

Prof. MURAT CANER TESTİK

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International Researcher IDs

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Education Information

Doctorate, Arizona State University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, United States Of America 1999 - 2003

Foreign Languages

English, C1 Advanced

Research Areas

Industrial Engineering, Quality and Reliability, Quality Control, Engineering and Technology

Academic Titles / Tasks

Professor, Hacettepe University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2012 - Continues

Associate Professor, Hacettepe University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2005 - 2012

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2005 - 2005

Academic and Administrative Experience

Hacettepe Üniversitesi, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2016 - Continues

Hacettepe Üniversitesi, Mühendislik Fakültesi, 2012 - 2016

Hacettepe Üniversitesi, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2006 - 2014

Advising Theses

TESTİK M. C., BİLGİSAYAR VERİ GÜNLÜKLERİ ÜZERİNE HTEA OTOMASYONU VE ALTERNATİF YÖNTEMLER İLE ÇÖZÜM YAKLAŞIMLARI, Postgraduate, H.İBRAHİM(Student), 2018

TESTİK M. C., Esnek üretim sistemlerinin süreç tabanlı petri ağları ile modellenmesi, Postgraduate, A.KOÇ(Student), 2017

TESTİK M. C., Parameter estimators in Phase I and performance of individuals chart, Postgraduate, M.ATALAY(Student),

2016

TESTİK M. C., Phase I analysis of variables type correlated data, Postgraduate, E.DAŞDEMİR(Student), 2015

TESTİK M. C., Sürekli üretim yapan sistemler için performans yönetim sistemi tasarımı, Doctorate, V.SÖNMEZ(Student), 2015

TESTİK M. C., A two-sided CUSUM for first-order integer-valued autoregressive processes of poisson counts, Postgraduate, P.YONTAY(Student), 2011

TESTİK M. C., An improved organization method for association rules and a basis for comparison of methods, Postgraduate, M.JABARNEJAD(Student), 2010

TESTİK M. C., Monitoring high quality processes: A study of estimation errors on the time-between-events exponentially weighted moving average schemes, Postgraduate, G.ÖZSAN(Student), 2008

TESTİK M. C., Controlling high quality manufacturing processes: A robustness study of the lower-sided TBE EWMA procedure, Postgraduate, C.PEHLİVAN(Student), 2008

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Patient-based real-time quality control in medical laboratories: On the design and robustness of the moving average control chart with truncation limits**
Murat U., TESTİK M. C., PINAR A.
Quality and Reliability Engineering International, 2024 (SCI-Expanded)
- II. **Bi-objective parameter setting problem of a genetic algorithm: an empirical study on traveling salesperson problem**
Akduran Y., DAŞDEMİR E., TESTİK M. C.
Applied Intelligence, vol.53, no.22, pp.27148-27162, 2023 (SCI-Expanded)
- III. **Regression-based multiobjective optimization approaches for the autoclave composite parts placement problem: a mixed integer nonlinear programming model and an evolutionary algorithm**
Kırdar G., TEZCANER ÖZTÜRK D., TESTİK M. C.
Soft Computing, vol.27, no.19, pp.14045-14062, 2023 (SCI-Expanded)
- IV. **A review and comparison of control charts for ordinal samples**
Ottenstreuer S., Weiß C. H., TESTİK M. C.
Journal of Quality Technology, vol.55, no.4, pp.422-441, 2023 (SCI-Expanded)
- V. **Nonparametric Control Charts for Monitoring Serial Dependence based on Ordinal Patterns**
Weiß C. H., TESTİK M. C.
Technometrics, vol.65, no.3, pp.340-350, 2023 (SCI-Expanded)
- VI. **Supplier management by distributing orders among new and existing suppliers: the methodology and its application to a fast fashion company**
Alagoz B. A., TESTİK M. C., DİNLER D.
JOURNAL OF FASHION MARKETING AND MANAGEMENT, vol.26, no.5, pp.813-831, 2022 (SSCI)
- VII. **Monitoring count time series: Robustness to nonlinearity when linear models are utilized**
Weiss C. H., TESTİK M. C.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.38, no.8, pp.4356-4371, 2022 (SCI-Expanded)
- VIII. **A Multi-objective open vehicle routing problem with overbooking: Exact and heuristic solution approaches for an employee transportation problem**
Daşdemir E., Testik M. C., Tezcaner Öztürk D., Tuncer Şakar C., Güteryüz G., Testik Ö. M.
OMEGA, vol.108, pp.1-16, 2022 (SCI-Expanded)
- IX. **Digital twins in manufacturing: systematic literature review for physical-digital layer categorization and future research directions**
Atalay M., Murat U., Oksuz B., Parlaktuna A. M., PİŞİRİR E., TESTİK M. C.
INTERNATIONAL JOURNAL OF COMPUTER INTEGRATED MANUFACTURING, vol.35, no.7, pp.679-705, 2022 (SCI-Expanded)
- X. **Change points of real GDP per capita time series corresponding to the periods of industrial**

revolutions

TESTİK M. C., Sarikulak O.

TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE, vol.170, 2021 (SSCI)

- XI. **On the design of Shewhart control charts for count time series under estimation uncertainty**
Weiss C. H., TESTİK M. C., Homburg A.
COMPUTERS & INDUSTRIAL ENGINEERING, vol.157, 2021 (SCI-Expanded)
- XII. **Assessment of OTT Pluvio(2) Rain Intensity Measurements**
Saha R., Testik F. Y., TESTİK M. C.
JOURNAL OF ATMOSPHERIC AND OCEANIC TECHNOLOGY, vol.38, no.4, pp.897-908, 2021 (SCI-Expanded)
- XIII. **Discussion on "Experiences with big data: Accounts from a data scientist's perspective"**
TESTİK M. C.
QUALITY ENGINEERING, vol.32, no.4, pp.553-555, 2020 (SCI-Expanded)
- XIV. **An algorithmic approach to outlier detection and parameter estimation in Phase I for designing Phase II EWMA control chart**
TESTİK M. C., Kara O., Knoth S.
COMPUTERS & INDUSTRIAL ENGINEERING, vol.144, 2020 (SCI-Expanded)
- XV. **Guidelines for automating Phase I of control charts by considering effects on Phase-II performance of individuals control chart**
Atalay M., TESTİK M. C., DURAN S., Weiss C. H.
QUALITY ENGINEERING, vol.32, no.2, pp.223-243, 2020 (SCI-Expanded)
- XVI. **Risk-based metrics for performance evaluation of control charts**
Weiss C. H., TESTİK M. C.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.35, no.1, pp.280-291, 2019 (SCI-Expanded)
- XVII. **Guaranteed conditional ARL performance in the presence of autocorrelation**
Weiss C. H., Steuer D., Jentsch C., TESTİK M. C.
COMPUTATIONAL STATISTICS & DATA ANALYSIS, vol.128, pp.367-379, 2018 (SCI-Expanded)
- XVIII. **Effectiveness of phase I applications for identifying randomly scattered out-of-control observations and estimating control chart parameters**
TESTİK M. C., Weiss C. H., KOCA Y., TESTİK M. C.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.34, no.1, pp.78-92, 2018 (SCI-Expanded)
- XIX. **Editor's note**
TESTİK M. C.
QUALITY ENGINEERING, vol.30, no.4, pp.545, 2018 (SCI-Expanded)
- XX. **Overall equipment effectiveness when production speeds and stoppage durations are uncertain**
SÖNMEZ V., TESTİK M. C., TESTİK Ö. M.
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, pp.1-10, 2017 (SCI-Expanded)
- XXI. **Using accurately measured production amounts to obtain calibration curve corrections of production line speed and stoppage duration consisting of measurement errors**
SÖNMEZ V., TESTİK M. C.
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.88, pp.3257-3263, 2017 (SCI-Expanded)
- XXII. **Evaluation of Phase I analysis scenarios on Phase II performance of control charts for autocorrelated observations**
DAŞDEMİR E., WEISS C., TESTİK M. C., KNOTH S.
QUALITY ENGINEERING, vol.28, no.3, pp.293-304, 2016 (SCI-Expanded)
- XXIII. **Special Issue: Special Issue on the Third Stu Hunter Research Conference**
TESTİK M. C.
QUALITY ENGINEERING, vol.28, no.1, pp.1, 2016 (SCI-Expanded)
- XXIV. **Sürekli Üretim Hatlarında Kullanılan Makinelerin Performanslarının İzlenmesi Amacıyla Geliştirilen Bir Bilgi Sistemi Çerçevesi**
SÖNMEZ V., TESTİK M. C.

