Prof. MEHMET ÇAKMAKÇI

Personal Information

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Education Information

Doctorate, Technische Universitaet Wien, Austria 1986 - 1990
Postgraduate, Vienna Technical University, Austria 1985 - 1990
Undergraduate, Istanbul Technical University, Sakarya Mühendislik Fakültesi, Makine Mühendisliği Pr., Turkey 1978 - 1982

Dissertations

Doctorate, Kalite güvenilirliği ve bilgisayar destekli ölçme tekn, Technische Universitaet Wien, 1990
Postgraduate, Konzepte und Lösungsstrategien der rechnerintegrierten Qualitaetssicherung und Qualitaetskontrolle im Rahmen der automatisierten Produktion, Vienna Technical University, 1990

Research Areas

Engineering and Technology

Academic Titles / Tasks

Professor, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2016 - Continues

Academic and Administrative Experience

Farabi Program Institutional Coordinator, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2020 - Continues
University Executive Board Member, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2015 - 2018
Deputy Head of Department, Dokuz Eylul University, Mühendislik Fakültesi, Endüstri Mühendisliği Bölümü, 2005 - 2007

Courses

YALIN ÜRETİM, Undergraduate, 2020 - 2021, 2019 - 2020, 2017 - 2018, 2016 - 2017
SEMİNER, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017
PROJE YÖNETİMİ, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017
İŞ SAĞLIĞI VE GÜVENLİĞİ I, Undergraduate, 2019 - 2020
İŞ SAĞLIĞI VE GÜVENLİĞİ II, Undergraduate, 2019 - 2020
M.SC. THESİS, Postgraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017
NANOBİLİM VE NANOMÜHENDİSLİKTE KALİTE YÖNETİMİ, Postgraduate, 2018 - 2019
İş Sağlığı ve Güvenliği, Undergraduate, 2018 - 2019
M.SC. RESEARCH, Postgraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017
BİTİRME PROJESİ, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017
MALİYET ANALİZİ VE FİZİBİLİTE, Undergraduate, 2018 - 2019, 2017 - 2018, 2016 - 2017
MÜHENDİSLER İÇİN YÖNETİM EKONOMİSİ, Postgraduate, 2017 - 2018, 2016 - 2017
KALİTE PLANLAMA VE KONTROL, Undergraduate, 2017 - 2018, 2016 - 2017

Advising Theses

ÇAKMAKÇI M., The problem of selection with the axiomatic design of MEMS (micro electro-mechanical systems) based sensors in industry 4.0 predictive maintenance processes, Postgraduate, A.SERCAN(Student), 2020
ÇAKMAKÇI M., Testing of the validity of nanotechnological methods through of 6-Sigma technique in the process improvement, Postgraduate, B.KAYABAŞI(Student), 2019
ÇAKMAKÇI M., Ürün güvenilirliği, Postgraduate, U.GÜREL(Student), 2008
ÇAKMAKÇI M., En iyileştirilmiş model değişim operasyonu için ileri analiz sistemi, Postgraduate, M.KEMAL(Student), 2008
ÇAKMAKÇI M., Proje yönetimi yaklaşımıyla üretimin iyileştirilmesi; ERP sistemi kullanımıyla Hold list yönetimi, Postgraduate, Ö.YALTIR(Student), 2007
ÇAKMAKÇI M., Araç rotalama problemi kullanarak tedarik zinciri yönetimi optimizasyonu ve hızlı tüketim ürünleri sektöründe bir uygulama, Postgraduate, Ö.KOÇTAŞ(Student), 2006
ÇAKMAKÇI M., Türkiye'nin ulaştırma potansiyelinin Avrupa Birliği ile ilişkileri çerçevesinde değerlendirilmesi ve kara yollarından demir yollarına geçiş için model önerisi, Postgraduate, E.KÜÇÜKAVCU(Student), 2006

