Expanded)

Articles Published in Other Journals

- I. **pycellga: A Python package for improved cellular genetic algorithms**
Karakaya S. A., Satman M. H.
JOURNAL OF OPEN SOURCE SOFTWARE, vol.10, no.105, pp.1-6, 2025 (Peer-Reviewed Journal)

- II. **A Robust Initial Basic Subset Selection Method for Outlier Detection Algorithms in Linear Regression**
Satman M. H.
Journal of Statistics and Applied Sciences, vol.10, pp.76-85, 2024 (Peer-Reviewed Journal)
- III. **Dynamic Energy And Cost Efficient Multi-UAV Routing Problem Using Enhanced Genetic Algorithm**
Güzey A., Satman M. H.
Journal of Optimization and Decision Making, vol.3, no.2, pp.449-484, 2024 (Peer-Reviewed Journal)
- IV. **An Improved Cellular Genetic Algorithm with Machine-Coded Operators for Real-Valued Optimisation Problems**
Akten Karakaya S., Satman M. H.
Journal of Engineering Research and Applied Science, vol.13, no.1, pp.2500-2514, 2024 (Peer-Reviewed Journal)
- V. **A Solution to Errors-in-variables Bias in Multivariate Linear Regression using Compact Genetic Algorithms**
Satman M. H., Diyarbakırhoğlu E.
The Journal of Applied Microeconometrics, vol.4, no.1, pp.31-64, 2024 (Peer-Reviewed Journal)
- VI. **Collaborative Truck/Drone Routing Problem: An Application to Disaster Logistics**
Güzey A., Satman M. H.
Journal of Statistics & Applied Sciences, no.9, pp.77-94, 2024 (Peer-Reviewed Journal)
- VII. **How European Are You? Cultural Changes Of European Countries In The Last 20 Years With Survey Data**
Aslan S. T., Satman M. H.
Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, vol.62, pp.295-315, 2024 (Peer-Reviewed Journal)
- VIII. **Comparison of Outlier Detection Methods in Linear Regression: A Multiple-Criteria Decision-Making Approach**
Satman M. H.
ACTA INFOLOGICA, vol.7, no.2, pp.333-347, 2023 (ESCI)
- IX. **G20 Ülkelerinin Covid-19 Pandemisi ile Mücadele Performanslarının Çok Kriterli Karar Verme Yöntemleri ile Değerlendirilmesi**
Karakaş Geyik S., Satman M. H., Kalyoncu G.
Ekoist journal of econometrics and statistics (Online), no.37, pp.27-52, 2022 (Peer-Reviewed Journal)
- X. **A Novel Automatic Relational Database Normalization Method**
AKADAL E., SATMAN M. H.
ACTA INFORMATICA PRAGENSIA, vol.11, no.3, 2022 (Scopus)
- XI. **Teaching the median with terms of absolute value, differentiability, and optimization**
Satman M. H.
Alphanumeric Journal, vol.10, no.1, pp.41-50, 2022 (Peer-Reviewed Journal)
- XII. **FACTORS INFLUENCING HEALTHCARE SATISFACTION IN TURKEY**
Issever T., İŞSEVER H., SATMAN M. H.
NOBEL MEDICUS, vol.18, no.1, pp.62-73, 2022 (ESCI)
- XIII. **JMcDM: A Julia package for multiple-criteria decision-making tools**
Satman M. H., Yildirim B. F., Kuruca E.
Journal of Open Source Software, vol.6, no.65, pp.1-6, 2021 (Peer-Reviewed Journal)
- XIV. **LinRegOutliers: A Julia package for detecting outliers in linear regression**
Satman M. H., Adiga S., Angeris G., Akadal E.
The Journal of Open Source Software, vol.6, no.57, pp.1-6, 2021 (Peer-Reviewed Journal)
- XV. **RCaller: A Java package for interfacing R**
Satman M. H., Aleksandr K.
Journal of Open Source Software, vol.5, no.55, pp.1-3, 2020 (Peer-Reviewed Journal)
- XVI. **Machine Coded Compact Genetic Algorithms for Real Parameter Optimization Problems**
Satman M. H., Akadal E.
Alphanumeric Journal, vol.8, no.1, pp.43-58, 2020 (Peer-Reviewed Journal)
- XVII. **PERFORMANCE COMPARISON OF THE SPECIALIZED ALPHA MALE GENETIC ALGORITHM WITH SOME**

EVOLUTIONARY ALGORITHMS

Satman M. H., Akadal E.