- Savunma Bilimleri Dergisi, vol.14, no.2, pp.111-140, 2015 (SCI-Expanded)
- XXV. **On the Phase I analysis for monitoring time-dependent count processes**
WEISS C. H., TESTİK M. C.
IIE TRANSACTIONS, vol.47, no.3, pp.294-306, 2015 (SCI-Expanded)
- XXVI. **Residuals-Based CUSUM Charts for Poisson INAR(1) Processes**
WEISS C. H., TESTİK M. C.
JOURNAL OF QUALITY TECHNOLOGY, vol.47, no.1, pp.30-42, 2015 (SCI-Expanded)
- XXVII. **A Two-Sided Cumulative Sum Chart for First-Order Integer-Valued Autoregressive Processes of Poisson Counts**
Yontay P., WEISS C. H., TESTİK M. C., BAYINDIR Z. P.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.29, no.1, pp.33-42, 2013 (SCI-Expanded)
- XXVIII. **Driver performance appraisal using GPS terminal measurements: A conceptual framework**
Simsek B., Pakdil F., Dengiz B., TESTİK M. C.
TRANSPORTATION RESEARCH PART C-EMERGING TECHNOLOGIES, vol.26, pp.49-60, 2013 (SCI-Expanded)
- XXIX. **Detection of Abrupt Changes in Count Data Time Series: Cumulative Sum Derivations for INARCH(1) Models**
WEISS C. H., TESTİK M. C.
JOURNAL OF QUALITY TECHNOLOGY, vol.44, no.3, pp.249-264, 2012 (SCI-Expanded)
- XXX. **Discovering Blood Donor Arrival Patterns Using Data Mining: A Method to Investigate Service Quality at Blood Centers**
TESTİK M. C., OZKAYA B., AKSU S., ÖZCEBE O. İ.
JOURNAL OF MEDICAL SYSTEMS, vol.36, no.2, pp.579-594, 2012 (SCI-Expanded)
- XXXI. **A review of data mining applications for quality improvement in manufacturing industry**
KÖKSAL G., BATMAZ İ., TESTİK M. C.
EXPERT SYSTEMS WITH APPLICATIONS, vol.38, no.10, pp.13448-13467, 2011 (SCI-Expanded)
- XXXII. **Monitoring chenille yarn defects using image processing with control charts**
TUNAK M., BAJZIK V., TESTİK M. C.
TEXTILE RESEARCH JOURNAL, vol.81, no.13, pp.1344-1353, 2011 (SCI-Expanded)
- XXXIII. **The Poisson INAR(1) CUSUM chart under overdispersion and estimation error**
WEISS C. H., TESTİK M. C.
IIE TRANSACTIONS, vol.43, no.11, pp.805-818, 2011 (SCI-Expanded)
- XXXIV. **On the Expected Parts Per Million Nonconforming Levels Obtained from Estimated Process Capability Indices**
OZKAYA B., TESTİK M. C.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.26, no.8, pp.817-829, 2010 (SCI-Expanded)
- XXXV. **Properties of the Exponential EWMA Chart with Parameter Estimation**
Ozsan G., TESTİK M. C., WEISS C. H.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.26, no.6, pp.555-569, 2010 (SCI-Expanded)
- XXXVI. **Editorial - ENBIS 8th Annual Meeting**
TESTİK M. C.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.26, no.2, pp.125, 2010 (SCI-Expanded)
- XXXVII. **Impact of Model Misspecification on the Exponential EWMA Charts: A Robustness Study when the Time-Between-Events are not Exponential**
PEHLIVAN C., TESTİK M. C.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.26, no.2, pp.177-190, 2010 (SCI-Expanded)
- XXXVIII. **CUSUM Monitoring of First-Order Integer-Valued Autoregressive Processes of Poisson Counts**
WEISS C. H., TESTİK M. C.
JOURNAL OF QUALITY TECHNOLOGY, vol.41, no.4, pp.389-400, 2009 (SCI-Expanded)
- XXXIX. **The effect of Phase I sample size on the run length performance of control charts for autocorrelated data**
KÖKSAL G., Kantar B., Ula T. A., TESTİK M. C.

JOURNAL OF APPLIED STATISTICS, vol.35, no.1, pp.67-87, 2008 (SCI-Expanded)

- XL. **Conditional and marginal performance of the Poisson CUSUM control chart with parameter estimation**
Testik M. C.
INTERNATIONAL JOURNAL OF PRODUCTION RESEARCH, vol.45, no.23, pp.5621-5638, 2007 (SCI-Expanded)
- XLI. **Relationships among control charts used with feedback control**
RUNGER G., Testik M. C., TSUNG F.
QUALITY AND RELIABILITY ENGINEERING INTERNATIONAL, vol.22, no.8, pp.877-887, 2006 (SCI-Expanded)
- XLII. **Multivariate one-sided control charts**
Testik M. C., RUNGER G.
IIE TRANSACTIONS, vol.38, no.8, pp.635-645, 2006 (SCI-Expanded)

