

## Prof.Dr. Şeref SOYLU

### Kişisel Bilgiler

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**Posta Adresi:** Kocaeli Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü  
Umuttepe Kampüsü - Kocaeli



### Uluslararası Araştırmacı ID'leri

ScholarID: seref

ORCID: 0000-0001-8022-8440

Publons / Web Of Science ResearcherID: E-1344-2013

ScopusID: 7004656212

Yoksis Araştırmacı ID: 41045

### Eğitim Bilgileri

Doktora, Iowa State University of Science and Technology, Engineering Faculty, Mechanical Engineering, Amerika Birleşik Devletleri 1996 - 2001

Yüksek Lisans, Iowa State University of Science and Technology, Engineering Faculty, Mechanical Engineering, Amerika Birleşik Devletleri 1994 - 1996

Lisans, Gazi Üniversitesi, Teknik Eğitim Fakültesi, Otomotiv, Türkiye 1984 - 1988

### Biyografi

Dr. Soylu was born in 1968, in Kayseri, Turkey. After receiving his B.S. degree from Gazi University in 1988, he worked as Internal Combustion Engine Instructor for the Ministry of National Education and National Defense in Turkey until 1994. Then, he went to Iowa State University, U.S.A. for his M.S. and Ph.D education in Mechanical Engineering under supervision of Prof. Dr. Jon Van Gerpen. His M.S. and Ph.D. research works focused on alternative fuels (natural gas and bio-diesel) for internal combustion engines, emission measurement, thermodynamic engine modeling and autoignition modeling that were supported by John Deere Product Engineering Center, and many other Industrial and State organizations in the US. Through end of his Ph.D. study, Dr. Soylu worked for Caterpillar Inc. as an Analytical Engineer in Peoria, IL for the development of the advanced diesel engines from 2000 to 2001. After receiving his Ph.D. degree in 2001, Dr. Soylu joined to Sakarya University, Turkey as an Assistant Professor.

His research works at Sakarya University centered on the development of environmentally friendly road transport vehicles by means of improving the efficiency and reducing emissions. He performed research specifically on alternative fuels (natural gas, bio-diesel, bio-gas, and hydrogen) and advance engine/vehicle technologies. The courses that he taught were mainly thermal science courses which were Thermodynamics, Heat Transfer, Air Pollution and Control.

As Dr. Soylu was selected as independent expert by European Commission in the field of Energy and Transport in 2003, he started evaluating and reviewing the FP6 and FP7 projects on behalf of the European Commission. Then Dr. Soylu moved to Italy to work as a Senior/Visiting Scientist in the Joint Research Center of European Commission for a year

from November 2004 to November 2005 to provide technical and scientific support to the European Commission for their legislative works. His work, in the Joint Research Center, focused on fuels and additives for internal combustion engines, portable emission measurement systems, and small engines.

After returning to Sakarya University, he clearly indicated his vision and leadership qualities as he coordinated a collaborative research project, that is Sakarya Air Quality Protection and Improvement (SAHAKK-I), with partners from Industry, Sakarya Municipality and Sakarya Governorship to solve real world Transport and Air Pollution problems of Sakarya. The overall goal of SAHAKK-I research project was to provide technical and scientific support to the policymakers and relevant stakeholders for sustainable development. After that he became an Associate Professor of Sakarya University and his scientific and leadership qualities were further strengthened as he coordinated the Hybrid City Bus project in which the first Hybrid City Bus of Turkey was developed and tested under real world urban driving conditions. During this period, he has supervised many graduate students, all of whom have completed their M.S. degrees, and produced several peer-reviewed publications.

Dr. Soylu was promoted to full professor and department head position at Bilecik S. Edebali University in 2015. He had been appointed various administrative duties such as Department Head, Member of Faculty Administration Committee and Member University Administration Committee. His research in Bilecik S. Edebali University mostly focused on multidisciplinary research projects which focus on the development of particle filters for Internal Combustion Engines. Starting from spring 2020 semester, he has been a faculty of Kocaeli University. He is currently a teaching thermal science courses and performing research on mainly IC Engines and Hybrid Vehicles.

As a result, Dr. Soylu has the expertise, leadership, training, and motivation necessary to successfully carry out energy and automotive related research projects and teach thermal science courses. He has a broad background in mechanical engineering, with specific training and expertise in thermal science and automotive engineering.