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Using Adaptive Neuro-Fuzzy Inference System, Artificial Neural Network and Response Surface Method to Optimize Overall Equipment Effectiveness for An Automotive Supplier Company**
Bekar E. T., ÇAKMAKÇI M., Kahraman C.
JOURNAL OF MULTIPLE-VALUED LOGIC AND SOFT COMPUTING, vol.28, pp.375-407, 2017 (SCI-Expanded)
II. **Fuzzy COPRAS method for performance measurement in total productive maintenance: a comparative analysis**
Turanoglu Bekar E., ÇAKMAKÇI M., Kahraman C.
JOURNAL OF BUSINESS ECONOMICS AND MANAGEMENT, vol.17, no.5, pp.663-684, 2016 (SSCI)
III. **An ANFIS Algorithm for Forecasting Overall Equipment Effectiveness Parameter in Total Productive Maintenance**
Bekar E. T., ÇAKMAKÇI M., Kahraman C.
JOURNAL OF MULTIPLE-VALUED LOGIC AND SOFT COMPUTING, vol.25, no.6, pp.535-554, 2015 (SCI-Expanded)
IV. **The importance of quality control within the relationship between the quality engineering and Taguchi methodology**
ÇAKMAKÇI M., Durakbasa N. M., Karasu M. K., Bas G., Gurel U.
Key Engineering Materials, vol.637, pp.27-35, 2015 (SCI-Expanded)
V. **Improvement of changeover times via Taguchi empowered SMED/case study on injection molding**

production
Karasu M. K., ÇAKMAKÇI M., Cakiroglu M. B., Ayva E., Demirel-Ortabas N.
MEASUREMENT, vol.47, pp.741-748, 2014 (SCI-Expanded)

VI. **Impact of reliability on warranty: A study of application in a large size company of electronics industry**
Gurel U., ÇAKMAKÇI M.
MEASUREMENT, vol.46, no.3, pp.1297-1310, 2013 (SCI-Expanded)

VII. **Interaction between capability indices and skewness of nonnormal processes using quantile based estimation and Johnson transformation**
ÇAKMAKÇI M., Ortabas-Demirel N., Durakbasa N. M., Bas G., Hornikova A.
Quality - Access to Success, vol.13, pp.79-86, 2012 (SCI-Expanded)

VIII. **Faster changeovers via improved SMED empowered by Taguchi / case study on injection molding production**
ÇAKMAKÇI M., Kemal Karasu M., Çakiroglu M. B., Ayva E., Ortabas-Demirel N.
Quality - Access to Success, vol.13, pp.73-78, 2012 (SCI-Expanded)

IX. **A feasibility study using simulation-based optimization and Taguchi experimental design method for material handling-transfer system in the automobile industry**
SUBULAN K., ÇAKMAKÇI M.
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.59, pp.433-443, 2012 (SCI-Expanded)

X. **Process improvement: performance analysis of the setup time reduction-SMED in the automobile industry**
Cakmakci M.
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.41, no.1-2, pp.168-179, 2009 (SCI-Expanded)

XI. **Set-up time reduction process and integrated predetermined time system MTM-UAS: A study of application in a large size company of automobile industry**
Cakmakci M., Karasu M. K.
INTERNATIONAL JOURNAL OF ADVANCED MANUFACTURING TECHNOLOGY, vol.33, no.3-4, pp.334-344, 2007 (SCI-Expanded)

XII. **CYLINDRICITY - A WELL KNOWN PROBLEM AND NEW SOLUTIONS**
OSANNA P., DURAKBASA N., CAKMAKCI M., OBERLANDER R.
INTERNATIONAL JOURNAL OF MACHINE TOOLS & MANUFACTURE, vol.32, no.1-2, pp.91-97, 1992 (SCI-Expanded)

Articles Published in Other Journals

I. **The relationship between the quality engineering and Taguchi methodology**
ÇAKMAKÇI M.
11th IMEKO TC14 International Symposium on Measurement and Quality Control (ISMQC 2013), 2013 (Peer-Reviewed Journal)

II. **NovelDevelopments in Dimensional Nanometrology in the Context of Geometrical Product Specificationsand Verification (GPS)**
DURAKBASA N., Osanna P. H., BAS G., DEMIRCIOGLU P., ÇAKMAKÇI M., HORNIKOVA A.
Journal of Automation, Mobile Robotics and Intelligent Systems, vol.6, no.2, pp.22-25, 2012 (Peer-Reviewed Journal)

III. **İnsan Bacak Hareketleri İçin Prototip Dış İskelet Robotik Sisteminin Mekanik Tasarımı Ve Hareket Verilerinin Yapay Sinir Ağları İle Elde Edilmesi**
Toygar E. M., Özkurt A., Kıral Z., Çakmakçı M., Gören Kıral B., Şenol Y., Akkan T., Arman Y., Olcay T., Dağhan N. M., et al.
SAKARYA UNIVERSITY JOURNAL OF SCIENCE, vol.16, no.3, pp.234-248, 2012 (Peer-Reviewed Journal)

