

## Asst. Prof. ESRA AKGÜL

### Personal Information

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### International Researcher IDs

ORCID: 0000-0002-4468-178X

Publons / Web Of Science ResearcherID: AAN-9507-2021

ScopusID: 57191370448

Yoksis Researcher ID: 144137

### Education Information

Doctorate, Erciyes University, Mühendislik Fakültesi, Endüstriyel Tasarım Mühendisliği, Turkey 2015 - 2020

Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, --, Turkey 2015 - 2019

Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, --, Turkey 2013 - 2015

Postgraduate, Erciyes University, Fen Bilimleri Enstitüsü, --, Turkey 2013 - 2015

Undergraduate, Erciyes University, Mühendislik Fakültesi, Tekstil Mühendisliği, Turkey 2007 - 2011

### Research Areas

Industrial Engineering , Ergonomics and Occupational Safety, Textile Engineering and Technology, Engineering and Technology

### Academic Titles / Tasks

Research Assistant PhD, Erciyes University, Mühendislik Fakültesi, Endüstriyel Tasarım Mühendisliği, 2020 - Continues

Research Assistant, Erciyes University, Mühendislik Fakültesi, Endüstriyel Tasarım Mühendisliği, 2011 - 2020

### Academic and Administrative Experience

Erciyes University, 2023 - Continues

Erciyes University, 2023 - 2026

### Published journal articles indexed by SCI, SSCI, and AHCI

#### I. Advanced and Smart Textiles during and after the COVID-19 Pandemic: Issues, Challenges, and Innovations

Ivanoska-Dacikj A., Oguz-Gouillart Y., Hossain G., Kaplan M., Sivri Ç., Ros-Lis J. V., Mikucioniene D., Munir M. U., Kizildag N., Unal S., et al.

Healthcare (Switzerland), vol.11, no.8, 2023 (SCI-Expanded)

#### II. Predicting quality parameters of denim fabrics using developed ANN based Artificial Bee Colony

## algorithm

Katırcıoğlu G., KIZILKAYA AYDOĞAN E., DELİCE Y., AKGÜL E.  
Journal of the Textile Institute, 2023 (SCI-Expanded)

- III. **Use of Topsis Method for Designing Different Textile Products in Coloration via Natural Source "Madder"**  
AKGÜL E., BAHTİYARİ M. İ., KIZILKAYA AYDOĞAN E., BENLİ H.  
JOURNAL OF NATURAL FIBERS, vol.19, no.14, pp.8993-9008, 2022 (SCI-Expanded)
- IV. **An application of fuzzy linguistic summarization and fuzzy association rule mining to Kansei Engineering: a case study on cradle design**  
AKGÜL E., DELİCE Y., KIZILKAYA AYDOĞAN E., BORAN F. E.  
Journal of Ambient Intelligence and Humanized Computing, vol.13, no.5, pp.2533-2563, 2022 (SCI-Expanded)
- V. **Investigation of different denim fabrics with fabric touch tester and sensory evaluation**  
AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.  
JOURNAL OF NATURAL FIBERS, vol.19, no.13, pp.5551-5565, 2022 (SCI-Expanded)
- VI. **Selection of dual-core yarn production parameters for denim fabric by using MULTIMOORA method**  
YILDIRIM N., AKGÜL E., TÜRKSOY H. G.  
JOURNAL OF THE TEXTILE INSTITUTE, vol.113, no.6, pp.1039-1047, 2022 (SCI-Expanded)
- VII. **Rough Kansei Mining Model for Market-Oriented Product Design**  
AKGÜL E., ÖZMEN M., SİNANOĞLU C., Aydoğan E. K.  
MATHEMATICAL PROBLEMS IN ENGINEERING, vol.2020, 2020 (SCI-Expanded)
- VIII. **Optimization of the Murata Vortex Spinning machine parameters by the SMAA-MOORA approach**  
AKGÜL E., ÖZMEN M., Aydoğan E. K., TÜRKSOY H. G.  
INDUSTRIA TEXTILA, vol.68, no.5, pp.323-331, 2017 (SCI-Expanded)
- IX. **MOORA-BASED TAGUCHI OPTIMIZATION FOR SELECTION OF MURATA VORTEX SPINNER MACHINE PARAMETERS**  
AKGÜL E., KIZILKAYA AYDOĞAN E., Akay D., TÜRKSOY H. G.  
TEKSTİL VE KONFEKSİYON, vol.26, no.3, pp.249-255, 2016 (SCI-Expanded)

