

Assoc. Prof. Sena Duru



## Personal Information

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## Education Information

Postgraduate, Istanbul Technical University, Tekstil Teknolojileri Ve Tasarımı Fakültesi, Tekstil Mühendisliği Bölümü, Turkey 2005 - 2007

Undergraduate, Istanbul Technical University, Tekstil Teknolojileri Ve Tasarımı Fakültesi, Tekstil Mühendisliği Bölümü, Turkey 2000 - 2005

## Foreign Languages

English

## Dissertations

Doctorate, Yuvarlak Örme Elemanlarının Aşınma ve Dinamik Davranışının Modellenmesi, İstanbul Teknik Üniversitesi, Tekstil Teknolojileri Ve Tasarımı Fakültesi, Tekstil Mühendisliği Bölümü, 2016

Postgraduate, Modelling of heat transfer behaviors of socks made from new fibers, İstanbul Teknik Üniversitesi, Tekstil Teknolojileri Ve Tasarımı Fakültesi, Tekstil Mühendisliği Bölümü, 2007

## Research Areas

Textile Engineering and Technology

## Academic Titles / Tasks

Research Assistant, Istanbul Technical University, Tekstil Teknolojileri Ve Tasarımı Fakültesi, Tekstil Mühendisliği Bölümü, 2005 - Continues

## Academic and Administrative Experience

Staj Başkanı, Istanbul Technical University, Tekstil Teknolojileri ve Tasarımı, Tekstil Mühendisliği, 2021 - Continues

## Courses

Design of Knitted Fabrics, Undergraduate, 2022 - 2023

Heat Transfer, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

Teknik Resim, Undergraduate, 2021 - 2022

Textile Technologies, Postgraduate, 2021 - 2022, 2020 - 2021

Knitting Technology 2, Undergraduate, 2021 - 2022, 2020 - 2021

Technical Drawing, Undergraduate, 2020 - 2021, 2019 - 2020, 2018 - 2019

Material Science, Undergraduate, 2021 - 2022, 2020 - 2021, 2019 - 2020, 2018 - 2019

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

- I. **Comfort Properties of Medical Compression Stockings from Biodesigned and Cotton Fibers**  
Kirci F., Karamanlargil E., Duru S., Nergis F. B., Candan C.  
FIBERS AND POLYMERS, vol.22, no.10, pp.2929-2936, 2021 (SCI-Expanded)
- II. **Development of a Care Labelling Process for Compression Stockings Based on Natural (Cotton) Fibers**  
Candan C., Nergis F. B., Duru S., Koyuncu B.  
POLYMERS, vol.13, no.13, 2021 (SCI-Expanded)
- III. **Effects of yarn type, process history, softener type and concentration on wicking and drying properties of cotton plain knitted fabrics**  
Duru S., Şahin U. K.  
JOURNAL OF THE TEXTILE INSTITUTE, vol.111, no.8, pp.1166-1175, 2020 (SCI-Expanded)
- IV. **Assessing Water-Related Comfort Performance of Knitted Fabrics made of Rayon Microfibers and Lyocell Fibers for Intimate Wear**  
Duru S., Göcek İ.  
TEKSTİL VE KONFEKSİYON, vol.30, no.3, pp.220-230, 2020 (SCI-Expanded)
- V. **Assessing Color Differences of Cotton Fabrics Made from Different Yarns After Abrasion**  
Duru S., Açıkgöz Tufan H., Şahin U. K.  
TEKSTİL VE KONFEKSİYON, vol.30, no.2, pp.108-116, 2020 (SCI-Expanded)
- VI. **Water-Related Comfort Properties of Silver-Modified Polyamide Fabrics Treated With Wicking and Antibacterial Finishes**  
Duru S.  
CLOTHING AND TEXTILES RESEARCH JOURNAL, vol.38, no.1, pp.59-70, 2020 (SSCI)
- VII. **Investigating the effects of wicking and antibacterial finishing treatments on some comfort characteristics of Meryl skinlife for seamless activewear/sportswear**  
Göcek İ., Duru S.  
Journal of Engineered Fibers and Fabrics, vol.14, 2019 (SCI-Expanded)
- VIII. **Comfort properties of socks from seacell fibers**  
AVCI H., Özdemir M., Iridag B. Y., Duru C. S., Candan C.  
Journal of the Textile Institute, vol.109, no.3, pp.419-425, 2018 (SCI-Expanded)
- IX. **EFFECTS OF SOFTENER APPLICATIONS ON AIR AND WATER VAPOR PERMEABILITY OF COTTON KNITTED FABRICS PRODUCED WITH DIFFERENT YARNS**  
ŞAHİN U. K., DURU S.  
Tekstil Ve Konfeksiyon, vol.27, pp.275-282, 2017 (SCI-Expanded)
- X. **WICKING AND DRYING BEHAVIORS OF KNITTED FABRICS PRODUCED WITH DIFFERENT POLIAMIDE YARNS**  
Duru S., Candan C.  
TEKSTİL VE KONFEKSİYON, vol.26, no.3, pp.280-286, 2016 (SCI-Expanded)
- XI. **EVALUATION OF WEAR IN NEEDLES WORKING WITH OPEN END COTTON YARN**  
Duru S., Candan C., Muğan A.

