

ICOSTEE
2024

International Conference on Science, Technology, Engineering and Economy

31st May 2024



Faculty of Engineering
University of Szeged

International Conference on Science, Technology, Engineering and
Economy

ICOSTEE 2024

CONFERENCE PROGRAM

LECTURES AND POSTER PRESENTATIONS

31st May 2024

Faculty of Engineering University of Szeged
Building A Mars tér 7, Szeged, Hungary





Scientific and Organization Committee

Joint organization with the Agricultural and Bioengineering Scientific Committee of Hungarian Academy of Sciences

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Petra Veszélovski



Scientific program

8 ³⁰ – 10 ⁰⁰	Registration
10 ⁰⁰ – 10 ¹⁵	Opening, conference introduction
10 ¹⁵ – 11 ¹⁵	Plenary lectures <ul style="list-style-type: none">▀ Prof. Dr. Péter Tamás Development directions of logistics education and research▀ Prof. Dr. Ákos Mesterházy Food safety and improvement of adaptation ability is to key to fee 12 billion people
11 ¹⁵ – 12 ⁰⁰	Break
	Poster session – continuous
12 ⁰⁰ –	Oral presentations (Sessions)
13 ⁰⁰ – 15 ⁰⁰	Lunch
14 ⁰⁰ –	Oral presentations (Sessions)
	Poster session – continuous



Session 1A. Bio- and Environmental Engineering

- Session chair: **Dr. Gábor Géczi**, Hungarian University of Agriculture and Life Sciences (Hungary)
- Co-chair: **Prof. Dr. Cecilia Hodúr**, University of Szeged (Hungary)
- Room: Seminar room VI.

12 ⁰⁰ – 12 ¹⁵	Abdelouahed FANNAKH , Károly BARTA, Andrea FARSANG [†] Assessment and validation of shallow groundwater vulnerability to contamination based on fuzzy logic and DRASTIC method for sustainable groundwater management, South-east Hungary
12 ¹⁵ – 12 ³⁰	Houria BOUZGHIBA , Ajdour A., Kenza KHOMSI, Gábor GÉCZI HYSPLIT and K-means clustering application for Trajectory analysis to determine source regions of secondary inorganic aerosols at Hungary's Kecskemet Background Monitoring Station
12 ³⁰ – 12 ⁴⁵	László TUTOR , András BÉRES, András BARCZI, Márk Kálmán HORVÁTH, Gábor GÉCZI Detectable Potassium reduction in various wastewater treatment systems
12 ⁴⁵ – 13 ⁰⁰	Dinesh CHANDOLA , Erik SINKOVICS, Zsuzsanna LÁSZLÓ, Tünde ALAPI Effect of ball-milling and water matrices on the degradation of trimethoprim by biochar-activated peroxymonosulfate
13 ⁰⁰ – 13 ¹⁵	Aws N. AL-TAYAWI , Hajnalka CSOTT, Nikolett Sz. GULYÁS, József Richárd LENNERT, Zsuzsanna HORVÁTH HOVORKA, Zsuzsanna LÁSZLÓ, Cecilia HODÚR, Szabolcs KERTÉSZ Flow dynamics assessment with integrated 3D printed turbulence promoters to mitigate membrane fouling in ultrafiltration module
13 ¹⁵ – 13 ³⁰	Zoltán Péter JÁKÓI , Cecilia HODÚR, Sándor BESZÉDES Enhancing the biodegradability of meat industry sludge with metal nanoparticles coupled microwave irradiation
13 ³⁰ – 15 ⁰⁰	Lunch



Session 1B. Bio- and Environmental Engineering

- Session chair: **Prof. Dr. Zita Seres**, University of Novi Sad (Serbia)
- Co-chair: **Dr. Gábor Veréb**, University of Szeged (Hungary)
- Room: Seminar room VII.

