

T.C.
İSTANBUL AYDIN UNIVERSITY



DEFENSE INDUSTRY
TECHNOLOGIES
APPLICATION and RESEARCH
CENTER

TAG:

T.C. İSTANBUL AYDIN UNIVERSITY

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İAÜ SSTUAM Director

Inst. Serkan GÖK
İAÜ SSTUAM Deputy Director

January 2022
No 5



E-NEWSLETTER

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Res. Asst. Mehmet Tahir PALA
Res. Asst. Cihan SEZER



DEFENSE INDUSTRY TECHNOLOGIES APPLICATION and RESEARCH CENTER

The purpose of the Defense Industry Technologies Application and Research Center (SSTUAM), established within the body of Istanbul Aydın University, is to conduct research on defense technologies, to perform analysis, to carry out modeling, design, simulation and manufacturing studies, to monitor and evaluate defense technologies, to make technology predictions regarding defense technologies, to contribute for the development of defense technologies and industry by developing basic and technological infrastructure technologies, making engineering applications for needed systems and subsystems. At the same time, we aim to contribute to the infrastructure of our students who will graduate in the project-oriented studies carried out within our center.

The importance of the defense industry is increasing day by day in Turkey as well as in the rest of the world. Defense industry; It is an industrial sector that is not separated from the general industry, can produce and maintain the vehicles, equipment and weapons, ammunition required in the field of national defense and has a connection with manufacturing technologies. The defense industry is not only a commercial factor; at the same time, it is an industrial organization that considers and evaluates many issues such as reliability, strategic, confidentiality, low dependency and technological competence. The defense industry is an important field where the most advanced technology systems are used and constantly needs new technologies. It is a fact that the technologies developed in this field are used for civilian purposes later on, thus contributing to the socio-economic development of countries. Therefore, while the defense expenditures, which are inevitable for Turkey, continue, our aim is; Our aim is to make our country a product and technology producer in the field of defense industry in order to increase our country's national technology capability and to achieve economic and social gains.

Message of Director

Asst. Prof. Dilşad AKGÜMÜŞ GÖK
SSTUAM Director



Res. Asst. Mehmet Tahir PALA was appointed as the Research Assistant of Defense Industry Technologies Application and Research Center at Istanbul Aydın University on 15.12.2021.



Res. Asst. Cihan SEZER was appointed as the Research Assistant of Defense Industry Technologies Application and Research Center at Istanbul Aydın University on 15.12.2021.



EVENTS

GİRİŞ

NETFORM



Emrah DEMİRAY

Kaynak ve Makine Yüksek Mühendisi

Çalışma Alanları

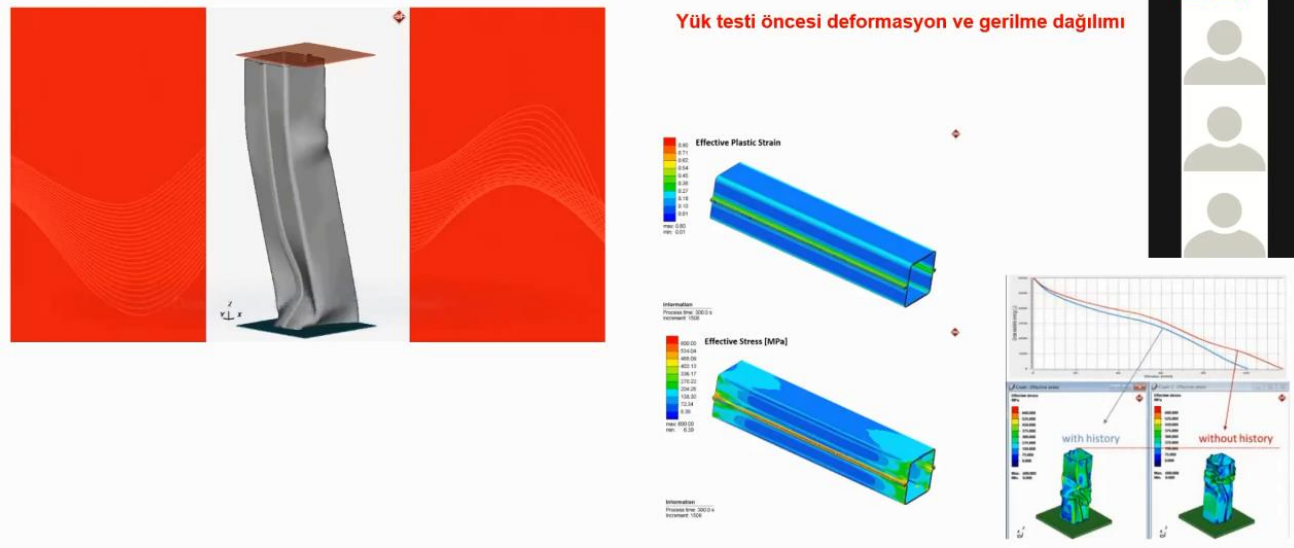
- İmalat Yöntemleri ve Teknolojileri
- Yalın Üretim & Yalın Dönüşüm
- Dünya Klasında Üretim (WCM)
- Dijital Üretim Hatları ile Sanal Fabrika Uyg.
- CAD & CAE (Tasarım ve Analiz)