## Articles Published in Other Journals

- I. **KANSEİ VE TEMEL BİLEŞENLER ANALİZİ TABANLI BEŞİK TASARIM STRATEJİLERİNİN OLUŞTURULMASI**  
AKGÜL E., DELİCE Y., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.  
Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, vol.8, no.2, pp.850-856, 2019 (Peer-Reviewed Journal)
- II. **KANSEI EVALUATION WITH ROUGH SETS THEORY FOR NEWPRODUCT DEVELOPMENT**  
AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.  
International Journal of Mechanical And Production Engineering, vol.5, pp.103-105, 2017 (Peer-Reviewed Journal)
- III. **Farklı Yapılardaki Dokuma Kumaşların Elektromanyetik Ekranlama Özelliklerinin İncelenmesi**  
OKYAY G., Bilgin S., AKGÜL E., ÖRTLEK H. G.  
Tekstil Teknolojileri Elektronik Dergisi, vol.5, no.1, pp.1-10, 2011 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Baby Cradle Design with Kansei Knowledge Mining Based on Rough Set Theory**  
Akgül E., Özmen M., Kızılkaya Aydoğan E., Sinanoğlu C.  
in: Customer Oriented Product Design, CENGİZ KAHRAMAN, SELÇUK CEBİ, Editor, Springer, London/Berlin , London, pp.469-478, 2020
- II. **Baby Cradle Design with Kansei Knowledge Mining Based on Rough Set Theory**  
AKGÜL E., ÖZMEN M., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.

in: Customer Oriented Product Design Intelligent and Fuzzy Techniques, Cengiz Kahraman, Selcuk Cebi Series Editor Janusz Kacprzyk, Editor, SPRINGER NATURE, pp.468-478, 2020

III. **Determination of Denim Fabric's Air Permeability with Image Processing Using Fuzzy C Means**

Özmen M., Kizilkaya Aydoğan E., Akgül E., Katircioğlu G.

in: Intelligent and Fuzzy Techniques in Big Data Analytics and Decision Making, Cengiz KahramanSelcuk CebiSezi Cevik OnarBasar OztaysiA. Cagri TolgaIrem Ucal Sari, Editor, Springer-Verlag , Berlin, pp.1208-1214, 2019

IV. **Determination of Denim Fabric's Air Permeability with ImageProcessing Using Fuzzy C Means**

Katircioğlu G., KIZILKAYA AYDOĞAN E., ÖZMEN M., AKGÜL E.

in: Intelligent and Fuzzy Techniques in Big Data Analytics and Decision Making, Kahraman Cengiz, Cebi Selcuk, Onar Sezi Cevik, Oztaysi Basar, Tolga A. Cagri, Ucal Sari Irem, Editor, SPRINGER, pp.1208-1214, 2019

## **Refereed Congress / Symposium Publications in Proceedings**

I. **Determination of Denim Fabric's Air Permeability with Image Processing Using Fuzzy C Means**

KATIRCIOĞLU G., KIZILKAYA AYDOĞAN E., ÖZMEN M., AKGÜL E.

In International Conference on Intelligent and Fuzzy Systems, 23 - 25 July 2019

II. **Prediction of Air Permeability of Denim Fabrics Using Artificial Neural Networks**

AKGÜL E., KIZILKAYA AYDOĞAN E., DELİCE Y.

International Data Science Engineering Symposium, Karabük, Turkey, 2 - 03 May 2019, pp.262

III. **A Systematic Approach To Develop STEM Toy**

AKGÜL E., SİNANOĞLU C., ATİK Z. N., YİĞİT F. N., Özden a.

4th International Conference on Engineering Technology and Applied Sciences Congress, 24 - 28 April 2019

IV. **The Tendency of The Market In The Furniture Industry For Design**

AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.

