

## Asst. Prof. FAZIL HÜSEM

### Personal Information

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### Education Information

Doctorate, Karabuk University, Fen Bilimleri Enstitüsü, Turkey 2014 - 2018

Post Graduate, Yildiz Technical University, Antropoloji, Department Of Metallurgical And Materials Engineering, Turkey 2010 - 2014

Under Graduate, Yildiz Technical University, Antropoloji, Department Of Metallurgical And Materials Engineering, Turkey 2005 - 2010

### Certificates, Courses and Trainings

Quality Management, TS EN ISO/IEC 17025:2017 Deney ve Kalibrasyon Laboratuvarlarının Yeterliliği için Genel Gereklilikler İç Tetkik Eğitimi, 2019

Quality Management, TS EN ISO/IEC 17025:2017 Deney ve Kalibrasyon Laboratuvarlarının Yeterliliği için Genel Gereklilikler Temel Eğitimi, TSE - Türk Standartları Enstitüsü, 2019

Vocational Training, CARL ZEİSS Ultra Plus FE-SEM Eğitimi, ZEISS, 2018

Vocational Training, Qness Q10A+ - Qness Q250 Sertlik Cihazları - Sertlik Ölçüme Yöntemleri Eğitimi, Karabuk University, 2017

Project Management, IPA Rekabetçi Sektörler Programı Proje Yazma Eğitimi, Sakarya Ticaret ve Sanayi Odası, 2017

Measurement and Evaluation, Ölçüm Belirsizliği, Karabuk University, 2017

Quality Management, Validasyon Eğitimi, Karabuk University, 2017

Vocational Training, Çekme - Basma - Eğme - Çentik Darbe Deney Metodları Eğitimi, Karabuk University, 2017

Vocational Training, TS EN ISO/IEC 17025 Dökümantasyon, Hedef ve Politika Eğitimi, Karabuk University, 2016

Occupational Health and Safety, İş Sağlığı ve Güvenliği Eğitimi, Karabuk University, 2016

Vocational Training, Kalıntı Gerilme Ölçümü Deney Metod Eğitimi, Karabuk University, 2016

Vocational Training, Brinell - Rokwell - Vickers Sertlik Deney Metodu Eğitimi, Karabuk University, 2016

Vocational Training, Yorulma Çatlak İlerleme Hızı ve Kırılma Tokluğu Deney Metodu Eğitimi, Karabuk University, 2015

Vocational Training, Nikon Profil Projektör V12B Cihaz Eğitimi, 2015

Vocational Training, Nikon ShuttlePix Dijital Mikroskop , 2015

Measurement and Evaluation, Ölçüm Belirsizliği, Kalite Rehberi Mühendislik ve Yönetim Sistemleri Danışmanlığı, 2015

Quality Management, Metod Validasyonu, 2015

Vocational Training, QDMS entegre Yönetim Sstemi, Bimsen Çözüm Yazılım Tic. AŞ., 2015

Vocational Training, Bruker FT-IR & FT-IR Mikroskop Eğitimi, Bruker, 2014

Vocational Training, AMETEK PAR Marka Parstat 4000 model Elektro Kimyasal Potansiyostat Galvanostat Deney Cihazı Eğitimi, NEL Electronic, 2014

Vocational Training, Protherm 1200C PLF 120/45 Model Kamara Tip Fırın, Protherm 1600C PTF 16/80/610 Model Tüp Fırın, Protherm 1200C PTF 12/50/500 Model Vakum Altında 3 zoneli Tüp Fırın Cihaz Eğitimi, ELİSTA Elektronik Ltd. Şti., 2014

Vocational Training, Hitachi STA 7300 Model TG/DTA ve Hitachi DSC 7000X Model DSC Cihaz Eğitimi, TETRA Teknolojik Sistemler, 2014

Measurement and Evaluation, Ölçüm Belirsizliği, KASCERT International, 2014

Vocational Training, Struers Discotom 100- Secotom 50- CitoPres 10- Tegramin 30- Lectropol 5 , ALS Applied Laboratory Systems, 2014

Vocational Training, Metkon Marka Spectral Model Çift Diskli Yüzey Taşlama Cihaz Eğitimi, Elista Elektronik İnf. Sis. Tas. Ltd. Şti., 2014

Quality Management, TS EN ISO/IEC 17025 Deney ve Kalibrasyon Laboratuvarlarının Yeterliliği Standardı İç Denetçi Eğitimi, PGM Project Inspection Engineering, 2014