## **Yabancı Diller**

İngilizce, C2 Ustalık

## **Araştırma Alanları**

Mühendislik ve Teknoloji

## **Akademik Unvanlar / Görevler**

Prof.Dr., Kocaeli Üniversitesi, Mühendislik Fakültesi, Makina Mühendisliği, 2020 - Devam Ediyor

Prof.Dr., Bilecik Şeyh Edebali Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2015 - 2020  
Doç.Dr., Sakarya Üniversitesi, Mühendislik Fakültesi, 2008 - 2015  
Yrd.Doç.Dr., Sakarya Üniversitesi, Mühendislik Fakültesi, Çevre Mühendisliği Bölümü, 2005 - 2008  
Yrd.Doç.Dr., Avrupa Komisyonu Ortak Araştırma Merkezi, Çevre ve Sürdürülebilirlik Enstitüsü, 2004 - 2005  
Yrd.Doç.Dr., Sakarya Üniversitesi, Teknik Eğitim Fakültesi, Makine Eğitimi Bölümü, 2001 - 2004  
Araştırma Görevlisi, Iowa State University of Science and Technology, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 1994 - 2001

## Akademik İdari Deneyim

Anabilim/Bilim Dalı Başkanı, Kocaeli Üniversitesi, Mühendislik Fakültesi, Makina Mühendisliği, 2020 - Devam Ediyor  
Üniversite Yönetim Kurulu Üyesi, Bilecik Şeyh Edebali Üniversitesi, Mühendislik Fakültesi, Makine Ve İmalat Mühendisliği Bölümü, 2015 - 2020  
Bölüm Başkanı, Bilecik Şeyh Edebali Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, 2015 - 2018

## Verdiği Dersler

Hybrid and Electric Vehicles, Lisans, 2022 - 2023  
Gaz Türbinleri, Lisans, 2022 - 2023  
İçten Yanmalı Motorlar, Lisans, 2019 - 2020  
Otomotiv Mühendisliği - Temel Teknolojiler, Yüksek Lisans, 2020 - 2021

## SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Microstructural Characterization, Mechanical, Physical and Thermal Properties of a Diesel Particulate Filter**  
Acikbas N. C., Ture Y., Gurlek E., Ozcan S., Soylu Ş., Acikbas G., Gudu T.  
ARABIAN JOURNAL FOR SCIENCE AND ENGINEERING, cilt.43, sa.3, ss.1383-1394, 2018 (SCI-Expanded)
- II. **Development of PN emission factors for the real world urban driving conditions of a hybrid city bus**  
Soylu Ş.  
APPLIED ENERGY, cilt.138, ss.488-495, 2015 (SCI-Expanded)
- III. **The effects of urban driving conditions on the operating characteristics of conventional and hybrid electric city buses**  
Soylu Ş.  
APPLIED ENERGY, cilt.135, ss.472-482, 2014 (SCI-Expanded)
- IV. **EXAMINATION OF PN EMISSIONS AND SIZE DISTRIBUTIONS OF A HYBRID CITY BUS UNDER REAL WORLD URBAN DRIVING CONDITIONS**  
Soylu Ş.  
INTERNATIONAL JOURNAL OF AUTOMOTIVE TECHNOLOGY, cilt.15, sa.3, ss.369-376, 2014 (SCI-Expanded)
- V. **EXAMINATION OF THE BRAKING ENERGY RECOVERY POTENTIALS OF A CITY BUS UNDER URBAN DRIVING CONDITIONS**  
Soylu Ş.  
ISI BİLİMİ VE TEKNİĞİ DERGİSİ-JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, cilt.34, sa.2, ss.39-47, 2014 (SCI-Expanded)
- VI. **COMPARISON OF OPERATING CHARACTERISTICS OF CONVENTIONAL, DIESEL-ELECTRIC AND HYBRID-ELECTRIC CITY BUSES UNDER REAL WORLD URBAN DRIVING CONDITIONS**  
Soylu Ş.  
ISI BİLİMİ VE TEKNİĞİ DERGİSİ-JOURNAL OF THERMAL SCIENCE AND TECHNOLOGY, cilt.34, sa.2, ss.143-154, 2014

(SCI-Expanded)

