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ENGINEERING FACULTY

e - Newsletter

December / 2023

No: 15



Sustainable Civil Engineering Workshop 2023

"Sustainable Civil Engineering Workshop 2023" was organized by the civil engineering department on December 20.



Rocket Club Meeting

Rocket Club Meeting was held by the Aerospace Engineering (English) department.





PROJECT MEETING

Under the supervision of Assist. Prof. Dr. Necip Gökhan Kasapoğlu, the Pusula Electronics Club has successfully concluded the courses on "Introduction to Algorithm and C Programming" and "Basic Electronics and PIC Microcontroller Programming". The students were supplied with useful experiences through the certificates and presents offered to them by Pusula Electronics Club. The club extends an invitation to any individuals interested in partaking in its next training sessions and esteemed competitions, such as Teknofest.

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TECHNICAL TOUR

A technical trip was organized to Ankara TUSAŞ (Turkey Aerospace Industries Inc.) by the mechanical engineering department.





MOTIVATIONAL ACTIVITY

An event was organized by the Dean's Office of the Faculty of Engineering to increase motivation among faculty members.



MEETING

Assist. Prof. Dr. Hasan Volkan ORAL attended the COST ACTION CA 22110 LiAISE Core Group meeting as WG 2 leader.

The first online Meeting on Zoom platform took place on 29/11/2023, at 11.00 CET

There were 47 participants in the meeting.

Participants were split up due to sub-tasks according to WG objectives. Before that sub-leaders were chosen. The volunteers for these positions were defined by the Google surveys before the online meeting took place.

Some interesting ideas, such as publishing a paper about clustering automotive industries in Europe and Turkey based on IS approach were proposed by a participant (Suat from TR).

One sub task leader, İstemi from TR suggested to merge sub tasks 2.2 and 2.3.

In the beginning **several potential paper topics were proposed under the WG2**, but having an internal discussion with sub-tasks leaders, it was decided it is too early at the moment.



LATEST ACADEMIC PUBLICATIONS

1) Prof. Dr. Abdulhadi BAYKAL

Yassine Slimani, Zainab H. Al Najj, Essia Hannachi, Muhammad Nawaz, R. Sivakumar, Sultan Akhtar, Munirah A. Almessiere, Abdulhadi Baykal, R. Vignesh, Atul Thakur, Preeti Thakur, Efficient photocatalysis of Zn_{1-2x}EuxDyxO nanoparticles towards the degradation of hazardous Rhodamine B dye, *Inorganic Chemistry Communications*, Volume 159, 2024, 111803, ISSN 1387-7003, <https://doi.org/10.1016/j.inoche.2023.111803>.

2) Prof. Dr. Ali SINAĞ

Yusuf Osman Donar, Selva Bilge, Duygu Bayramođlu, Beyza Özoylumlu, Samed Ergenekon, Ali Sınađ, Recent developments and modification strategies in electrochemical sensors based on green nanomaterials for catechol detection, *Trends in Environmental Analytical Chemistry*, Volume 41, 2024, e00223, ISSN 2214-1588, <https://doi.org/10.1016/j.teac.2023.e00223>.

3) Prof. Dr. Hasan Hüseyin BALIK – Prof. Dr. Murtaza FARSADI

Alhanaf, A.S.; Balik, H.H.; Farsadi, M. Intelligent Fault Detection and Classification Schemes for Smart Grids Based on Deep Neural Networks. *Energies* 2023, 16, 7680. <https://doi.org/10.3390/en16227680>

4) Prof. Dr. Murtaza FARSADI

Diagnosing internal defects of power transformers using neural networks and transformer mechanical vibrations conversion function

Soft-Switching Ultra-High Step-Up DC-DC Converter with the Coupled Inductor and Low Voltage Stress on the Power Switches

5) Prof. Dr. Zafer ASLAN

B. İşler, Z. Aslan, F. Sunar, A. Güneş, E. Feoli, D. Gabriels, Hybrid model-based prediction of biomass density in case studies in Türkiye, *Ecological Informatics*, Volume 79, 2024, 102439, ISSN 1574-9541, <https://doi.org/10.1016/j.ecoinf.2023.102439>.

Akbulut, U.; Cifci, M.A.; Aslan, Z. Hybrid Modeling for Stream Flow Estimation: Integrating Machine Learning and Federated Learning. *Appl. Sci.* 2023, 13, 10203. <https://doi.org/10.3390/app131810203>

6) Assist. Prof. Dr. Hasan Volkan ORAL

Sustainable Smart City Application Based on Machine Learning: A Case Study Example from the Province of Tekirdađ, Turkey" ,Urban Sustainability, Ali Cheshmehzangi et al. (Eds): City Information Modelling, Springer Nature



7) Assist. Prof. Dr. Mohamed Gamal Omar AL HAGRI

Döndüren, M.S., Al-Hagri, M.G. Single and Combined Effect of Fine and Coarse Tire Rubbers on the Static, Microstructural, and Impact Properties of Concrete. Strength Mater (2023). <https://doi.org/10.1007/s11223-023-00596-3>

Al-Hagri, M.G , Döndüren, M.S., Experimental study on static and impact properties of concrete incorporating nano-SiO₂, nano-Al₂O₃ and Fe₂O₃ in single and combined forms, ICE Virtual Library