Vocational Training, MTS Test Systems / 793.00 Flex Test System Software Training / 793.10 Multi Purpose Test Ware / MTS Software, MTS - Mega Danışmanlık Temsilcilik Dış Tic. Ltd. Şti., 2013

Quality Management, Laboratuvar Akreditasyonu Genel Bilgi, PGM Project Inspection Engineering, 2013

Quality Management, TS EN ISO/IEC 17025 Deney ve Kalibrasyon Laboratuvarlarının Yeterliliği Standardı Genel Bilgilendirme Eğitimi, PGM Project Inspection Engineering, 2013

Vocational Training, GNR Atlantis 13087ATL07 Optik Emisyon Spektrometresi Eğitimi, ANKA Analitik Mekatronik San. ve Tic. Ltd. Şti., 2013

Vocational Training, Zwick 600kN Çekme Basma Eğme Test Cihazı - TestXpert II Programı, ZWICK, 2013

Vocational Training, Zwick 50 HFP MR Yorulma Cihazı - TestXpert Programı, ZWICK, 2013

Vocational Training, zwick 450 Joule Darbe Test Cihazı - TestXpert II Programı, ZWICK, 2013

## Dissertations

Doctorate, Bazı Heusler alaşımlarının termo-elektriksel ve termo-mekaniksel özelliklerinin incelenmesi, Karabuk University, Fen Bilimleri Enstitüsü, 2018

Post Graduate, Alçının Taşınım Transformasyonu ve Etki Eden Unsurlar, Yıldız Teknik Üniversitesi, Antropoloji, Metalurji Ve Malzeme Mühendisliği Bölümü, 2014

## Research Areas

Artificial Organs and Biomaterials, Transportation Engineering, Railways Engineering (railroads, metro, etc.), Fracture Mechanics, Finite Element Methods, Mechanical Testing, Metallurgical and Materials Engineering, Material Technologies, Aircraft System Technologies, Testing Techniques, Engineering and Technology

## Academic Titles / Tasks

Assistant Professor, Karabuk University, Tobb Bilimler Meslek Yüksek Okulu, Makine ve Metal Teknolojileri, 2020 - Continues

Research Assistant, Karabuk University, Mühendislik Fakültesi, Metalurji Ve Malzeme Mühendisliği Bölümü, 2011 - 2020

Research Assistant, Karabuk University, Demirçelik Enstitüsü, 2013 - 2019

## Courses

Ürün İşleme Makinaları ve Tasarımı, Post Graduate, 2019 - 2020

Rail Steels, Post Graduate, 2019 - 2020

Computer aided Technical Drawing, Under Graduate, 2019 - 2020

Computer Aided Technical Drawing I, Under Graduate, 2018 - 2019

Under Graduate, 2018 - 2019

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Effects of constrained groove pressing, severe shot peening and ultrasonic nanocrystal surface modification on microstructure and mechanical behavior of S500MC high strength low alloy automotive steel**  
Karademir I., ÇELİK M. B. , HÜSEM F., Maleki E., Amanov A., ÜNAL O.  
Applied Surface Science, vol.538, 2021 (Journal Indexed in SCI Expanded)
- II. **Enhancement in microstructural and mechanical performance of AA7075 aluminum alloy via severe shot peening and ultrasonic nanocrystal surface modification**  
EFE Y., Karademir I., HÜSEM F., Maleki E., Karimbaev R., Amanov A., ÜNAL O.  
Applied Surface Science, vol.528, 2020 (Journal Indexed in SCI Expanded)

## Articles Published in Other Journals

- I. **The Relationship Between Fatigue Crack Growth and Residual Stress in Rails**  
HÜSEM F., TURAN M. E. , SUN Y., AHLATCI H., Tozlu İ.  
World Academy of Science, Engineering and Technology International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering, vol.10, pp.1194-1199, 2016 (Refereed Journals of Other Institutions)
- II. **Relationship between fatigue crack growth and residual stress in rails**  
HÜSEM F., TURAN M. E. , SUN Y., AHLATCI H., TOZLU İ.  
World Academy of Science, Engineering and Technology International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering, vol.10, pp.1169-1174, 2016 (Refereed Journals of Other Institutions)
- III. **The Relationship Between Fatigue Crack Growth and Residual Strees in Rails**  
HÜSEM F., TURAN M. E. , SUN Y., AHLATCI H., TOZLU İ.  
International Journal of Chemical, Molecular, Nuclear, Materials and Metallurgical Engineering, vol.10, pp.1169-1174, 2016 (Refereed Journals of Other Institutions)