- VII. **Estimation of Turkish road transport emissions**  
Soylu Ş.  
ENERGY POLICY, cilt.35, sa.8, ss.4088-4094, 2007 (SCI-Expanded)
- VIII. **Fueling direct injected diesel engines with 2% biodiesel blend**  
Schumacher L., Soylu Ş., Van Gerpen J., Wetherell W.  
APPLIED ENGINEERING IN AGRICULTURE, cilt.21, sa.2, ss.149-152, 2005 (SCI-Expanded)
- IX. **Prediction of knock limited operating conditions of a natural gas engine**  
Soylu Ş.  
ENERGY CONVERSION AND MANAGEMENT, cilt.46, sa.1, ss.121-138, 2005 (SCI-Expanded)
- X. **Examination of combustion characteristics and phasing strategies of a natural gas HCCI engine**  
Soylu Ş.  
ENERGY CONVERSION AND MANAGEMENT, cilt.46, sa.1, ss.101-119, 2005 (SCI-Expanded)
- XI. **Development of empirically based burning rate sub-models for a natural gas engine**  
Soylu Ş., Van Gerpen J.  
ENERGY CONVERSION AND MANAGEMENT, cilt.45, sa.4, ss.467-481, 2004 (SCI-Expanded)
- XII. **Development of an autoignition submodel for natural gas engines**  
Soylu Ş., Van Gerpen J.  
FUEL, cilt.82, sa.14, ss.1699-1707, 2003 (SCI-Expanded)
- XIII. **The speed of sound and isentropic bulk modulus of biodiesel at 21 degrees C from atmospheric pressure to 35 MPa**  
Tat M. E., Van Gerpen J. H., Soylu Ş., Canakci M., Monyem A., Wormley S.  
JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, cilt.77, sa.3, ss.285-289, 2000 (SCI-Expanded)

## **Kitap & Kitap Bölümleri**

- I. **Development of an autoignition model for natural gas engines an experimental and modeling study**  
SOYLU Ş.  
VDM Verlag Dr. Müller Aktiengesellschaft & Co. KG, Dudweiler Landstr. 99, 66123 Saarbrücken, Deutschland, 2009

## **Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar**

- I. **Experimental Investigation of Effects of Engine Load and Speed on the Raw Exhaust Noise Characteristic**  
Tekin M. Ş., Bostancı G., Soylu Ş., Güven E. A.  
1st International Conference on Engineering and Applied Natural Sciences, Kocaeli, Türkiye, 10 - 13 Mayıs 2022, ss.380-385
- II. **İçten Yanmalı Motorlar için Partikül Filtreleri**  
ÇALIŞ AÇIKBAŞ N., AÇIKBAŞ G., ÖZCAN S., SOYLU Ş.  
I. Uluslararası Bilimsel Çalışmalarda Yenilikçi Yaklaşımlar Sempozyumu (ISAS-2018), Antalya, Türkiye, 11 - 13 Nisan 2018
- III. **Particulate Filters for Internal Combustion Engines**  
ÇALIŞ AÇIKBAŞ N., AÇIKBAŞ G., ÖZCAN S., SOYLU Ş.  
1st International Symposium on Innovative Approaches in Scientific Studies, 11 - 13 Nisan 2018
- IV. **Properties of porous silicon nitride bonded-silicon carbide ceramics for diesel particle filter**  
ÇALIŞ AÇIKBAŞ N., SOYLU Ş., Kırçalı Ş., AÇIKBAŞ G., ÖZCAN S.  
1st International Symposium on Innovative Approaches in Scientific Studies, 11 - 13 Nisan 2018
- V. **Porous SiC based composite ceramics fabricated by partial reaction sintering method for diesel particle filter**

ÇALIŞ AÇIKBAŞ N., SOYLU Ş., Kırcalı Ş.