Books & Book Chapters

- I. **Assessment of Shewhart Control Chart Limits in Phase I Implementations Under Various Shift and Contamination Scenarios**
TESTİK M. C., Weiss C., KOCA Y., TESTİK Ö. M.
in: Frontiers in Statistical Quality Control 12, , Editor, Springer, Cham, pp.21-43, 2018
- II. **GERİATRİK BİLİMLER**
BAYDAR T., KUTSAL F. Y., İnam A., SAYIL F. M., ERDİL F., RAKICIOĞLU N., ASLAN D., BARAN A., BABAOĞUL M., TESTİK M. C., et al.
Yalçın Matbaacılık A.Ş., Ankara, 2015

Refereed Congress / Symposium Publications in Proceedings

- I. **Otoklavlarda Kürlenme Süresinin Tahmin Edilmesine Yönelik Yaklaşımlar**
Yücel T., TEZCANER ÖZTÜRK D., TESTİK M. C.
11. Savunma Teknolojileri Kongresi, SAVTEK, Ankara, Turkey, 10 September 2024
- II. **Estimating the Time to Reach the Curing Temperature in Autoclave Curing Processes**
Kırdar G., TEZCANER ÖZTÜRK D., TESTİK M. C.
ENBIS-21 Conference, Turkey, 13 - 15 September 2021
- III. **A Multiobjective Evolutionary Approach to Employee Bus Transportation Problem**
DAŞDEMİR E., TESTİK M. C., TESTİK Ö. M., TUNCER ŞAKAR C.
International Conference on Advanced Technologies, Computer Engineering and Science (ICATCES 2018), Karabük, Turkey, 11 - 13 May 2018
- IV. **A Database Design for a Process Mapping Tool: RASCI**
SÖNMEZ V., TESTİK M. C.
1st International Advanced Research and Engineering Congress, 16 - 18 November 2017
- V. **A Framework for Designing a Performance Measurement System that Measures and Monitors Overall Equipment Effectiveness**
SÖNMEZ V., TESTİK M. C.
2nd International Mediterranean Science and Engineering Congress, 25 - 27 October 2017
- VI. **Simulation of Out-of-Control Process Observations for Evaluating Effectiveness of Phase I Studies**
TESTİK M. C., Weiss C., KOCA Y., TESTİK Ö. M.
INFORMS Annual Meeting, HOUSTON, United States Of America, 22 - 25 October 2017
- VII. **A Tool for Calculating Fuzzy and Interval Production Loss Measurement**
SÖNMEZ V., TESTİK M. C., TESTİK Ö. M.
The 5th International Fuzzy Systems Symposium, 14 - 15 October 2017
- VIII. **Phase I Performance of Control Charts under Temporally Random Contamination of Observations**

TESTİK M. C., Weiss C., KOCA Y., TESTİK Ö. M.

ENBIS European Network for Business and Industrial Statistics) 17, Napoli, Italy, 9 - 14 September 2017