## Refereed Congress / Symposium Publications in Proceedings

- I. **The Effect of Different Cooling Parameters on Fatigue Strength of 1040 Steel after Heat Treatment**  
bektaş s., HÜSEM F.  
4th Iron and Steel Symposium, 4 - 06 April 2019
- II. **FCG Analysis According to ASTM E647 and BS ISO 12108**  
HÜSEM F.  
4th Iron and Steel Symposium, 4 - 06 April 2019
- III. **Difficulties in The KIC Analysis of Materials With High Fracture Toughness**  
HÜSEM F.  
4th Iron and Steel Symposium, 4 - 06 April 2019
- IV. **Effect of Heat Treatment on Structural, Surface and Mechanical Properties of Al-Based Al-x Mn (x = 0.1, 0.2, 0.3) Alloys**  
HÜSEM F., MEYDANERİ TEZEL F., BOĞA A., HAN S., SEMERCİ M.  
1st International Symposium on Light Alloys and Composite Materials (ISLAC'18), Karabük, Turkey, 22 - 24 March 2018, pp.105-108
- V. **Mechanical and Microstructure Properties of Sn-Zn Alloys Used in The Electronic Industry**  
HÜSEM F., MEYDANERİ TEZEL F., HAMUTOĞLU U. C. , NERGİZ F., ALBAYRAK C., BEKTAŞ S.  
1st International Symposium on Light Alloys and Composite Materials (ISLAC'18), Karabük, Turkey, 22 - 24 March 2018, pp.170-172
- VI. **Mechanical and Corrosion Properties of Sn-Zn Alloys Used in Electronics Industry**  
HÜSEM F., MEYDANERİ TEZEL F., BEKTAŞ S.  
1st International Symposium on Light Alloys and Composite Materials (ISLAC'18), Karabük, Turkey, 22 - 24 March 2018, pp.93-95

- VII. **Effect of Heat Treatment on Corrosion and Wear Behaviors for Al Based Al-x Mn ( $x = 0.1, 0.2, 0.3$ ) Alloys Used as Roofing Material**  
HÜSEM F., MEYDANERİ TEZEL F., AHLATCI H., han s., boğa a.  
1st International Symposium on Light Alloys and Composite Materials, 22 - 24 March 2018
- VIII. **The Effect of Heat Treatment on Structural, Surface and Mechanical Properties of Al Based Al-Sn-Si Alloys used For International Combustion Engines and Bearings in The Automotive Sector**  
bektaş s., HÜSEM F., MEYDANERİ TEZEL F.  
1st International Symposium on Light Alloys and Composite Materials, 22 - 24 March 2018
- IX. **Dry sliding wear, friction and axial fatigue behavior of AA7075 aluminum alloy with a nanogained layer**  
EFE Y., HÜSEM F., MALEKİ E., ÜNAL O.  
13th International Conference on Surfaces, Coatings and Nanostructured Materials (NANOSMAT), Gdansk, Poland, 11 - 14 September 2018, vol.1, pp.61
- X. **Corrosion Properties of Al-10Sn-xSi ( $x = 2, 4, 6$ ) Alloys Used Automotive Industry**  
HÜSEM F., bektaş s., MEYDANERİ TEZEL F.  
1st International Symposium on Light Alloys and Composite Materials, 22 - 24 March 2018
- XI. **Comparison of Mechanical Properties of Honeycomb Composite Materials Used in Airplane Industries**  
İncedere M. İ. , Yıldırım E., DEMİRCİ E., ÖZUSTA B., AHLATCI H., SUN Y., TÜREN Y., ÖZÇELİK S., HÜSEM F.  
1st International Conference of Advanced Materials and Manufacturing Technologies, 25 - 27 October 2017
- XII. **Influence of Cooling Conditions on Fracture Toughness of 1040 Quality Steel**  
HÜSEM F., TURAN M. E.  
3rd Iron and Steel Symposium(UDCS'17), 3 - 05 April 2017
- XIII. **Influence of Head Hardening Process on Fracture Toughness in Rails**  
HÜSEM F., TURAN M. E. , AHLATCI H.  
3rd Iron and Steel Symposium(UDCS'17)3-5April 2017 Karabük-TURKEY, 3 - 05 April 2017
- XIV. **Effect of Aging Process on Wear Performance, Hardness Behavior and Residual Stress of Al-Cu-Fe Heusler Alloys**  
HÜSEM F., MEYDANERİ TEZEL F., AKGÜL Y.  
The 3rd International Conference on Engineering and Natural Sciences (ICENS), Budapest, Hungary, 3 - 07 May 2017, pp.165
- XV. **The Effect Of Silicon Carbide Nanoparticle Content On The Mechanical Properties Of The Aluminum-SiC Composites**  
AKGÜL Y., TURAN M. E. , SUN Y., HÜSEM F., IŞIK M.  
3rd INTERNATIONAL CONFERENCE ON ENGINEERING AND NATURAL SCIENCES, 3 - 07 May 2017
- XVI. **Influence of Aging on Residual Stress, Wear and Hardness Behaviour in Al-Cu-Ni Heusler Alloys**  
HÜSEM F., MEYDANERİ TEZEL F.  
III. Iron and Steel Symposium, Karabük, Turkey, 3 - 05 April 2017, pp.661
- XVII. **Investigation of Wear and Mechanical Behaviors of Damascus Steels**  
SALISI E., YAVUZ U., KUCUK N., HÜSEM F., AHLATCI H., IŞIK M., UYAN P.  
3rd Iron and Steel Symposium(UDCS'17), 3 - 05 April 2017
- XVIII. **Dry Sliding and Corrosive Wear Performances of Head Hardened Rails**  
TURAN M. E. , HÜSEM F., AKGÜL Y., SUN Y., Ahlatçı H.  
3rd Iron and Steel Symposium(UDCS'17), 3 - 05 April 2017
- XIX. **RESIDUAL STRESS DISTRIBUTION IN R220 AND R260 GRADE GROOVED RAILS**  
TURAN M. E. , SUN Y., HÜSEM F.  
3rd Iron and Steel Symposium(UDCS'17), 3 - 05 April 2017
- XX. **Fabrication and Mechanical Behavior of Aluminum-Matrix Composites Reinforced with Boron Nitride Particles**  
AKGÜL Y., AKINAY Y., HÜSEM F., ŞİMŞİR H., POLAT S.  
3rd Iron and Steel Symposium(UDCS'17)3-5April 2017, 3 - 05 April 2017