IV. **İnsan Bacak Hareketleri İçin Prototip Dış İskelet Robotik Sisteminin Mekanik Tasarımı ve Hareket Verilerinin Yapay Sinir Ağları İle Elde Edilmesi**
Toygar E. M., Özkurt A., Kıral Z., Çakmakçı M., Gören Kıral B., Şenol Y., Akkan T., Arman Y., Olcay T., Dağhan N. M., et al.
Sakarya Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.16, no.3, pp.234-248, 2012 (Peer-Reviewed Journal)

V. **RELATIONSHIP BETWEEN PERFORMANCE OF HUMAN FACTORS AND MAN-MACHINE INTERACTION IN ADVANCED MANUFACTURING SYSTEMS**
ÇAKMAKÇI M.
Proceedings of the 35th International Conference on Computers & Industrial Engineering, Istanbul, Turkey, June 19-22, 2005. vol. 2, 2005 (Peer-Reviewed Journal)

Books & Book Chapters

I. **The Problem of Selection with the Fuzzy Axiomatic Design of MEMS Based Sensors in Industry 4.0 Predictive Maintenance Process**
EREZ A. S., ÇAKMAKÇI M., IMRENCI R.
in: Intelligent and Fuzzy Techniques: Smart and Innovative Solutions, Cengiz Kahraman, Sezi Cevik Onar, Basar Oztaysi, Irem Ucal Sari, Selcuk Cebi, A. Cagri Tolga, Editor, Springer, Cham, pp.213-221, 2021

II. **Mathematical modelling and inverse dynamic analysis of human motion**
Toygar E. M., Çakmakçı M.
in: Mobile Robotics. Solutions and Challenges, Mohammad Osman Tokhi,O Tosun,Gurvinder S Virk,H L Akin, Editor, World Scientific Publishing , New York, pp.853-860, 2009

Refereed Congress / Symposium Publications in Proceedings

I. **An Application Using Stability Increasing for the Grinding Machine Performance Improvement in the Automobile Industry**
ÇAKMAKÇI M., Sonmez E., Kucukyasar M.
Global Joint Conference on Industrial Engineering and Its Application Areas (GJCIE), ELECTR NETWORK, 14 - 15 August 2020, pp.81-90

II. **The problem of selection with the axiomatic design of mems (micro electro-mechanical systems) based sensors in industry 4.0 predictive maintenance process**
ÇAKMAKÇI M.
INFUS 2020 International Conference on Intelligent and Fuzzy Systems, Istanbul, Turkey, July 21-23, 2020, Turkey, 21 - 23 July 2020, pp.195-203

III. **The Problem of Selection with the Fuzzy Axiomatic Design of MEMS Based Sensors in Industry 4.0 Predictive Maintenance Process**
Erez A. S., ÇAKMAKÇI M., Imrenci R.
International Conference on Intelligent and Fuzzy Systems, INFUS 2020, İstanbul, Turkey, 21 - 23 July 2020, pp.195-203

IV. **Interaction in Project Management Approach Within Industry 4.0**
ÇAKMAKÇI M.
6th International Scientific-Technical Conference on Advances in Manufacturing II (MANUFACTURING), Poznan, Poland, 19 - 22 May 2019, pp.176-189

V. **Performance Measurement of SMED Improved Plastic Injection Molding Production by Using Process Capability Analysis for Attribute Data**
ÇAKMAKÇI M., Demirel-Ortabas N.
6th International Scientific-Technical Conference on Advances in Manufacturing II (MANUFACTURING), Poznan, Poland, 19 - 22 May 2019, pp.188-205

VI. **Bir Elektronik Fabrikasında Kanban Uygulamasının Malzeme Sipariş Miktarlarının Optimizasyonu Çerçevesinde Endüstri 4.0 Yaklaşımına Entegrasyonu**
ÇAKMAKÇI M., KÜÇÜKYAŞAR M., AYDIN E. S., AKTAŞ B., SARIKAYA M. B., TURANOĞLU BEKAR E.
YAEM2018 Yöneylem Araştırması ve Endüstri Mühendisliği 38. Ulusal Kongresi, Turkey, 26 - 29 June 2018