12 ⁰⁰ – 12 ¹⁵	Anett COVIC , Gyöngyi OROSZ, Tünde ALAPI Investigation of the use of persulfate salts in advanced oxidation processes using trimethoprim as model compound
12 ¹⁵ – 12 ³⁰	Bence VERES , Benjámín VAS, Tünde ALAPI The effect of persulfate ions on the heterogeneous photocatalytic efficiency of zinc oxide
12 ³⁰ – 12 ⁴⁵	Owais ALAQTASH , Andras SAPI, Ferenc FARKAS Reactor chamber design effect on flue gas conversion
12 ⁴⁵ – 13 ⁰⁰	Fernanda PANTOJA , Sándor BESZÉDES, Tamás GYULAVÁRI, Erzsébet ILLÉS, Gábor KOZMA, Zsuzsanna LÁSZLÓ Impact of pyrolysis temperature on the physical and chemical properties of banana leaves biochar. Ammonium adsorption case study
13 ⁰⁰ – 13 ¹⁵	Masoud Shirzadi AHOUDASHTI Enhancing sustainability in carbon dioxide hydrogenation through process intensification
13 ¹⁵ – 13 ³⁰	Zsófia Gréta SÁNTA , Balázs LEMMER, Zoltán Péter JÁKÓI Intensification and monitoring of anaerobic fermentation of sewage sludge from the meat industry
13 ³⁰ – 13 ⁴⁵	Jelena ŠURLAN , Zita ŠEREŠ, Nikola MARAVIĆ, Nataša ĐURIŠIĆ-MLADENOVIĆ, Igor ANTIĆ, Carla BRAZINHA, João G. CRESPO Removal of carbamazepine from water by polyamide nanofiltration membranes in a cross-flow system
13 ⁴⁵ – 14 ⁰⁰	Sándor BESZÉDES , Zoltán JÁKÓI, Balázs LEMMER, Cecilia HODÚR Potential applications of monitoring methods based on dielectric behaviour in wastewater and sludge treatment and utilization processes
14 ⁰⁰ – 15 ⁰⁰	Lunch



Poster session

Bio- and Environmental Engineering

Hairong CHEN, Qiaolin ZHANG, István BÍRÓ

Effects of foot orthosis and kinesio tape on spatiotemporal and kinetic gait parameters during running in individuals with flatfoot

Viktória CSATORDAI, Zoltán JÁKÓI, Balázs LEMMER, Sándor BESZÉDES

Enhancing and monitoring the anaerobic digestion of wastewater sludge

Ákos Ferenc FAZEKAS, Zsuzsanna LÁSZLÓ, Gábor VERÉB

Immobilization of TiO_2 and TiO_2/CNT nanoparticles using polydopamine to fabricate photocatalytically active PVDF membranes for filtration of oil emulsions

Gréta GERGELY, Kevin TÓTH, József Richárd LENNERT, Szabolcs KERTÉSZ

Enhancing membrane separation efficiency through the utilization of 3D-printed turbulence promoters derived from recycled PET bottles, with integration into filtration module

Nikolett SZ. GULYÁS, Cecilia HODÚR, Szabolcs KERTÉSZ

Effect of 3D printed turbulence promoter on fouling

Lidija PEROVIĆ, Jelena MILJANIĆ, Lato PEZO, Zita ŠEREŠ

Physicochemical properties of macroporous sugar beet pulp used as biosorbent

Marija ŠOBIĆ, Mirjana PETRONIJEVIĆ, Sanja PANIĆ, Nataša ĐURIŠIĆ-MLADENOVIĆ

Application of oxidoreductases immobilized on biochar for effective removal of CECs from wastewater

Jelena ŠURLAN, Noemi KIŠ, Nikola MARAVIĆ, Nataša ĐURIŠIĆ MLADENOVIĆ, Biljana PAJIN, Jelena ŽIVANČEV, Zita ŠEREŠ

Use of nanofiltration membrane in the removal of carbofuran, acetamipride and propiconazole from waterQ

Gábor VERÉB, Kata FEJES, Ákos Ferenc FAZEKAS, Szabolcs KERTÉSZ, Sándor BESZÉDES, Zoltán JÁKÓI, Gábor KOVÁCS, Zsolt PAP, Tamás GYULAVÁRI, Klára HERNÁDI, Cecilia HODÚR, Zsuzsanna LÁSZLÓ

Maximization of TiO_2 content of PVDF membranes produced by blending and blending/spray-coating methods

Ida ZAHOVIĆ, Jelena DODIĆ, Zorana TRIVUNOVIĆ

Recent application of xanthan in removal of water contaminants

Ida ZAHOVIĆ, Jelena DODIĆ, Damjan VUČUROVIĆ, Bojana BAJIĆ, Siniša DODIĆ, Zorana TRIVUNOVIĆ

Utilization of biodiesel industry effluent for xanthan production in lab-scale bioreactor

Qiaolin ZHANG

Tbiomechanical analysis and modeling of different traction patterns in adolescent idiopathic scoliosis subjects



Session 2.