4th International Conference on Engineering Technology and Applied Sciences Congress, 24 - 28 April 2019

V. **Customer preference based Small Household Appliances selection using MOORA Optimization Approach**

AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.

3'rd International Symposium on Industrial Design & Engineering, Antalya, Turkey, 22 - 25 November 2018, pp.196-201

VI. **DETERMINATION OF DENIM FABRICS FOR SUMMER SHIRT USING MULTI-CRITERIA DECISION MAKING**

AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.

12TH NCM INTERNATIONAL CONFERENCE ON NEW CHALLENGES IN INDUSTRIAL ENGINEERING AND OPERATIONS MANAGEMENT, Ankara, Turkey, 11 - 12 September 2018, pp.66-70

VII. **Emotional Evaluation of the Iron with Semantic Differential Scale**

AKGÜL E., KIZILKAYA AYDOĞAN E., DELİCE Y.

12.NCMConferences New Challenges in industrial Engineering and Operations Management, 11 - 12 September 2018, pp.71-73

VIII. **APPLICATION OF ARTIFICIAL NEURAL NETWORKS TO ESTIMATE THE TEAR STRENGTH OF DENIM FABRICS**

AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.

UMTEB - 2. INTERNATIONAL CONGRESS ON VOCATIONAL AND TECHNICAL SCIENCES, Batumi, Georgia, 10 - 13 May 2018, pp.35

IX. **ESTIMATING OF CUSTOMER PERCEPTIONS WITH ARTIFICIAL NEURAL NETWORK**

AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.

UMTEB - 2. INTERNATIONAL CONGRESS ON VOCATIONAL AND TECHNICAL SCIENCES, Batumi, Georgia, 10 - 13 May 2018, pp.36

X. **SELECTION OF DENIM FABRICS FOR AS A WORK CLOTHING USING MULTI-CRITERIA DECISION MAKING**

AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C., AKAY D.

IV INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Kiev, Ukraine, 2 - 06 May 2018, pp.215

**XI. PRODUCT DESIGN IMPROVEMENT WITH TAGUCHI METHOD**

AKGÜL E., KIZILKAYA AYDOĞAN E.

IV INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, Kiev, Ukraine, 2 - 06 May 2018, pp.216

**XII. Kansei Evaluation With Rough Sets Theory For New Product Development**

AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C.

International Conference on Advances in Business Management and Information Technology (ICABMIT), Roma, Italy, 20 - 21 October 2017, pp.52-56

**XIII. Product Design With Ion Motion Algorithm Based On Kansei Engineering**

AKGÜL E., KIZILKAYA AYDOĞAN E., SİNANOĞLU C., ERTEKİN M.

International Symposium on Industrial Design Engineering (ISIDE), Nevşehir, Turkey, 13 - 15 September 2017, pp.216-221

**XIV. Soğan Kabukları İle Keten Kumaşların Renklendirme Tasarımları**

AKGÜL E., BAHTİYARİ M. İ., BENLİ H., YILMAZ F.

Uluslararası Geleneksel Sanatlar Sempozyumu "Yazmalardaki El İzleri", Trabzon, Turkey, 20 - 21 April 2017, pp.765-770

**XV. Yünlü Kumaşların Renklendirilmesinde Doğu Karadeniz Bölgesinden Temin Edilen Siyah Çayın Kullanılması**

YILMAZ F., BAHTİYARİ M. İ., BENLİ H., AKGÜL E.

Uluslararası Geleneksel Sanatlar Sempozyumu "Yazmalardaki El İzleri", Trabzon, Turkey, 20 - 21 April 2017, pp.646-650

**XVI. Soğan Kabukları ile Keten Kumaşların Renklendirme Tasarımları**

AKGÜL E., BAHTİYARİ M. İ., BENLİ H., YILMAZ F.

ULUSLARARASI GELENEKSEL SANATLAR SEMPOZYUMU "Yazmalardaki El İzleri", Trabzon, Turkey, 20 - 21 April 2017, pp.765-770

**XVII. Stereotaktik Sistem Tasarımı ve İmalatı**

SİNANOĞLU C., AKGÜL E., AKANSU S. O., TUCER B., PEKER K.