BUGÜNKÜ KONUMUZ : Kaynaklı İmalat ve Kaynaklı İmalat Simülasyonları

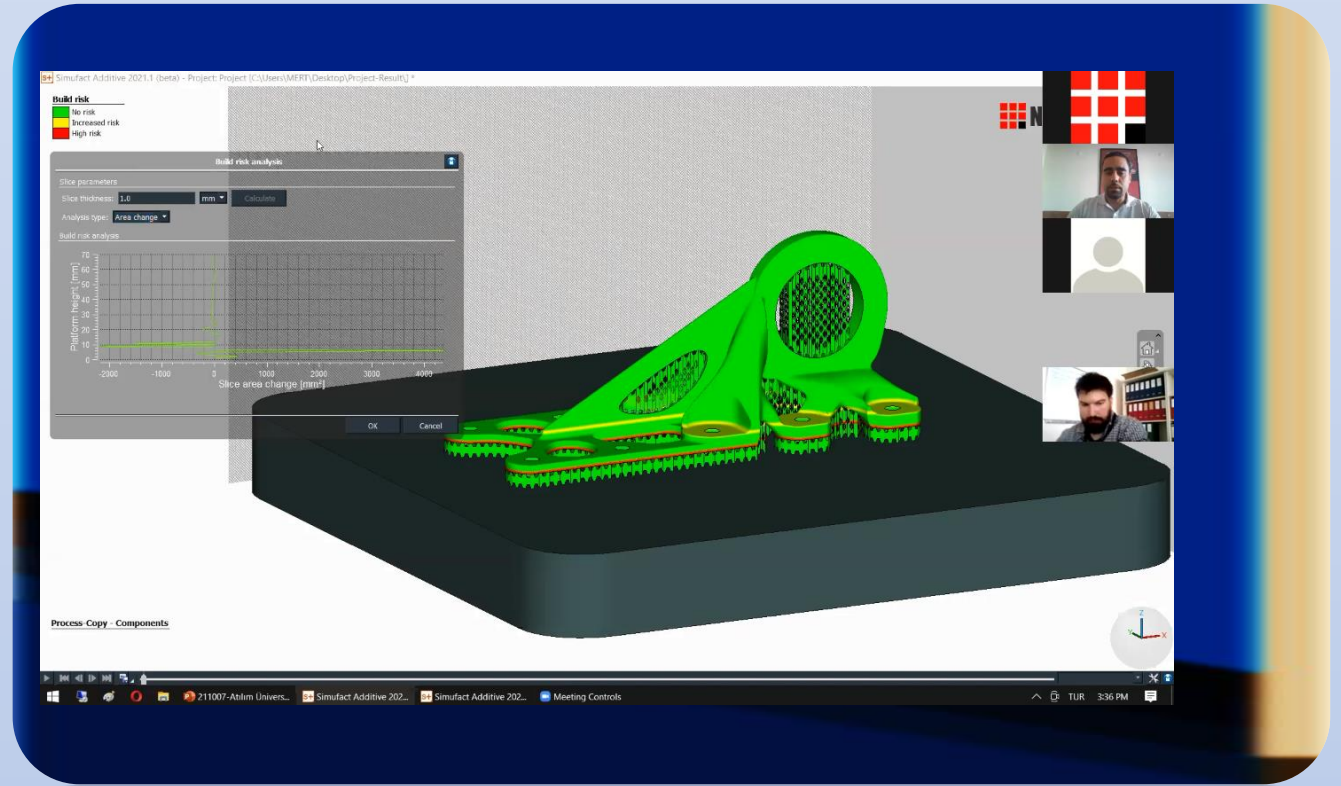
- Kaynak Nedir?
- Kaynaklı İmalatta Kalite Güvence
- Yeni Nesil Kaynak Prosesleri
- Sanal Üretim Hatları ve Robotik Kaynak Uyg.
- Sonlu Elemanları Yöntemi
- Kaynaklı İmalatta Sonlu Elemanlar Yöntemi
- Simufact Welding ile Kaynak Simülasyonları



