

International Brokerage Event
Brussels, 26-27/10/2017



Mercedes-Benz Türk A.Ş.
Istanbul Technical University
Okan OTUZ
okan.otuz@daimler.com
otuz@itu.edu.tr

Description of the your research interest

Istanbul Technical University



Manufacturing Engineering Department

CNC Machining Lab.

Mechanical Testing Lab.

Green Composite Lab.

Tensile Test Fatigue Tests

Compression Test Bending Tests

Hardness Tests Impact Test Surface Roughness

Surface Characterization Corrosion Tests

Description of the your research interest

Prof.Dr. Mustafa Bakkal - Istanbul Technical University/ Materials Science & Manufacturing



- *Hybrid and green composite manufacturing, joining, testing, and computational modeling for transport, housing, energy and medical sectors*
- *Amorphous alloy development, manufacturing, heat treatment, characterisation, testing and modeling.*
- *Thermal modeling of manufacturing processes.*
- *Hard to cut lightweight material manufacturing, characterisation, testing and modeling.*

Description of the your research interest

Dr. Osman Taha Şen- Istanbul Technical University/ Automotive Engineering Department

- *Combustion modeling in internal combustion engines*
- *Improving exhaust emissions in internal combustion engines*
- *Combustion chamber modeling and design*
- *Vehicle Acoustics*
- *Vibration measurement and analysis*
- *Fatigue*
- *Vehicle chassis design*

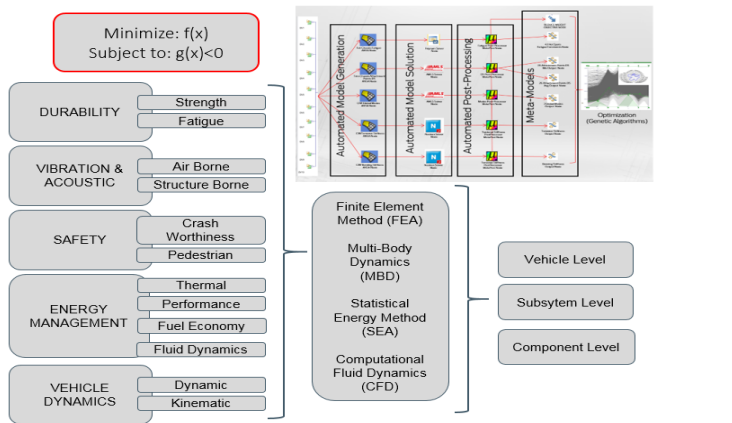


- *Artificial road profiles*
- *Automotive Tribology*
- *Simulation of driver-vehicle-environment control cycle*
- *Homology tests related to exhaust emissions, noise, performance, safety, compliance and reliability*
- *Determination and control of emissions of greenhouse gases arising from the transport sector*

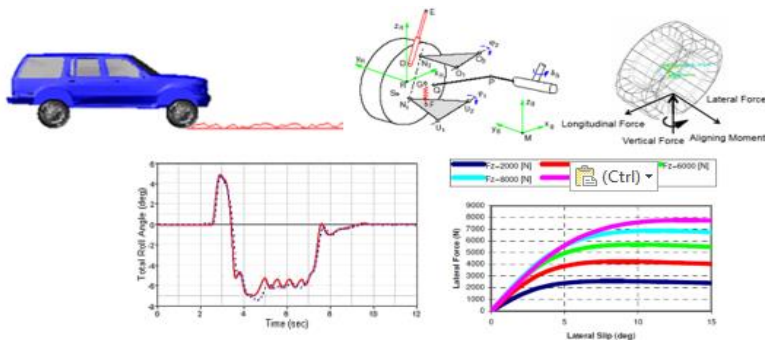


Description of the your research interest

Dr. Polat Şendur - Özyeğin University/ Vibration & Acoustics



- *Development of Advanced Simulation / Testing / Automation Tools*
- *Vibration Based Damage Detection*
- *Damping Characterization*
- *Mid and High Frequency Vibration / Acoustics*
- *Multidisciplinary Design Optimization (MDO)*
- *Development of Lightweight Design Tools*
- *Vehicle Dynamics*



Please add relevant 2017 CALL TOPIC

Please add TITLE of the PROJECT IDEA



Transport

LC-GV-07-2020: Advanced light materials and their production processes for automotive applications

Development of ultra light composite materials for automotive application via controlled polymer foam and metal foam joining.