- IX. **Sürekli Üretim Sistemlerinde Kullanılan Makineler için Gerçekleşen Üretim Hızı ve Toplam Üretim Kesinti Süresinin Hesaplanmasında Kalibrasyon Yaklaşımı**
SÖNMEZ V., TESTİK M. C.
37. Yöneylem Araştırması ve Endüstri Mühendisliği Ulusal Kongresi, Turkey, 5 - 07 July 2017
- X. **Automation of FMEA for Computer Servers Using Log Data with Grey Relational Analysis**
AYAZ H. İ., TESTİK M. C.
2017 International Conference on Computer Science and Engineering (UBMK), Antalya, Turkey, 5 - 08 October 2017, pp.616-620
- XI. **Yazılım Geliştirme Takımlarının Bulut Üstünden Yazılım Geliştirme Eğilimlerinin İncelenmesi**
Çoban Ş., UÇAR E., CHOUSEIN OĞLOU O., SEVGİ C., TESTİK M. C.
10. Ulusal Yazılım Mühendisliği Sempozyumu (UYMS16), Çanakkale, Turkey, 24 - 26 October 2016, pp.14-25
- XII. **On the Phase I Shewhart Control Charts for Minizing Mean Squared Error When the Data are Contaminated**
TESTİK M. C., weiss c., KOCA Y., TESTİK Ö. M.
XIIth International Workshop on Intelligent Statistical Quality Control 2016, 16 August 2016
- XIII. **İş Pozisyonlarının Görev Analizi için Görev Yönetim Matrisi**
SÖNMEZ V., TESTİK M. C.
Yöneylem Araştırması ve Endüstri Mühendisliği 36. Ulusal Kongresi, Turkey, 13 - 15 July 2016
- XIV. **Design of an Information System for Analyzing the Performance of Continuous Production Systems**
SÖNMEZ V., TESTİK M. C.
28th European Conference on Operational Research, 3 - 06 July 2016
- XV. **Understanding the tendency of software development teams to develop software over the cloud**
Yazılım geliştirme takımlarının bulut üstünden yazılım geliştirme eğilimlerinin incelenmesi
Çoban Ş., Uçar E., CHOUSEİNOĞLOU O., Sevgi C., TESTİK M. C.
10th Turkish National Software Engineering Symposium, UYMS 2016, Çanakkale, Turkey, 24 - 26 October 2016, vol.1721, pp.14-25
- XVI. **Sürekli Üretim Hatlarında Kullanılan Makineler için Toplam Üretim Duruşu Süresinin Bileşik Poisson Dağılımı ile Modellenmesi ve İzlenmesi**
SÖNMEZ V., TESTİK M. C.
Yöneylem Araştırması ve Endüstri Mühendisliği 35. Ulusal Kongresi, Turkey, 9 - 11 September 2015
- XVII. **Phase I Analysis of Autocorrelated Time Series Data**
DAŞDEMİR E., WEISS C., TESTİK M. C., KNOTH S.
European Network for Business and Industrial Statistics (ENBIS) 14 Conference, Linz, Austria, 21 - 25 September 2014
- XVIII. **A Simulation Based Decision Support Tool For Hospital Bed Capacity Planning**
SÖNMEZ V., DAŞDEMİR E., TESTİK Ö. M., TESTİK M. C.
Global Conference on Healthcare Systems Engineering, 4 - 07 July 2014
- XIX. **Improving Hospital Billing Processes for Reducing Costs of Billing Errors**
Daşdemir E., Oğuz M. M., Atalay M., Bilgin V., Testik M. C., Soydan G.
European Network for Business and Industrial Statistics (ENBIS) 13 Conference, Ankara, Turkey, 15 - 19 September 2013, pp.1
- XX. **Hacettepe Üniversitesi Tıp Fakültesi İhsan Doğramacı Çocuk Hastanesi Çocuk Acil Ünitesi'nde Triaj Uygulama Tecrübesi ve Triaj Performans Analizi**
TEKŞAM Ö., TESTİK M. C., ÖZÖN Z. A., SÖNMEZ V., pehlivan C., KALE G., BODUROĞLU O. K.
II. Uluslararası Sağlıkta Performans ve Kalite Kongresi, Antalya, Turkey, 28 April 2010, pp.255-262
- XXI. **Gün İçi Kan Bağış Sayılarının Homojen Olmayan Bileşik Poisson Süreci Olarak Modellenmesi**
SÖNMEZ V., TESTİK M. C., YÜKSEL ÖZKAYA B.
Yöneylem Araştırması Endüstri Mühendisliği Sempozyumu, Turkey, 07 July 2009 - 08 July 2007
- XXII. **Kan Merkezi Hizmet Kalitesinin İyileştirilmesine Yönelik Bir Simülasyon Çalışması**

SÖNMEZ V., TESTİK M. C., YÜKSEL ÖZKAYA B.

Yöneylem Araştırması Endüstri Mühendisliği Sempozyumu, Turkey, 7 - 08 July 2008

XXIII. Business descriptions and financial performance analysis of public RFID companies

Kasap S., TESTİK M. C., KASAP N.

1st International RFID Eurasia Conference, İstanbul, Turkey, 5 - 06 September 2007, pp.238-240

Supported Projects

TESTİK M. C., TESTİK Ö. M., WEİSS C., KOCA Y., Project Supported by Higher Education Institutions, Kontrol Grafiklerinin Geçici Olarak Rasgele Kirli Gözlemler Altındaki Faz I Performansı, 2017 - 2020

SÖNMEZ V., TESTİK M. C., Project Supported by Higher Education Institutions, Sürekli Üretim Sistemlerinde Kullanılan Makineler için Gerçekleşen Üretim Hızı ve Toplam Üretim Kesinti Süresinin Hesaplanmasında Kalibrasyon Yaklaşımı, 2017 - 2017

CHOUSEİN OĞLOU O., TESTİK M. C., Project Supported by Higher Education Institutions, Yazılım Geliştirme Takımlarının Bulut Üstünden Yazılım Geliştirme Eğilimlerinin İncelenmesi, 2016 - 2017

TESTİK M. C., Project Supported by Higher Education Institutions, POISON INAR1 Süreçleri için Rezidüye Dayalı CUSUM Grafikleri, 2016 - 2017

Metrics

Publication: 67

Citation (WoS): 440

Citation (Scopus): 757

H-Index (WoS): 10

H-Index (Scopus): 14