II. INES International Academic Research Congress, 18 - 21 Ekim 2017

- VI. **Examination of the Energy Saving Potential of a Hybrid City Bus with Regenerative Braking**  
SOYLU Ş., DEMİR Z.  
6th International Conference on Advanced Technology Sciences, 12 - 15 Eylül 2017
- VII. **KATALİZÖR MİKTARININ POLİMER MATRİSLİ KOMPOZİT MALZEME ÖZELLİKLERİ ÜZERİNE ETKİSİ**  
AÇIKBAŞ G., ÇALIŞ AÇIKBAŞ N., YAMAN B., SOYLU Ş.  
2. ULUSLARARASI MÜHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, 12 - 13 Mayıs 2017
- VIII. **Talaşlı İmalatta Kullanılan Sialon Esaslı Kesici Uçların Mikroyapı Tasarımı**  
ÇALIŞ AÇIKBAŞ N., AÇIKBAŞ G., YAMAN B., SOYLU Ş.  
2 International Congress On Engineering Architecture And Design (UMMTK), 12 - 13 Mayıs 2017
- IX. **TALAŞLI İMALATTA KULLANILAN SIALON ESASLI KESİCİ UÇLARIN MİKROYAPI TASARIMI**  
ÇALIŞ AÇIKBAŞ N., AÇIKBAŞ G., YAMAN B., SOYLU Ş.  
2. ULUSLARARASI MÜHENDİSLİK MİMARLIK VE TASARIM KONGRESİ, 12 - 13 Mayıs 2017
- X. **SİC DİZEL PARTİKÜL FİLTRE ÜRETİMİ VE KARAKTERİZASYONU**  
Çetintaş B., SOYLU Ş., ÇALIŞ AÇIKBAŞ N.  
4. UNİKOP Proje Pazarı Etkinliği, Türkiye, 17 - 18 Mayıs 2017
- XI. **Katalizör Miktarının Polimer Matrisli Kompozit Malzeme Özellikleri Üzerine Etkisi**  
AÇIKBAŞ G., ÇALIŞ AÇIKBAŞ N., YAMAN B., SOYLU Ş.  
2 International Congress On Engineering Architecture And Design (UMMTK), 12 - 13 Mayıs 2017
- XII. **Structural and Chemical Characterization of Commercial Catalytic Converter**  
TÜRE Y., Gürlek E., ÇALIŞ AÇIKBAŞ N., SOYLU Ş.  
1ST INTERNATIONAL BLACK SEA CONGRESS ON ENVIRONMENTAL SCIENCES (IBCESS), 31 Ağustos - 03 Eylül 2016
- XIII. **Characterization of Commercial Diesel Particle Filter**  
TÜRE Y., Gürlek E., ÇALIŞ AÇIKBAŞ N., SOYLU Ş.  
1st international Black Sea Congress on Environmental Sciences, 31 Ağustos - 03 Eylül 2016
- XIV. **Dizel Partikül Filtre Karakterizasyonu**  
Gürlek E., TÜRE Y., ÇALIŞ AÇIKBAŞ N., SOYLU Ş., GÜDÜ T.  
OTEKON16, Türkiye, 23 - 24 Mayıs 2016
- XV. **CHARACTERIZATION OF CATALYTIC CONVERTER**  
TÜRE Y., Gürlek E., ÇALIŞ AÇIKBAŞ N., SOYLU Ş., GÜDÜ T.  
NCC6- 6th Catalysis Conference, 27 - 30 Nisan 2016
- XVI. **Sapanca lake air pollution originating from transportation investigation of heavy metal emissions**  
Demirel H., Ates A., SOYLU Ş.  
International Conference on Engineering and Natural Science, 15 - 19 Mayıs 2015
- XVII. **Examination of operating characteristics of a Conventional and a Hybrid Electric Bus under real world urban driving conditions**  
SOYLU Ş.  
1st International Symposium on Energy Challenges and Mechanics, Aberdeen, 8 - 10 Temmuz 2014
- XVIII. **Real world PN emissions from a hybrid city bus under urban driving conditions**  
SOYLU Ş.  
19th International Transport and Air Pollution Conference 2012, 26 - 28 Kasım 2012
- XIX. **Examination of Particle Number Emissions of a Hybrid City Bus**  
SOYLU Ş.  
International Conference on Energy and Automotive Technologies, İstanbul, 12 Ekim 2012
- XX. **Examination of fuel economy and NOx emissions of a hybrid city bus under real world urban driving conditions**  
SOYLU Ş., Hulya S.  
OTEKON 2012, Türkiye, 4 - 05 Haziran 2012
- XXI. **Examination of Real World Operating Conditions and Emissions of a Hybrid City Bus İstanbul**

SOYLU Ş., Hulya S., Bal A.

International Conference on energy and Automotive Technologies, İstanbul, 05 Kasım 2010

**XXII. Adapazarı şehir içi trafik karakteristikleri ve ulaştırma kaynaklı emisyonların saatlik incelenmesi**

SOYLU Ş., Semercioglu H., Bal A., Ay E.

9. Hava Kirliliği ve Kontrolü Sempozyumu, ODTÜ KKM – ANKARA, Türkiye, 25 - 27 Ekim 2009

**XXIII. 5 Otomotiv Teknolojileri Kongresi Bursa**

SOYLU Ş., Bal A., Hulya S., Ay E.