Trakya Üniversitesi Sosyal Bilimler Dergisi, vol.21, no.1, pp.55-82, 2019 (Peer-Reviewed Journal)

- XXVIII. **mcga: R Implementation of the Machine-coded Genetic Algorithms**
SATMAN M. H., AKADAL E.
British Journal of Mathematics & Computer Science, no.20, pp.1-20, 2017 (Peer-Reviewed Journal)
- XIX. **Machine-coded genetic operators and their performances in floating-point genetic algorithms**
SATMAN M. H., AKADAL E.
International Journal of Advanced Mathematical Sciences, vol.5, no.1, pp.8-19, 2017 (Peer-Reviewed Journal)
- XX. **ARIMA forecasting as a genetic inheritance operator in floating-point genetic algorithms**
Satman M. H., Akadal E.
Journal of Mathematical and Computational Science, vol.6, pp.360-376, 2016 (Scopus)
- XXI. **Hybridization of floating-point genetic algorithms using Hooke-Jeeves algorithm as an intelligent mutation operator**
Satman M. H.
Journal of Mathematical and Computational Science, vol.5, pp.320-332, 2015 (Scopus)
- XXII. **Fast Online detection of outliers using least-trimmed squares regression with non-dominated sorting based initial subsets**
SATMAN M. H.
International Journal of Advanced Statistics and Probability, no.3, pp.53-63, 2015 (Peer-Reviewed Journal)
- XXIII. **RCaller: A Software Library for Calling R from Java**
SATMAN M. H.
British Journal of Mathematics and Computer Science, no.4, pp.2188-2196, 2014 (Peer-Reviewed Journal)
- XXIV. **Selecting Location of Retail Stores Using Artificial Neural Networks and Google Places API**
SATMAN M. H., Altunbey M.
International Journal of Statistics and Probability, no.3, pp.67-77, 2014 (Peer-Reviewed Journal)
- XXV. **The Maximum Diversification Index**
Diyarbakirlioğlu E., Satman M. H.
JOURNAL OF ASSET MANAGEMENT, vol.14, no.6, pp.400-409, 2013 (ESCI)
- XXVI. **A New Algorithm for Detecting Outliers in Linear Regression**
SATMAN M. H.
International Journal of Statistics and Probability, vol.2, pp.101-109, 2013 (Peer-Reviewed Journal)
- XXVII. **PURO: A Package for Unmasking Regression Outliers**
Siniksaran I. E., Satman M. H.
GAZI UNIVERSITY JOURNAL OF SCIENCE, no.24, pp.59-68, 2011 (Scopus)
- XXVIII. **Ekonometik Modellerde Eksik Gölge Değişkenlerin Genetik Algoritmalar ile Tespit Edilmesi**
SATMAN M. H.
İstanbul Üniversitesi Sosyal Bilimler Dergisi, vol.1, pp.139-147, 2008 (Peer-Reviewed Journal)
- XXIX. **Durağan Zaman Serilerinde Uygun ARMA Modelinin Genetik Algoritmalarla Bulunması ve İMKB Verileri Üzerine Bir Uygulama**
SATMAN M. H.
İSTANBUL ÜNİVERSİTESİ İKTİSAT FAKÜLTESİ MECMUASI, vol.57, no.1, pp.21-38, 2008 (Peer-Reviewed Journal)
- XXX. **Çoklu Regresyon Uçdeğerlerinin Teşhisçisi Olarak Çanta Çiziti**
SINIKSARAN İ. E., SATMAN M. H.
İstatistik Araştırma Dergisi, no.5, pp.35-48, 2007 (Peer-Reviewed Journal)
- XXXI. **EKK ve Bazı Dayanıklı Tahmincilerin Derinliklerinin Kirlenmeye Karşı Değişimlerinin İncelenmesi**
SINIKSARAN İ. E., SATMAN M. H., ALTAYLIGİL Y. B.
İstatistik Araştırma Dergisi, vol.4, pp.76-91, 2005 (Peer-Reviewed Journal)
- XXXII. **Stock Market Forecasting: Artificial Neural Network and Linear Regression Comparison in an Emerging Market**
Altay E., Satman M. H.