Şekillendirme Kaynak ve Yük Testi



Participated in the "Metal Forming Analysis" and "Additive Manufacturing and Welding Analysis" trainings held by NETFORM Engineering Company between 5-7 October 2021.



KAYNAKLI İMALAT TEKNOLOJİLERİ ve SAYISAL SİMÜLASYONLAR

Emrah DEMİRAY
Kaynak ve Makine Yüksek Mühendisi

On 22-23 November 2021, Selcuk University International Engineering Technologies Conference participated in the online seminar on "Analysis of Manufacturing Methods with Numerical Simulation Method"

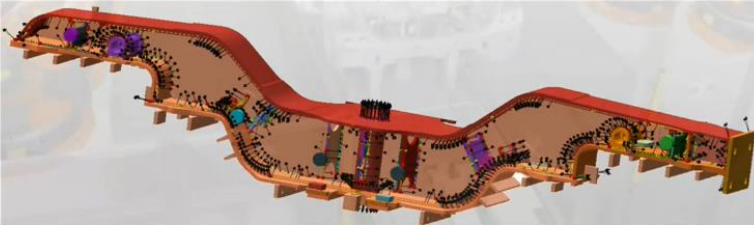
SIMUFACT WELDING

NETFORM

Simufact Welding Özellikleri

- Farklı kaynak türlerini kombine etme
- Birden fazla kaynak robotu tanımlama ✓
- Kaynak robotlarını farklı zamanlarda aktifleştirme
- Bir robot için birden fazla kaynak yolu tanımlayabilme
- Tablo yardımıyla kaynak zamanlaması tanımlama

Kaynak zamanlama tablosu



Uygulama Alanları

- Medikal
- Havacılık ve uzay
- Savunma
- Otomotiv



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EVENTS

SUMMIT 2021
Nov30 - Dec 2, 2021
FUTURE OF MANUFACTURING WORK
Empower, Innovate, Transform

eit Manufacturing Co-funded by the European Union

Participated in EIT Manufacturing 2021 Summit on 30 November-2 December 2021.

YILDIZ TEKNİK ÜNİVERSİTESİ
SAVUNMA SANAYİ
TEKNOLOJİLERİ TOPLULUĞU

Kayıt için :
YILDIZSST.COM
7 ARALIK 2021

HAVACILIK VE UZAY SEMİNERİ

11.20-12.00
Abdurrahman Şeref CAN
SSB Uçak Daire Başkanı

12.10-13.10
Mesut YILMAZ
Mühendislik Direktörü

13.20-14.20
A. Onur GÜZELMERİÇ
Satış, Pazarlama ve İş Geliştirme Direktörü

14.30-15.30
Prof. Dr. İbrahim KÜÇÜK
Uzay Bilimleri Daire Başkanı

/yildzsst
Etkinliğimiz ücretsiz ve sertifikalıdır

MALZEME BİLİMLERİ KULUBU

Participation in the seminar titled "Aviation and Space" held by Yildiz Technical University on December 7, 2021.