- TEKSTİL VE KONFEKSİYON, vol.25, no.2, pp.162-167, 2015 (SCI-Expanded)
- XII. **Effect of yarn, machine and knitting process parameters on the dynamics of the circular knitting needle**  
Duru S., CANDAN C., Muğan A.  
Textile Research Journal, vol.85, no.6, pp.568-589, 2015 (SCI-Expanded)
- XIII. **Effect of repeated laundering on wicking and drying properties of fabrics of seamless garments**  
Duru S., Candan C.  
TEXTILE RESEARCH JOURNAL, vol.83, no.6, pp.591-605, 2013 (SCI-Expanded)
- XIV. **Determination of Natural Convective Heat Transfer Coefficient for Plain Knitted Fabric via CFD Modeling**  
Duru S., Deniz E., Candan C., Nergis F. B.  
FIBRES & TEXTILES IN EASTERN EUROPE, vol.20, no.1, pp.42-46, 2012 (SCI-Expanded)
- XV. **A Comparative Study of Some Comfort-related Properties of Socks of Different Fiber Types**  
Cimilli S., NERGİS B. U., Candan C., Özdemir M.  
Textile Research Journal, vol.80, no.10, pp.948-957, 2010 (SCI-Expanded)
- XVI. **Properties of Plain Knits from Siro Spun Viscose Elastane Yarns**  
BECEREN Y., CANDAN C., Duru S., Kemal Ü.  
FIBRES & TEXTILES IN EASTERN EUROPE, vol.0, 2010 (SCI-Expanded)
- XVII. **Modeling of Heat Transfer Behavior Of Cotton Plain Knitted Fabric Using Finite Element Method**  
Duru S., NERGİS F. B., CANDAN C.  
Textile Research Journal, vol.0, 2008 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Design of Undergarment for Female Racing Drivers**  
Candan C., Nergis F. B., Duru S., Aral N., Guner M. N., Bulut H. M.  
JOURNAL OF BIOMIMETICS BIOMATERIALS AND BIOMEDICAL ENGINEERING, vol.57, pp.47-56, 2022 (ESCI)
- II. **Development of Cotton-Based Compression Stockings for Class II Compression Requirements**  
NERGİS F. B., CANDAN C., DURU S., KOYUNCU B.  
Materials Circular Economy, vol.4, 2021 (Peer-Reviewed Journal)
- III. **Fatigue Life Estimation of Circular Knitting Needle**  
DURU S., CANDAN C., MUGAN A.  
ENGINEERING PROCEEDINGS, 2021 (Peer-Reviewed Journal)
- IV. **EFFECTS OF YARN SPINNING SYSTEMS AND TWIST DIRECTION ON SOME PROPERTIES OF VISCOSE INTERLOCK FABRICS**  
DURU S.  
Uludağ Üniversitesi Mühendislik Fakültesi Dergisi, vol.25, no.3, pp.1513-1531, 2020 (Peer-Reviewed Journal)
- V. **Örme İğnelerininin Aşınmasına Neden Olan Faktörler**  
DURU S.  
TekstilTeknik, vol.28, no.326, pp.126-132, 2012 (Non Peer-Reviewed Journal)
- VI. **İplik Giriş Gerginliğinin ve İplik Sürtünmesinin İlmek İplik Uzunluğuna Etkileri**  
DURU S.  
TekstilTeknik, vol.27, no.320, pp.158-163, 2011 (Non Peer-Reviewed Journal)
- VII. **Çoraplarda Boya Terbiye İşlemine Genel Bakış**  
CANDAN C., DURU S.  
TekstilTeknik, vol.27, no.312, pp.94-102, 2011 (Non Peer-Reviewed Journal)
- VIII. **Yuvarlak Örme Makinelerinde Kullanılan İğnelerin Dinamik Analizi**  
Kara A., Hatipoğlu S., Nergis B., DURU S., CANDAN C.  
TekstilTeknik, vol.26, no.302, pp.100-110, 2010 (Non Peer-Reviewed Journal)
- IX. **Konfor özellikleri iyileştirilmiş lifler ve çorap üretiminde kullanımı**

CANDAN C., DURU S., Avcı H.