- XXI. **Influence of Head Hardening Process on Fatigue Crack Growth Behavior in Rails**  
KALYONCUOĞLU B., TURAN M. E. , ÖZÇELİK S., HÜSEM F., AHLATCI H., SUN Y.  
3. Uluslararası Raylı Sistemler Mühendisliği Sempozyumu, 13-15 Ekim 2016, Karabük Üniversitesi, Türkiye., 13 - 15 October 2016
- XXII. **Influence of Head Hardening Heat Treatment Process on Fatigue Crack Growth Behavior in Rails**  
kalyocuoğlu b., HÜSEM F., TURAN M. E. , ÖZÇELİK S., SUN Y., AHLATCI H., tozlu i.  
ISERSE'xx16 3. uluslararası Raylı Sistemler Mühendisliği Sempozyumu, 13 - 15 October 2016
- XXIII. **Effect of Cr2O3 on Mechanical Properties of Aluminium Produced Powder Metallurgy**  
AKGÜL Y., HÜSEM F., IŞIK M.  
ICMSME: 18th International Conference on Material Science and Material Engineering, 15 - 16 September 2016
- XXIV. **Effect of Cr2O3 on Mechanical Properties of Aluminum Produced Powder Metallurgy**  
AKGÜL Y., HÜSEM F., IŞIK M.  
ICMSME Rome 2016: 18th International Conference on Material Science and Material Engineering, 15 - 16 September 2016
- XXV. **The Relationship between Fatigue Crack Growth and Residual Stress in Rails**  
HÜSEM F., TURAN M. E. , SUN Y., AHLATCI H., TOZLU İ.  
World Academy of Science, Engineering and Technology, Roma, Italy, 15 - 16 September 2016
- XXVI. **Mantarı Sertleştirilmiş Raylarda Hızlandırılmış Soğutma Süresinin Mekanik Özelliklere Etkisi**  
ÖZÇELİK S., TURAN M. E. , KÜÇÜK E., TOZLU İ., HÜSEM F., KELESOĞLU E., AHLATCI H., SUN Y.  
2nd International Iron and Steel Symposium (IISS'15), 1 - 03 April 2015

## Supported Projects

MEYDANERİ TEZEL F., HÜSEM F., Project Supported by Higher Education Institutions, Bazı Heusler Alaşımının Termo-elektriksel ve Termo-mekaniksel Özelliklerinin İncelenmesi, 2016 - 2019

HÜSEM F., Project Supported by Higher Education Institutions, The Relationship between Fatigue Crack Growth and Residual Stress in Rails, 2016 - 2016

## Citations

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