Books & Book Chapters

- I. **Blockchain: Concepts, Issues, and Applications**
Akadal E. (Editor), Karakaş Geyik S. (Editor), Satman M. H. (Editor)
Istanbul University Press, İstanbul, 2024
- II. **An Answer to Roll's Critique (1977) 45 Years Later.**
Desban M., Diyarbakırlioğlu E., Jarjir S. L., Satman M. H.
in: Essays on Financial Analytics. (part of Lecture Notes in Operations Research), Alphonse P., Bouaiss K., Grandin P., Zopounidis C., Editor, Springer, London/Berlin, London, pp.297-341, 2023
- III. **Optimization With Julia**
Satman M. H., Akadal E.
in: Global Studies on Management Information Systems, Elif Kartal, Emre Akadal, Gökhan Övenç, Saeed Tabar, Editor, Istanbul University Press, İstanbul, pp.295-315, 2023
- IV. **GENETİK PROGRAMLAMININ TEMELLERİ: GENETİK PROGRAMLAMA VE EKONOMETRİ İLİŞKİSİ BAĞLAMINDA BİR İNCELEME**
Karakakaş Geyik S., Satman M. H.
in: Ekonometride Güncel Yöntemler ve Uygulamalar, Nilgün Çil, Editor, Istanbul University Press, İstanbul, pp.177-205, 2022
- V. **Güncel Yazılım Teknolojileri**
Satman M. H., Akadal E.
in: Tıp Bilişimi, Nilgün Bozbuğa, Sevinç Gülseçen, Editor, Istanbul University, İstanbul, pp.319-334, 2021
- VI. **Büyük Veri ve Getirdikleri: Saklanması, Anlamlandırma ve Analiz**
Karakakaş Geyik S., Satman M. H.
in: İşletmeciliği Yeniden Düşünmek, Ayşegül Özbebek Tunç, Yiğit Yurder, Merve Samioğlu, Editor, Türkmen Kitabevi, İstanbul, pp.61-92, 2021
- VII. **R ile Programlama**
SATMAN M. H.
Türkmen Kitabevi, İstanbul, 2018
- VIII. **Otomatik İlişkisel Veritabanı Tasarımı İçin Bir Yöntem Önerisi**
AKADAL E., SATMAN M. H.
in: Yönetim Bilişim Sistemlerinde Gündem, Gülsecen, S., Erol, Ç. S., Reis, Z. A., Gezer, M., Editor, Çağlayan Yayınevi, İstanbul, pp.189-202, 2018
- IX. **İstatistikte Optimizasyonun Yeri ve Evrimsel Optimizasyon Algoritmaları**
SATMAN M. H., AKADAL E.
in: Ekonometride Güncel Konular, Terzioğlu M. K., Dal S., Editor, Gazi Kitabevi, Ankara, pp.105-120, 2018
- X. **Genetik Algoritmalar**
SATMAN M. H.
Türkmen Kitabevi, İstanbul, 2016
- XI. **İstatistik ve Ekonometri Uygulamaları ile R**
SATMAN M. H.
Türkmen Kitabevi, İstanbul, 2010

Refereed Congress / Symposium Publications in Proceedings

- I. **Higher-moments estimation of industry-level cost of equity capital with errors-in-variables**
Diyarbakırlioğlu E., Satman M. H.
International Conference in Finance, Banking and Accounting, Montpellier, France, 23 September 2023

II. Ham verilerin genetik algoritmalarla ilişkiel veritabanlarına dönüştürülmesi

AKADAL E., SATMAN M. H.

4. Uluslararası Yönetim Bilişim Sistemleri Konferansı, İstanbul, Turkey, 17 - 20 October 2017, pp.187

III. Reel sayılı genetik algoritmalarla makine kodlamalı genetik operatörlerin performanslarının diğer bazı genetik operatörlerle karşılaştırılması

SATMAN M. H., AKADAL E.

17. ULUSLARARASI EKONOMETRİ, İSTATİSTİK VE YÖNEYLEM ARAŞTIRMASI SEMPOZYUMU, Sivas, Turkey, 2 - 04 June 2016, pp.1

Other Publications

I. Scientific Computing and (Big) Data Analysis with Julia

Satman M. H.

Presentation, pp.1-75, 2024

Supported Projects

Altuna O., Sınıksaran İ. E., Satman M. H., Samioğlu M., Technopark, COGBIAS: BİLİŞSEL KUSURLARIN TEŞHİSİNDE MAKİNE ÖĞRENME TEMELLİ BİR YAZILIM, 2020 - 2021

Satman M. H., Technopark, Matletik Mobil: Ortaokul Matematik Eğitimi İçin Bir Mobil Yazılım, 2017 - 2018

SATMAN M. H., Project Supported by Higher Education Institutions, Enez Kampı Kayıt Programı, 2010 - 2011

Patent

Akadal E., Satman M. H., Otomatik İlişkiel Veritabanı Oluşturmak İçin Bir Yöntem, Patent, CHAPTER B Implementation of Operations; Transport, The Invention Registration Number: 2017 23004 , Standard Registration, 2022

Satman M. H., Akadal E., Makine Kodlu Hibrit Kompakt Genetik Algoritmalar Optimizasyon Yöntemi, Patent, CHAPTER B Implementation of Operations; Transport, The Invention Registration Number: 2018-GE-510239 , Standard Registration, 2022

Activities in Scientific Journals

JOURNAL OF OPEN SOURCE SOFTWARE, Editor, 2021 - Continues

Journal of Econometrics and Statistics, Advisory Committee Member, 2020 - Continues

Scientific Refereeing

The Journal of Supercomputing, SCI Journal, January 2024

STATISTICAL PAPERS, SCI Journal, May 2021

Journal of Statistical Computation and Simulation, SCI Journal, August 2015

British Journal of Mathematics & Computer Science, Other Indexed Journal, January 2014

İ.Ü. İktisat Fakültesi Ekonometri ve İstatistik Dergisi, National Scientific Refreed Journal, January 2013

Metrics

Publication: 50

Citation (WoS): 10

Citation (Scopus): 37

H-Index (WoS): 2

H-Index (Scopus): 3

Non Academic Experience

İstanbul Üniversitesi

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