TekstilTeknik, vol.24, no.281, pp.150-154, 2008 (Non Peer-Reviewed Journal)

**X. Dikişsiz Örme Üretimine Genel Bakış**

CANDAN C., DURU S., TAŞCINAR S., GOZUBUYUK P.

TekstilTeknik, vol.24, no.277, pp.74-80, 2008 (Non Peer-Reviewed Journal)

**XI. Tekstilde Isı Transferi ve Bunları Etkileyen Parametreler**

DURU S.

Örme İhtisas, vol.28, pp.30-38, 2008 (Non Peer-Reviewed Journal)

**XII. Kumaşların Konfor Özellikleri ve Bunları Etkileyen Parametreler**

DURU S.

TekstilTeknik, vol.23, no.268, pp.194-200, 2007 (Non Peer-Reviewed Journal)

**XIII. Örme Kumaşlarda Islanma ve Kılcal Islanma**

DURU S.

TekstilTeknik, vol.23, no.267, pp.94-102, 2007 (Non Peer-Reviewed Journal)

## Books & Book Chapters

**I. Some Comfort Properties of Terry Knitted Fabrics Made from Cotton/Polyester Blend**

Duru S., Candan C.

in: Engineering Research Papers, Abdurahman GÜNDAY, Erol PEHLİVAN, Mehmet Recep MİNAZ, Editor, Gece Kitaplığı, Ankara, pp.410-422, 2019

**II. Innovation in the Comfort of Intimate Apparel**

DURU S., CANDAN C., NERGİS F. B.

in: Textile Manufacturing Processes, Uddin F., Editor, IntechOpen, pp.227, 2019

**III. Smart Protective Clothing for Aircraft Crew**

ÖNDER KARAOĞLU E., BOZ E. C., DURU S., CANDAN C., PAKER S., SAYAR R.

in: Advances in Sustainable Aviation, Karakoç Tahir Hikmet, Colpan CO, Şöhret Y, Editor, Springer International Publishing, pp.221-235, 2017

## Refereed Congress / Symposium Publications in Proceedings

**I. Designing Sustainable Supportive Composite Structures with Hemp and Cotton Fibers**

DURU S., SEZGİN H., CANDAN C.

3rd International Conference on Applied Engineering and Natural Sciences, Konya, Turkey, 20 July 2022

**II. Design of Underwear for Female Racing Drivers**

CANDAN C., NERGİS F. B., DURU S., ARAL YILMAZ N.

AUTEX 2021 - 20th WORLD TEXTILE CONFERENCE, Portugal, 05 September 2021

**III. Development of Cotton Based Compression Stockings For Class II Compression Requirements**

NERGİS F. B., CANDAN C., DURU S., KOYUNCU B.

5th INTERNATIONAL CONFERENCE ON NATURAL FIBERS, Portugal, 17 May 2021

**IV. Development of a care labelling process for compression stockings based on natural (cotton) fibers**

CANDAN C., NERGİS F. B., DURU S., KOYUNCU B.

5th International Conference on Natural Fibers - Materials of the Future, Portugal, 17 May 2021

**V. Pamuk/polyester Karışım Oranının Çorapların Bazı Konfor ve Performansları Üzerine Etkisi.**

DURU S., CANDAN C.

8. Uluslararası Bilimsel Araştırmalar Kongresi - Fen ve Mühendislik Bilimleri (UBAK), Turkey, 22 - 23 August 2020

**VI. A New Approach for Testing Air Permeability**

GÖKASLAN M. Y., DURU S., CANDAN C., ÖZDEMİR M., NERGİS F. B.

