This project is co-financed by the European Union and the Republic of Turkey
Bu proje Avrupa Birliği ve Türkiye Cumhuriyeti tarafından finanse edilmektedir

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Introduction to Cranfield University

- Cranfield University is a British postgraduate public research university specialising in science, engineering, design, technology and management
  - Ranked 9th in UK in the 2014 REF for Aeronautical, Mechanical, Chemical and Manufacturing engineering
  - 81% of the research at Cranfield is classed as world-leading
  - Six time winner of the Queen's Anniversary Prize

- Previous projects (EPSRC):
  - No-fault found problems in aerospace applications
  - Application of machine learning for system health management
  - Real-time anomaly detection with FPGAs

Description of your research interest

- I am currently working on a number of projects related to prognostics and system health monitoring in the areas of:
  - Autonomous systems
  - Multimodal simulations

- The Center for Digital Engineering and Manufacturing
  - Virtual/augmented reality
  - Digital twins demonstrators in manufacturing
  - Component degradation analysis using thermography
  - AI-based medical solutions

Project Idea

Advanced digital technologies for manufacturing

- **HORIZON-CL4-2022-TWIN-TRANSITION-01-06: ICT Innovation for Manufacturing Sustainability in SMEs (I4MS2) (Made in Europe Partnership) (IA)**

Title: Study on online multi-modal simulation of manufacuting operation

Objectives:

- to create a real-time digital twin of the system behaviour;
- to apply online multi-modal simulations for prediction;
- to understand the complexity of multi-fidelity models;
- to implement and optimise the technology.

- Expected results
  - show online multi-modal approach can improve accuracy and speed
  - push on-ground processing onto onboard

Consortium - required partners

No	Expertise	Type	Country	Role in the project
01	Multifidelity simulations	RTD	UK	Development of Digital twin
02	UAV testing	SME	Turkey, UK	Case study and operational simulation requirements
03	Real-time processing	UNI	Turkey, UK	Online multi-modal simulation
04				
05				
06				

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