3B Baskı Teknolojileri Uluslararası Sempozyumu, İstanbul, Turkey, 5 - 07 May 2016, pp.45-50

**XVIII. Ergonomik Kabza Tasarımı ve Uygulaması**

AKGÜL E., KIZILKAYA AYDOĞAN E., AKAY D., SİNANOĞLU C.

3B Baskı Teknolojileri Uluslararası Sempozyumu, İstanbul, Turkey, 5 - 07 May 2016, pp.51-56

## Supported Projects

SİNANOĞLU C., ÖZMEN Ö., AKGÜL E., CERİT A. A., Project Supported by Higher Education Institutions, 3D optik tarayıcı (CMM) doğruluğunun tarama parametreleri optimizasyonu ve fotogrametri desteği ile artırılması, 2017 - 2023

SİNANOĞLU C., KIZILKAYA AYDOĞAN E., AKGÜL E., AKAY D., Project Supported by Higher Education Institutions, DENİM KUMAŞ ÜRETİM PARAMETRELERİ İLE KONFOR PARAMETRELERİ ARASINDAKİ AKILLI İLİŞKİNİN BELİRLENMESİ, 2018 - 2022

Kızilkaya Aydoğan E., TUBITAK Project, GENETİK ALGORİTMA TABANLI GENÇ NESİL MOBİLYASINDA DUYGUSAL TASARIM, 2018 - 2019

Akgül E., Sinanoğlu C., EU Supported Other Project, "Strategic Partnerships for Embodiment Design Methodology in Vocational Education (Yellow Tulip), 2016 - 2019

KARAMIŞ M. B., SİNANOĞLU C., NAİR F., GÖÇER A., HAMAMCI M., SARI F. N., SAVAŞ S., AKGÜL E., ERTURUN V., DAĞAŞAN BULUCU E., Project Supported by Higher Education Institutions, 9th International Conference on Tribology, 2017 - 2018

SİNANOĞLU C., HAROĞLU D., ÖZMEN Ö., AKGÜL E., SARI F. N., TEKİN S. A., YILMAZ E., Project Supported by Higher Education Institutions, 2'nd International Symposium on Industrial Design & Engineering, 2017 - 2017

SİNANOĞLU C., KAYA B., AKGÜL E., YILMAZ E., TEKİN S. A., Project Supported by Higher Education Institutions, Bilgisayar Destekli Tasarım ve Hızlı Prototipleme Araştırma Altyapısının Geliştirilmesi, 2015 - 2016  
AKSU Ö., CERİT A. A., SİNANOĞLU C., AKGÜL E., EU Supported Other Project, MAKİNA TASARIM VE İMALAT ALANINDA MESLEKİ EĞİTİMİN İÇERİĞİNİN VE KALİTESİNİN ARTTIRILMASI (MUSAVVIR) PROJESİ, 2014 - 2015

## Tasks In Event Organizations

Akgül E., TASARIM FEST'19, Social Activities, Kayseri, Turkey, Mayıs 2019

Akgül E., 3. Uluslararası Endüstriyel Tasarım ve Mühendislik Sempozyumu (ISIDE 2018), Scientific Congress, Antalya, Turkey, Kasım 2018

Akgül E., 2'nd International Symposium on Industrial Design & Engineering (ISIDE'17), Scientific Congress, Nevşehir, Turkey, Eylül 2017

## Metrics

Publication: 35

Citation (WoS): 27

Citation (Scopus): 29

H-Index (WoS): 3

H-Index (Scopus): 4

## Awards

AKGÜL E., THE IIER EXCELLENT PAPER AWARD, THE INTERNATIONAL INTITUTE OF ENGINEERING AND RESEARCH, October 2017

AKGÜL E., En iyi inovasyon ödülü, Uluslararası Geleneksel Sanatlar Sempozyumu "Yazmalardaki El İzleri", April 2017

Akgül E., Bölüm Üçüncülüğü, T.C. Erciyes Üniversitesi Mühendislik Fakültesi Tekstil Mühendisliği, June 2011

## Non Academic Experience

UNIVERSITY OF MINHO

TU DELFT UNIVERSITY INDUSTRIAL DESIGN ENGINEERING DEPARTMENT