VII. **Otonom Bakı Teknolojisinin Proje Maliyet Etkisi Çerçevesinde Endüustri 4.0 Yaklaşımı na Entegrasyonu**
ÇAKMAKÇI M., BİGE Ç., KORAL O. C., DOĞRU A. Ö., ÖNEY E.
YAEM2018 Yöneylem Araştırması ve Endüstri Mühendisliği 38. Ulusal Kongresi, Turkey, 26 - 29 June 2018

VIII. **Üretim Hatları İçin Yeni Bir Hızlı Tüm Vücut Değerlendirme Önerisi ve Matematiksel ModellemeTabanlı Ergonomik Montaj Hattı ve İş Rotasyonu Tasarımı**
Altıntaş O., Özcan S., Doğan K., ÇAKMAKÇI M.
ULUSLARARASI KATILIMLI 16. ÜRETİM ARAŞTIRMALARI SEMPOZYUMU, 12 - 14 October 2016

IX. **Proposal of New Performance Measures Total ProductiveMaintenance Performance Measurement under Fuzzy Environment**
TURANOĞLU BEKAR E., ÇAKMAKÇI M., KAHRAMAN C.
The 4th International Fuzzy Systems Symposium, 5 - 06 November 2015

X. **An ANFIS model for forecasting risk by Overall Equipment Effectiveness parameter in Total Productive Maintenance**
Bekar E. T., ÇAKMAKÇI M., Kahraman C.
4th International Conference on Risk Analysis and Crisis Response, RACR 2013, İstanbul, Turkey, 27 - 29 August 2013, pp.229-235

XI. **The relationship between the quality engineering and taguchi methodology**
ÇAKMAKÇI M., Durakbasa N. M., Karasu M. K., Bas G.
11th IMEKO TC14 International Symposium on Measurement and Quality Control, ISMQC 2013, Cracow and Kielce, Poland, 11 - 13 September 2013, pp.205-208

XII. **Nanometric measurement of the pre nano scale TiO2 powders via flame spray pyrolysis: Synthesis, properties and photocatalytical decomposition of methylen blue**
Erol M., Yurddaşkal M., Yıldırım S., Mermer Ö., Bas G., Çakmakçı M., Numan Durakbasa M., Çelik E.
20th IMEKO World Congress 2012, Busan, South Korea, 9 - 14 September 2012, vol.3, pp.1771-1776

XIII. **Nanometric Measurement of the Pre Nano Scale TiO2 Powders via Flame Spray Pyrolysis: Synthesis, Properties and Photocatalytical Decomposition of Methylene Blue**
Erol M., Yurddaşkal M., Yıldırım S., Mermer Ö., Baş G., Çakmakçı M., Durakbasa N., Çelik E.
20th IMEKO World Congress 2012, Busan, South Korea, 9 - 14 September 2012, vol.3, pp.1771-1776

XIV. **Optimizasyon ve Taguchi Yaklaşımı Kullanılarak Otomotiv Sanayiinde Taşıma - Aktarma Sistemleri için Fizibilite Çalışması**
SUBULAN K., ÇAKMAKÇI M.
Yöneylem Araştırması ve Endüstri Mühendisliği 30.Ulusal Kongresi (YAEM2010), İstanbul, Turkey, 30 June - 02 July 2010, pp.392

XV. **Relationship between performance of human factors and man-machine interaction in advanced manufacturing systems**
ÇAKMAKÇI M.
35th International Conference on Computers and Industrial Engineering, ICC and IE 2005, İstanbul, Turkey, 19 - 22 June 2005, pp.351-356

Memberships / Tasks in Scientific Organizations

İzmir Kalkınma Ajansı, Member of Science Committee, 2011 - 2013, Turkey

Scientific Consultations

Avrupa Birliği İş Geliştirme Merkezi İzmir (ABİGEM İzmir) - European Commission MEDA Programme, Scientific Consultancy, Dokuz Eylul University, Turkey, 2004 - 2006

Metrics

Publication: 34
Citation (WoS): 227
Citation (Scopus): 293
H-Index (WoS): 7
H-Index (Scopus): 6

Scholarships

Nord-Süd Dialog Stipendienprogramm - Bundesministerium Europäische und Internationale Angelegenheiten - AUSTRIA , Official Institutions of Foreign Countries, 1988 - 1990