Economics, Marketing, Management and Logistics

- Session chair: **Dr. László Csorba**, Eszterházy Károly Catholic University (Hungary)
- Co-chair: **Dr. Brigitta Zsótér**, University of Szeged (Hungary)
- Room: Seminar room IV.

12 ⁰⁰ – 12 ¹⁵	László CSORBA Risk-taking factors in a dynamic approach
12 ¹⁵ – 12 ³⁰	Edmira CAKRANI The role of statistics in supply chain management
12 ³⁰ – 12 ⁴⁵	József GÁL , Duanhvilay KHONESAVAHN Waste management problems in Laos
12 ⁴⁵ – 13 ⁰⁰	Sándor NAGY Current issues of the applicability of artificial intelligence in relation with the work of Supreme Audit Institutions
13 ⁰⁰ – 13 ¹⁵	Gréta ÚJVÁRI , Brigitta ZSÓTÉR, Zoltán VERES The relationship between supplementation and sport
13 ¹⁵ – 14 ¹⁵	Lunch

Poster session

Economics, Marketing, Management and Logistics

Helga KOVÁCS, Bernadett Edit ROTICS, Krisztina GÉMES-MATUSEK, Ágnes SÜLI Economic perspectives of alpaca farming in Hungary
Edina LENDVAI, Marcell KOCSIS Analysis of the marketing and sales strategy of a small hungarian prosthesis manufacturing company
Ágota PANYOR The importance of honey in a healthy nutrition
Csilla SAMU, Krisztián KIS Investigating the meaning of the concept of "clean label" and evaluating its content through a consumer survey



Session 3

Food Science, Safety and Technologies

Joint organization with the Agricultural and Bioengineering Scientific Committee of Hungarian Academy of Sciences

- ▀ Session chair: **Prof. Dr. Péter Sipos**, University of Debrecen (Hungary)
- ▀ Co-chair: **Prof. Dr. Antal Véha**, University of Szeged (Hungary)
- ▀ Room: Lecture room III.

12 ⁰⁰ – 12 ¹⁵	Anna FARKAS , Antal VERES, Péter KORZENSZKY The examination of apple shelf life from consumer storage perspective
12 ¹⁵ – 12 ³⁰	Sanja MILOŠEVIĆ , Danica BOŽOVIĆ, Maja ŽIVANOVIĆ, Nemanja TESLIĆ, Nevena GLADIKOSTIĆ, Zoran ZEKOVIĆ, Branimir PAVLIĆ Comparison of the novel and traditional extraction techniques for the isolation of thyme bioactive compounds
12 ³⁰ – 12 ⁴⁵	Róbert NAGY , Bence PECSENYE, Endre MÁTHÉ, Péter SIPOS Evaluation of the effects of sorghum flours on the viability and development on <i>Drosophila</i> larvae
12 ⁴⁵ – 13 ⁰⁰	Zoltán RÉPÁS , Róbert NAGY, Zsolt Géza POLGÁR, Zoltán GYŐRI The relationship between the nutrient content of potatoes and the structure stability, color changes, of their freeze-dried products
13 ⁰⁰ – 13 ¹⁵	Tijana POPOVIĆ, Milica STOŽINIĆ , Ivana LONČAREVIĆ, Biljana PAJIN, Danica ZARIĆ, Ivana NIKOLIĆ, Jovana PETROVIĆ Comparative analysis of milling technologies in dark and milk cocoa topping production for ice cream
13 ¹⁵ – 13 ³⁰	Jovana GRBIĆ, Mihajlo BOGDANOVIĆ, Mihailo MLADENOVIĆ, Dragana MLADENOVIĆ, Saša LAZOVIĆ, Aleksandra DJUKIĆ-VUKOVIĆ Non-thermal plasma for improved fractionation of lignocellulose biomass – different strategies
13 ³⁰ – 14 ³⁰	Lunch
14 ³⁰ – 14 ⁴⁵	Dóra SZEPESEI-BENCSEK , Ádám LŐRINCZ, Eszter TRENKŐ, Balázs P. SZABÓ Duckweeds: sustainable novel foods
14 ⁴⁵ – 15 ⁰⁰	Eszter TRENKŐ , Antal VÉHA, Balázs P. SZABÓ Physico-mechanical properties of purple wheat in Hungary
15 ⁰⁰ – 15 ¹⁵	Ádám LŐRINCZ , Balázs P. SZABÓ, Diána BÁNÁTI, Krisztina VARGA, József CSANÁDI Comparison of the effect of homogenization and sonication on the texture properties of goat milk yogurt