17th National 3rd International the Recent Progress Symposium on Textile Technology And Chemistry, 20 - 22

November 2019

- VII. **Compression Stockings with Cotton Components for Long Haul Flights**  
DURU S., NERGİS F. B., CANDAN C.  
2nd International Congress of Innovative Textile-IconTex, 17 - 18 April 2019
- VIII. **COMPRESSION STOCKINGS WITH COTTON COMPONENTS FOR LONG HAUL FLIGHTS**  
Nergis F. B., Candan C., Duru S.  
2nd International Congress of Innovative Textiles – ICONTEX 2019, Tekirdağ, Turkey, 17 - 18 April 2019, vol.2, pp.262-267
- IX. **Effects of softener applications on air permeability of cotton knitted fabrics produced with siro yarns**  
DURU S., ACIKGOZ H., ŞAHİN U. K.  
AUTEX 2018, İstanbul, Turkey, 20 - 22 June 2018, pp.515-517
- X. **The Influence of Yarn Input Tension Take Down Force and Machine Speed on Stress Evaluation of Knitting Needle**  
Duru S., Candan C., Mugan A.  
16th Autex Textile Conference, Ljubljana, Slovenia, 8 - 10 June 2016
- XI. **Comfort Properties of Socks from Dri Release Fibers**  
CANDAN C., NERGİS F. B., DURU S., Beceren Y.  
AUTEX 2016, 8 - 10 June 2016
- XII. **A Novel Underwear Clothing for Air Crew**  
CANDAN C., Onder E., DURU S., Noyan E. C. B.  
International Symposium on Sustainable Aviation, 29 May - 01 June 2016
- XIII. **Stress and Strain Analyses of Circular Knitting Needles by Using Finite Element Method**  
Duru S., Candan C.  
47th International Federation of Knitting Technologists Congress, İzmir, Turkey, 23 - 26 October 2014
- XIV. **A Multicriteria Decision Approach on Physical Properties of Socks Made from Different Fiber Types**  
DURU S., CANDAN C., NERGİS F. B.  
47th IFKT Congress, 25 September 2014
- XV. **A Multicriteria Decision Approach on Properties of Plain Knits From Siro Spun Viscose Spandex Yarns**  
DURU S., CANDAN C., BECEREN Y.  
14 th AUTEX World Textile Conference, 26 - 28 May 2014
- XVI. **A Multicriteria Decision Approach on Comfort Properties of Socks Made from Different Fiber Types**  
DURU S., CANDAN C., NERGİS F. B.  
10th Joint International Conference Clothtech, 20 - 22 September 2012
- XVII. **Seamless Garment Design for Outwear**  
DURU S., CANDAN C., Tascinar S., Gözübüyük P.  
41th TRS Textile Research Symposium, 12 - 14 September 2012
- XVIII. **Acoustic Performance of Some Cellulosic Fibers in The Form of Plain Jersey Fabric with Chipboard Backing**  
KÜÇÜKALİ ÖZTÜRK M., DURU S., NERGİS F. B., CANDAN C.  
12th AUTEX World Textile Conference, 13 - 15 June 2012
- XIX. **Numerical Investigation of Convective Heat Transfer for Knitted Fabric**  
DENİZ E., DURU S.  
10th AUTEX World Textile Conference, 21 - 23 June 2010
- XX. **An experimental investigation on some physical properties of socks from some new regenerated fibers**  
Duru S., Nergis F. B., Candan C.  
2010 Spring Conference of the Fiber Society, Bursa, Turkey, 12 - 14 May 2010
- XXI. **Transfer Wetting Properties of Terry Socks from New Fiber**  
BECEREN Y., DURU S., CANDAN C.

## Supported Projects

Sarıçam C., Sünbulođlu E., Abiş M., Bozdađ S. E., Duru S., Okur N., Yamak F., Project Supported by Higher Education Institutions, Kayma Altında Katılařan Sıvılarla Güçlendirilmiş İki Boyutlu 2D Dokuma Kumařların Balistik Özelliklerinin İncelenmesi, 2021 - 2024

Duru S., Candan C., Nergis B., TUBITAK Project, Çocuk Dıř Giyimine Yönelik Kenevir Karıřımı İplikler Kullanılarak Uv Koriyuculuđu İyileřtirilmiş Çevre Dostu Mevsimlik Örne Kumařların Geliřtirilmesi, 2022 - 2023

## Metrics

Publication: 62

Citation (WoS): 117

Citation (Scopus): 128

H-Index (WoS): 3

H-Index (Scopus): 4

## Non Academic Experience

University, RWTH Aachen University, Institut für Textiltechnik  
Institut für Textiltechnik der RWTH Aachen University