Şehir Otobüslerinin Gerçek Dünya Koşullarında Motor Çalışma Şartlarının ve NOx Emisyonlarının İncelenmesi, Otekon 2010 5. Otomotiv Teknolojileri Kongresi, Türkiye, 7 - 10 Haziran 2010

**XXIV. Otomobiller için alternatif enerji kaynaklarının incelenmesi**

SOYLU Ş., Murat K., ERMİŞ K.

II. Ulusal Ege Enerji Sempozyumu, Türkiye, 26 - 28 Mayıs 2004

**XXV. Monitoring of urban transport sourced pollutants by using GIS istanbul**

SOYLU Ş., Mahnaz G.

5th International Conference on Geographic Information Systems, İstanbul, 2 - 05 Temmuz 2008

**XXVI. Analysis of urban transport sourced emissions Adapazarı case study Konya**

SOYLU Ş., Gumrukcuoglu M.

Uluslararası Küresel İklim Değişikliği ve Çevresel Etkileri Konferansı, Konya, 18 - 20 Ekim 2007

**XXVII. Examination of Knock Limits of a Spark Ignited Natural Gas Engine**

SOYLU Ş.

Proceedings of ICEF04 ASME Internal Combustion Engine Division 2004 Fall Technical Conference Long Beach, CA, USA, 24 - 27 Ekim 2004

**XXVIII. Examination of Combustion Characteristics of an HCCI Engine**

SOYLU Ş.

The Sixth International Symposium on Diagnostics and Modeling of Combustion in Internal Combustion Engines, Yokohoma, Japan, 02 Ağustos 2004 - 05 Ağustos 2005

**XXIX. Combustion analysis of a natural gas engine**

SOYLU Ş.

ICES2003-563 ASME spring conference ICED 2003, Salzburg, Austria, 11 - 14 Mayıs 2003

**XXX. Simple Modeling of Combustion for Natural Gas Engines**

SOYLU Ş.

SAE Paper no: 2002-01-2733, 21 Ekim 2002

**XXXI. Prediction of Knock Limited Operating Conditions of a Natural Gas Engine**

SOYLU Ş.

Automotive Technologies Congress, June 24-26, 2002, Uludağ Üniversitesi, Bursa, 24 - 26 Haziran 2002

**XXXII. Evaluation of the Lubricity of Soybean Oil based Additives in Diesel Fuel**

SOYLU Ş., Jon V. G., Tata M. E.

American Society of Agricultural Engineers 1999 Annual Meeting, Toronto, Canada, 18 - 21 Temmuz 1999

**XXXIII. Fueling Direct Injected Diesel Engines with 2 Biodiesel Blend**

SOYLU Ş., LG S., Jon V. G., Wetherell W.

American Society of Agricultural Engineers , ASAE 98-6084, Orlando, Florida, 13-15 July 1998, 13 - 15 Temmuz 1998

**XXXIV. Fuel Effects on the Knocking Limit of a Heavy Duty Natural Gas Engine**

SOYLU Ş., Jon V. G.

SAE Meeting, Paper No 981401, 01 Mayıs 1998

**XXXV. Determination of Knock sensor Location on a Heavy duty Natural Gas engine SAE Paper No 971705**

SOYLU Ş., Jon V. G.

SAE Meeting 1997, 01 Mayıs 1997

## Desteklenen Projeler

GÜVEN E. A., TEKİN M. Ş., SOYLU Ş., AYTİMUR E. E., BOSTANCI G., YILDIRIM K. U., KARAYER O. O., Yükseköğretim Kurumları Destekli Proje, İçten Yanmalı Motorlar için Susturucu Tasarımı, 2021 - 2023

## Bilimsel Danışmanlıklar

Tubitak MAM, TÜLOMSAŞ, Bilimsel Projeler İçin Yapılan Danışmanlık, Bilecik Şeyh Edebali Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği Bölümü, Türkiye, 2018 - Devam Ediyor

## Metrikler

Yayın: 50

Atıf (WoS): 388

Atıf (Scopus): 471

H-İndeks (WoS): 9

H-İndeks (Scopus): 9

## Akademi Dışı Deneyim

European Commission Joint Research Center

Şirket, Caterpillar inc., Peoria , IL, USA, Technology Center

Caterpillar Inc.

Iowa Devlet Üniversitesi