15 ¹⁵ – 15 ³⁰	Balázs SZEGEDI ; Réka DOBOZI; Katalin PAPP-SZILÁDI Examination of the surface changes of UV-C treated carrots
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15 ³⁰ – 15 ⁴⁵	Nominzul ALTANKHUYAG , Réka DOBOZI, Judit KRISCH Searching for probiotics in traditional Mongolian fermented milk product
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Poster session

Food Science, Safety and Technologies

Areej ALSOBH, Gyula VATAI, Szilvia BÁNVÖLGYI

Reverse osmosis filtration of hawthorn fruit extract (*Crataegus monogyna* Jacq.): Optimization for bioactive compound concentrates, permeate flux and fouling index by response surface methodology

Thong Le BA, Tímea KASZAB, László BARANYAI

Numerical simulation of yogurt viscosity during fermentation

Judit BAJZÁT, Amanda SÁNDORNÉ SZŐKE, András MISZ, Dániel KÖKÉNY, Marianna VISNYEI, József RÁCZ, Máté VÁGVÖLGYI, Csaba CSUTORÁS, Csaba VÁGVÖLGYI

Investigation of low temperature heat treatment (sous vide) of white button mushroom (*Agaricus Bisporus*)

Danica BOŽOVIĆ, Sanja MILOŠEVIĆ, Maja ŽIVANOVIĆ, Nemanja TESLIĆ, Nevena GLADIKOSTIĆ, Zoran ZEKOVIĆ, Branimir PAVLIĆ

Chemical composition and antioxidant activity of Lavander (*Lavandula angustifolia*) essential oil and lipophilic extracts

Sandra BULUT, Ružica TOMIČIĆ, Jelena PEJIN, Milana PRIBIĆ, Jelena ŽIVANČEV, Igor ANTIĆ, Sunčica KOCIĆ-TANACKOV

Presence of food-borne and toxigenic molds in wheat and corn products

Réka DOBOZI, Zoltán Péter JÁKÓI, Sándor BESZÉDES

Dielectric monitoring of microwave extraction processes

Namik DURMISHI, Vlatko TANEVSKI, Nexhdet SHALA, Gafur XHABIRI, Ismail FERATI, Xhezair IDRIZI, Rejhana LUMA

Statistical investigation of the correlation between the intake of bisphenol A (BPA) from carbonated and energy drinks and the occurrence of reproductive problems in 156 subjects

Bálint ERDEI, Tamás KULCSÁR, József MIHALKÓ

Development of spreadable meat product made from Mangalica liver

Adrienn FEJŐS, Zsuzsanna LÁSZLÓ, Gábor VERÉB, József CSANÁDI, Sándor BESZÉDES, Edina LENDVAI, Anikó BIRKÁSNÉ NAGYPÁL, Dorottya CSENKI, Imre ÁBRAHÁM, Nóra GARABNÉ ÁBRAHÁM, Andrea SÜVEGES-GRUBER, Cecilia HODÚR, Szabolcs KERTÉSZ

Cascade membrane system for selective separation of functional compounds from dairy by-products



Njomza GASHI, Péter FAUSZT, Péter DÁVID, Zsombor SZŐKE, Judit REMENYIK, László STÜNDL, Melinda PAHOLCSEK