EVENTS

MAKÜ
BURDUR MEHMET AKIF ERSOY ÜNİVERSİTESİ

NETFORM
mühendislik • makina • metal

**Eklemeli İmalat Yöntemleri
ve
Sayısal Simülasyon Uygulamaları**

22 Aralık 2021

Mert Aygen – Makina Yük. Mühendisi

Avantajlar / Dezavantajlar

Avantajlar

- Karmaşık ve özel işlevli parça imalatı
- Düşük adetli parçalar için uygun maliyet
- Yedek parça stok ihtiyacını ortadan kaldırma

Dezavantajlar

- Düşük üretim hızı → Binder Jetting, v.b. yeni eklemeli imalat yöntemleri
- Yüksek maliyetli ham madde → Artan ham madde üretici sayısı
- Yüksek maliyetli tezgahlar → Artan tezgah üretici sayısı ve kompakt tezgahlar
- Düşük yüzey kalitesi → Yeni proses kontrol ve yüzey işleme teknikleri
- Düşük relatif yoğunluk (gözenekli parça) → Yeni proses kontrol teknikleri ve ısıtım işlem (HIP)

NETFORM Engineering Company participated in the online seminar titled "Analysis of Manufacturing Methods with Numerical Simulation Method" held with Mehmet Akif Ersoy University on 15-22-29 December 2021 within the scope of university-industry cooperation..

MAKÜ | MMF
MÜHENDİSLİK-MİMARLIK FAKÜLTESİ
Makine Mühendisliği

**İmalat Yöntemlerinin
Sayısal Simülasyon
Yöntemi ile Analizleri**

Moderatör: Doç. Dr. Gültekin Basmacı

**ÇEVİRİM İÇİ
SEMİNER**

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Mekanik Birleştirme

12/15/2021

Sac Metal Şekillendirme Sayısal Simülasyon Uygulamaları



STUDIES



MÜHENDİSLİK KAMPLARI

SAVUNMA SANAYİ KULÜBÜ
ROKET TASARIM EĞİTİMİ

22 Aralık Çarşamba (17:00-19:00)
Model Roket Nedir, Roketler Nasıl Çalışır
ve Roket Tasarımına Giriş

23 Aralık Perşembe (17:00-19:00)
SolidWorks ile Roket Tasarımı

24 Aralık Cuma (17:00-19:00)
KENDİ ROKETİNİZİ TASARLAYIN !

Yer: D Blok D2230

Kontenjan: 50 Kişi



Gerekli Bilgiler Biodaki Formda Verilmiştir.