LC-GV-02-2018: Virtual product development and production of all types of electrified vehicles and components

The main objective of this research is to grow the capabilities of simulation and mathematical modeling so as to reduce hardware testing and physical prototypes on the virtual development of electrified vehicles. These tools are related to noise and vibration development, development of sound warning system for pedestrian protection, controller design, and energy management of electrified vehicles.

LC-GV-07-2020: Advanced light materials and their production processes for automotive applications

The main objective of this research is to understand the effect of system level characteristics of various materials such as composites on the vibration and acoustics and address the complex relationship between the trade-offs between light weight and vibration performance. In addition, modeling and verification of composite modeling, development of methodologies to enable the basic design of automotives at very early stages and addressing of trade-offs between vehicle functions using multi-disciplinary optimization methods for automotives are targeted.

LC-MG-1-9-2019: Upgrading transport infrastructure in order to monitor noise and emissions

LC-GV-04-2019: Low-emissions propulsion for long-distance trucks and coaches

MG-2-1-2018: Human Factors in Transport Safety

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NMBP

DT-NMBP-01-2018: Open Innovation Hubs for Lightweight nano-enabled multifunctional composite materials and components (IA)

High performance natural fiber and nano-sized additive reinforced polymer composites

DT-FoF-01-2018: Skills needed for new Manufacturing jobs (CSA)

New; experience and industry driven based curriculum development for new manufacturing jobs.

DT-FoF-03-2018: Innovative manufacturing of opto-electrical parts (RIA) DT

Injection based meso and micro size “nano crystalline/amorphous metal alloy” product manufacturing method development for opto-electrical parts.

NMBP-10-2019: Translation of manufacturing problems into materials modeling (RIA)

Thermal modeling of novel amorphous/nano crystalline metals materials

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NMBP

DT-FoF-12-2019: Handling systems for flexible materials (RIA)

System solutions that address and manage all product and material related data (size, shape, weight, colour, material composition, defects, etc.) so that their automated handling can be embedded in larger production and process management systems.

DT-NMBP-09-2018: Accelerating the uptake of materials modelling software (IA)

Software packages to be developed should create a modelling framework allowing the seamless integration with and re-use of various existing models used in industry. Coupling and linking of models should allow reliable top-down and bottom up design of new materials and processes for faster product development.

CE-SPIRE-08-2020: Improved Industrial Processing using novel high-temperature resistant materials (RIA)

CE-SPIRE-09-2020: Making the most of mineral waste, by-products and recycled material as feed for high volume production (IA)

CE-SPIRE-10-2018: Efficient recycling processes for plastic containing materials (IA)

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Energy

LC-SC3-RES-14-2019: Optimising manufacturing and system operation

Virtual feature based process planning and optimization on time consuming machining processes via cutting mechanics and thermal modeling

Environment

CE-SC5-07-2018-2019-2020: Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery schemes

(Waste) textile fiber reinforced (recycled) polymer composite manufacturing, product development for industrial and outdoor use purpose

Okan Otuz

Mercedes-Benz Türk A.Ş.

Truck Development

+905324570735

okan.otuz@daimler.com

Prof. Dr. Mustafa BAKKAL

Istanbul Technical University

Materials Science & Manufacturing

bakkalmu@itu.edu.tr

Dr. Polat Şendur

Özyeğin University

Vibration & Acoustics

polat.sendur@ozyegin.edu.tr

Dr. Osman Taha Şen

Istanbul Technical

University

Automotive Engineering

senos@itu.edu.tr