Soil microbiota's impact on maize grain nutrition

Szabolcs HOMOLYA, Eszter VOZÁRY, Katalin BADA KERTI, Mohsen MARDANI, Tímea KASZAB, Anikó LAMBERT MERETEI

Oleogel containing beeswax and monoglycerides as a potential substitute for confectionery palm fats

Zsuzsanna HORVÁTH

Comparison of color coordinates measured with different devices in case of ground spices

Nevena HROMIŠ, Senka POPOVIĆ, Danijele ŠUPUT, Marija JOKANOVIĆ, Snežana ŠKALJAC, Anita MILIĆ

Possibility of using new biopolymer/polyethylene bilayer film for packing coffee

Júlia HUPUCZI, Adrienn WEIGERT, Helga KOVÁCS

Farmers' decisions in the Southern Great Plain region as a result of the 2022 drought

Dea ISMAJLI, Bence PECSENYE, Endre MATHE

Insights into Saffron's anti-inflammatory properties; lab studies and beyond

Raziyeh JAMALIFARD, József BARANYI

Knowledge graph to build a database on Human Milk Microbiota

Blanka JUHÁSZ, Balázs LEMMER, Zoltán JÁKÓI

Analysis and fermentation monitoring of wines from Csongrád wine region

Zsóka KRATOFIL, Nikola MARAVIĆ, Ivana LONČAREVIĆ, Éva ĐUROVIĆ, Biljana PAJIN, Dragana ŠORONJA-SIMOVIC, Zita ŠEREŠ

Unveiling household food waste: Survey results from the households from Vojvodina Region, Serbia

Tamás KULCSÁR, Adrienn GÁL, József MIHALKÓ

The examination of the loss of Frankfurters before packaging at a Hungarian meat industry company

Biljana LONČAR, Vladimir FILIPOVIĆ, Olja ŠOVLJANSKI, Lato PEZO, Violeta KNEŽEVIĆ, Danijela ŠUPUT, Milica ACIMOVIĆ

Osmotic treatment of orange and pink sweet potato-mass transfer rate and efficiency

Ana MARĐOKIĆ, Gyula VATAI, Szilvia BÁNVÖLGYI

Comparative analysis of polyphenol extraction from olive pomace: A study on microwave-assisted and traditional methods

Anita MILIĆ, Aleksandra TEPIĆ HORECKI, Milana VUJIČIĆ, Ivana PETROVIĆ, Zdravko ŠUMIĆ

Investigating the potential of Marloo variety for spontaneous cabbage fermentation

Zibuyile A. MPOSULA, Endre MÁTHÉ

Potential solutions to lifestyle and socio-economic inequalities and dealing with the prevalence of non-communicable diseases in low and middle-income communities in South Africa



Tünde PACZA, József BARANYI

Dynamic modelling of the molecular composition of human milk

Bence PECSENYE, Endre MÁTHÉ

Assessing the health promoting effect of malt, using *Drosophila melanogaster* model system

Senka POPOVIĆ, Nevena HROMIŠ, Danijela ŠUPUT, Sandra BULUT, Ranko ROMANIĆ, Tanja LUŽAIĆ

The influence of the process parameters of the biopolymer pouches synthesis on the quality of packaged edible oil

Milana PRIBIĆ, Lenka GRUBAČ, Jelena PEJIN

Native triticale as a stand-in for barley malt

Aleksandra RANITOVIĆ, Dragoljub CVETKOVIĆ, Olja ŠOVLJANSKI, Ana TOMIĆ, Tara BUDIMAC, Milica AĆIMOVIĆ, Jelena VULIĆ, Teodora CVANIĆ

Antimicrobial activity of some medicinal plants from territory of Serbia

Ágnes RÉDEY

Design and development of a monitoring system based on wireless data collection for food industry purposes

Maha ROCKAYA, József BARANYI

Effect of the food composition on the microbial kinetics in plant-based milk

Anja SAVELJIĆ, Olja ŠOVLJANSKI, Jelena VULIĆ, Slađana STAJČIĆ, Jasna ČANADANOVIĆ-BRUNET

The potential of future superfood-microgreens: Bioactivity and bioactive content of three *Brassicaceae* microgreens