MÜHENDİSLİK KAMPLARI

SAVUNMA SANAYİ KULÜBÜ
İNSANSIZ HAVA ARACI TASARIM EĞİTİMİ

28 Aralık Salı (17:00-19:00)
İnsansız Hava Aracı Nedir ?

29 Aralık Çarşamba (17:00-19:00)
İnsansız Hava Aracı Tasarım Temelleri ve
SolidWorks ile Tasarıma Başlangıç.

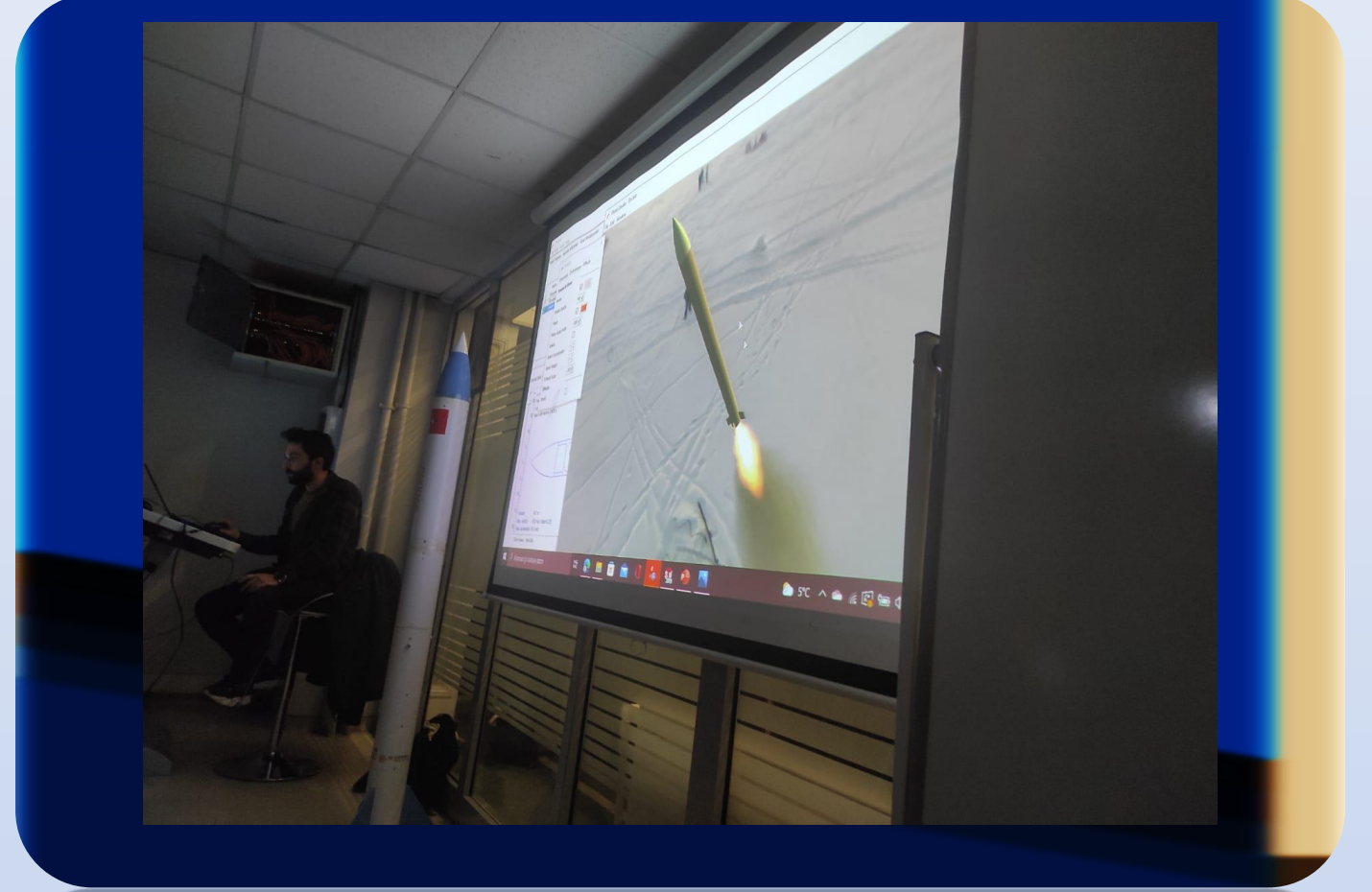
30 Aralık Perşembe (17:00-19:00)
İnsansız Hava Aracı Tasarımı

Yer: D Blok D2230

Kontenjan: 50 Kişi



Gerekli Bilgiler Biodaki Formda Verilmiştir.



Under the name of Defense Industry Student Club and Engineering Camps, "Rocket Design" training on 22-23-24 December 2021 and "UAV Design" training on 28-29-30 December 2021 were given to associate and undergraduate students.



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STUDIES



Within the scope of TÜBİTAK 2209a, students were given project writing training, and 7 project applications were made with undergraduate students and 13 project applications were made with associate degree students.



Defense Industry Technologies Center Director Asst. Prof. Dilşad AKGÜMÜŞ GÖK's International publication titled "Design and Fatigue Life Analysis of Air Suspension Z Type Leaf Springs Used in Heavy Commercial Vehicle" has been accepted for publication in the Journal of Polytechnic.



STUDIES



Defense Industry Technologies Center Director Asst. Prof. Dilşad AKGÜMÜŞ GÖK and Deputy Director Inst. Serkan GÖK's International book titled "Solidworks Flow Simulation" has been accepted for publication at the Nobel publisher.



Work has started for the competition with the Nova Drone Team, which will represent our university in the Teknofest 2022 Fighting Drone category.



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