Tamás SOMOGYI, Mátyás LUKÁCS, Mercy MUKITE, Éva STEFANOVITS-BÁNYAI, Viktória ZSOM-MUHA, Tamás ZSOM

The effects of ultrasonic treatment in canning technology

Nisa SULEJMANI, Rejhana LUMA, Kaltrina SELMANI, Kaltrina SEJDIU, Fatbardha TËRSTENA, Rihan ABDURAMANI, Leonora ALIU, Florentina BEHLULI, Blerta AJDARI, Ermira ALIJA, Sulejman XHEZAI, Xhabir ABDULLAHI, Erhan SULEJMANI

Thermal degradation of anthocyanin in blueberry juice as affected by sucrose and vitamin C

Danijela ŠUPUT, Biljana LONČAR, Senka POPOVIĆ, Nevena HROMIŠ, Slađana RAKITA, Nedeljka SPASEVSKI

The influence of the type and concentration of plasticizer on the properties of biopolymer films based on wild flax (*Camelina Sativa*)

Patrik SZATMÁRI, Ernő GYIMES, Dóra CSERCICS

Rheological analysis of microalgae

Judit TAREK-TILISTYAK, Zoltan CZIAKY, Tamas ANTAL, Mohamed TAREK

Effect of drying methods on quality of fruit pomace

Gafur XHABIRI, Namik DURIMISHI, Xhezair IDRIZI, Erhan SULEJMANI, Blerta AJDARI, Ermira ALIJA

Evaluation of rheological, sensory and nutritional qualities in gluten-free bread formulations



Session 4. Intelligent Systems and Logistics

- Session chair: **Prof. Dr. Erwin-Christian Lovász**
- Co-chair: **Dr. Péter Sarcevic**, University of Szeged (Hungary)
- Room: Seminar room V.

12 ⁰⁰ – 12 ¹⁵	Lili Dóra BRASSÓ , Zsófia VÁRSZEGI, István KOMLÓSI Application of artificial techniques in the poultry industry
12 ¹⁵ – 12 ³⁰	Dániel László VAJDA , Károly FARKAS Pre-processing for enhanced anomaly detection on periodic server farm telemetry data
12 ³⁰ – 12 ⁴⁵	Burak COLAK , Károly FARKAS RealTime-AT: Improved online anomaly detection in streaming multidimensional time series
12 ⁴⁵ – 13 ⁰⁰	Attila MÉSZÁROS , Réka MÁTÓ, József SÁROSI A soft exoskeleton for hand finger rehabilitation application using fully elastic pneumatic actuators
13 ⁰⁰ – 14 ⁰⁰	Lunch
14 ⁰⁰ – 14 ¹⁵	Dominik CSÍK , Ákos ODRY, Richárd PESTI, Péter SARCEVIC Impact of antenna orientation on localization accuracy using RSSI-based trilateration
14 ¹⁵ – 14 ³⁰	Tibor DOBJÁN Sequential probability ratio test for vibration analysis testing
14 ³⁰ – 14 ⁴⁵	György HAMPEL , Zoltán FABULYA The risks of using AI
14 ⁴⁵ – 15 ⁰⁰	Zoltán FABULYA , György HAMPEL Developing Excel VBA functions for the mathematical modeling of three-dimensional vectors
15 ⁰⁰ – 15 ¹⁵	Yao MENG , István BÍRÓ, József SÁROSI Markerless measurement techniques for motion analysis in sports science



Poster session

Intelligent Systems and Logistics

Yao MENG, István BÍRÓ, Yaodong GU

Effect of foot orthoses on multi-segment foot kinematics: A systematic review

Valeria NAGY

With ChatGPT about ChatGPT...

Richárd PESTI, Dominik CSÍK, Ákos ODRY, Péter SARCEVIC

Measurement system for the calibration of accelerometer arrays

János SIMON

Augmented reality based industrial digitalization and logistics

Session 5.

Mechanical Engineering, Materials Science and Energetics

- Session chair: **Dr. Péter Bencs**, University of Miskolc (Hungary)
- Co-chair: **Dr. István Tibor Tóth**, University of Szeged (Hungary)
- Room: Lecture room I.

12⁰⁰ – 12¹⁵ **Gusztáv FEKETE**, Endre JÁNOSI

Numerical study of knee prosthesis wear as a function of prosthesis size

12¹⁵ – 12³⁰ **Endre JÁNOSI**, Gusztáv FEKETE

Total knee replacement wear measurement methods

12³⁰ – 12⁴⁵ **Nóra NAGY**, János LUKÁCS

Mechanical properties and microstructural characteristics of steel pipes after long-time hydrogen exposure

12⁴⁵ – 13⁰⁰ **Saadi HASNA**, Péter Emőd KORZENSZKY, Péter HERMANUCZ

Thermal optimization and technological transformation of photovoltaic systems

13⁰⁰ – 13¹⁵ **Viktória VARGA**, Erzsébet ILLÉS

Preparation, characterization and application of magnetic nanoflowers

13¹⁵ – 13³⁰ **Márton RÁTKAI**, Richárd KICSINY, László SZÉKELY

Modelling of a recently invented solar pot

13³⁰ – 13⁴⁵ **Siniša BIKIĆ**, Saša LALOŠ, Milivoj RADOJČIN, Ivan PAVKOV

Density measurements of nanofluids using pycnometer – review of the existing results



13 ⁴⁵ – 14 ⁴⁵	Lunch
14 ⁴⁵ – 15 ⁰⁰	Bence MOLNÁR, Péter BENCS Analysis of the spanwise effect behind a cylindrical body
15 ⁰⁰ – 15 ¹⁵	Istvan Tibor TÓTH , Katalin PAPP-SZILADI The logic of a technical innovation
15 ¹⁵ – 15 ³⁰	Sándor CSIKÓS , Ádám BÁLINT, József SÁROSI Modelling hysteresis with memristors
15 ³⁰ – 15 ⁴⁵	Peter HERMANUCZ , Gábor HOLLÓ Methodology for measuring temperature conditions of heat pump outdoor unit
15 ⁴⁵ – 16 ⁰⁰	Istvan Tibor TÓTH , Katalin PAPP-SZILADI The consumption of e-cars can be improved with a new mode of operation
16 ⁰⁰ – 16 ¹⁵	Gusztáv FEKETE , István BÍRÓ Alternative method for modeling dynamic systems
16 ¹⁵ – 16 ³⁰	Áron LÓRÁND , Ágota DRÉGELYI-KISS Study and comparison of surface roughness parameters in turning

Poster session

Mechanical Engineering, Materials Science and Energetics

András BETOVICS, Viktor MADÁR, Norbert SCHREMPF, László TÓTH

Production of high-quality gas by pyrolysis

Imre Vajk FAZEKAS, Martin TRANCSIK, Aws N. AL-TAYAWI, József Richárd LENNERT, Sándor BESZÉDES, József CSANÁDI, Tamás SZABÓ, Cecilia HODÚR, Gábor VERÉB, Zsuzsanna LÁSZLÓ, Szabolcs KERTÉSZ

Enhancing hydrodynamic characteristics through the integration of 3D-printed spacers within the VSEP membrane filtration module

László GOGOLÁK

Design and implementation of a wireless smart home heating control system: integrating iot for enhanced efficiency

László GOGOLÁK, Tamás TORNAL, Igor FÜRSTNER

Design, implementation, and investigation of ethercat and serial communication servo control system and it's industrial application

Balázs HEGEDŰS, Zsolt DOBÓ

Energetic characterization of liquid, solid, and gaseous products derived from plastic pyrolysis

Róbert KOVÁCS, Péter KORZENSZKY, Róbert KERESZTES

Investigation of the cutting of engineering polymers



Dávid KÓCZI, József SÁROSI

Design and implementation of a 3 degrees of freedom robotic arm powered by pneumatic artificial muscle

Erik KŐMŰVES, István Péter SZABÓ

Design of the drive chain and back suspension of a pneumobile racing car

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Rotation vectors for multi degree of freedom vibrationi

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Optimization of parameters for synthesis of alginate based hydrogels

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The energetic analysis of the pyrolysis of tire and additives mixtures

Kevin TÓTH, László TÓTH, Szabolcs KERTÉSZ

Mechanical characteristics analysis of 3D printing materials used for integration into filter modules
