

# The Eurasia Proceedings of Science, Technology, Engineering & Mathematics

## EPSTEM

**VOLUME 28 ICBASET CONFERENCE**

**ISSN: 2602-3199**

**ISBN: 978-625-6959-38-5**

ICBASET 2024: 4th International Conference on Basic Sciences, Engineering and Technology (ICBASET)  
May 02 - 05, 2024 Alanya, Turkey

Edited by: Prof.Dr. Mehmet Ozaslan - Gaziantep University, Turkey

# ICBASET 2024

International Conference on Basic Sciences, Engineering and Technology (ICBASET)

## Proceedings Book

### Editor

Mehmet Ozaslan  
*Gaziantep University, Turkey*

**ISBN:** 978-625-6959-38-5

**Copyright 2024**

**Published by the ISRES Publishing**

**Address:** Askan Mah. Akinbey Sok. No: 5-A/Konya/TURKEY

**Web:** [www.isres.org](http://www.isres.org)

**Contact:** [isrespublishing@gmail.com](mailto:isrespublishing@gmail.com)

**Dates:** May 02 - 05, 2024

**Location:** Alanya, Turkey

<https://www.2024.icbasnet.net>



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-nc-sa/4.0/).

**About Editor**

Prof Dr. Mehmet Ozaslan

Department of Biology, Gaziantep University, Turkey

Website: mehmetozaslan.com

E-mail: [ozaslanmd@gantep.edu.tr](mailto:ozaslanmd@gantep.edu.tr)

**Language Editor**

Lecturer Ceren Dogan

School of Foreign Languages, Necmettin Erbakan University, Turkey

Email: [cerendogan@erbakan.edu.tr](mailto:cerendogan@erbakan.edu.tr)

**CONFERENCE PRESIDENT**

Prof. Dr. Mehmet Özaslan - Gaziantep University, Turkey

Prof. Dr. Csaba Antonya - Transilvania University of Brasov, Romania

**SCIENTIFIC BOARD**

Besnik Hajdari - University "isa Boletini" Mitrovica, Kosovo

Bogdan Patrut - Alexandru Ioan Cuza Üniversitesi, Romania

Chalavadi Sulochana - Gulbarga University, India

Csaba Antonya - Transilvania University of Brasov, Romania

Dariusz Jacek Jakobczak - Technical University of Koszalin, Poland

Dehini Rachid - University of Bechar, Algeria

Eleonora Guseinoviene - Klaipeda University, Lithuania

Elena Krelja Kurelovic - Polytechnic of Rijeka, Croatia

Elżbieta Patkowska - University of Life Sciences in Lublin, Poland

Eva Trnova - Masaryk University, Czech Republic

Farhad Balash - Kharazmi University, Iran

Fundime Miri - University of Tirana, Albania

Gabriel Delgado-Toral - Universidad Nacional Autónoma de México, Mexico

Gordana Savic - University of Belgrade, Serbia

Hasan Mlinaku, VUZF, Sofia in Bulgaria

Ibrahim Krasniqi - University of Peja, Kosovo

Irina Andreeva - Peter The Great St. Petersburg Polytechnic University, Russia

Isti Hidayah - Semarang State University, Indonesia

Jose Manuel Lopez Guede - University of Basque Country, Spain

Kamil Yurtkan - Cyprus International University, Cyprus

Katsina Christopher Bala - Federal University of Technology, Minna, Nigeria

Khitam Shraim - Palestine Technical University, Palestine

Marija Stanic - University of Kragujevac, Serbia

M. Hanefi Calp - Karadeniz Technical University, Turkey

Mohamed Ahmed - Mansoura University, Egypt

Mousa Attom- American University of Sharjah, U.A.E.

Nicu Bizon - Pitesti University, Romania

Pandian Vasant - Teknology Petronas University, Romania

Rajnalkar Laxman - Gulbarga University, India

Sanaa Al-Delaimy - Mosul University, Iraq

Shadi Aljawarneh - Jordan University of Science and Technology, Jordan

Shynar Baimaganbetova - Nazarbayev University, Kazakhstan

Svetlana Khan - Almaty University of Power Engineering and Telecommunications, Kazakhstan

Yiyang Chen - Soochow University (CN), China

Zairi Ismael Rizman - MARA University of Technology, Malaysia

Zipporah Pewat Duguryil - Federal College of Education, Nigeria

**ORGANIZING COMMITTEE**

Besnik Hajdari - University "isa Boletini" Mitrovica, Kosovo

Cemil Aydogdu - Hacettepe University, Türkiye

Csaba Antonya - Transilvania University of Brasov, Romania

Danielle Gonçalves de Oliveira Prado-Federal Technological University of Paraná, Brazil

Dariusz Jacek Jakóbczak - Technical University of Koszalin, Poland  
Elman Iskender - Central Botanical Garden of Anas, Azerbaijan  
Halil Snopce - South East European University, Macedonia  
Hasan Mlinaku, VUZF, Sofia in Bulgaria  
Ibrahim Krasniqi - University of Peja, Kosovo  
Ishtar Imad - Uruk University, Iraq  
Jaya Bishnu Pradhan-Tribhuvan University, Mahendra Ratna Campus, Nepal  
Kamil Yurtkan - Cyprus International University, Cyprus  
Mehmet Özaslan - Gaziantep University, Türkiye  
Mohammad Sarwar - Scialert, Dubai, United Arab Emirates  
Murat Beytur - Kafkas University, Türkiye  
Samire Bagirova - Institute of Dendrology of Anas, Azerbaijan  
Suhail Bayati - Hadi University College, Iraq  
Zairi Ismael Rizman - MARA University of Technology, Malaysia

## **Editorial Policies**

ISRES Publishing follows the steps below in the proceedings book publishing process.

In the first stage, the papers sent to the conferences organized by ISRES are subject to editorial oversight. In the second stage, the papers that pass the first step are reviewed by at least two international field experts in the conference committee in terms of suitability for the content and subject area. In the third stage, it is reviewed by at least one member of the organizing committee for the suitability of references. In the fourth step, the language editor reviews the language for clarity.

## **Review Process**

Abstracts and full-text reports uploaded to the conference system undergo a review procedure. Abstracts will be evaluated on the basis of abstracts/proposals. The conference system allows the full text to be sent if the abstract is accepted. Participants must wait for the evaluation results after uploading their article abstracts to the conference system. If their abstracts are accepted, they can upload their full texts to the conference system. The full texts are then sent to at least two reviewers for review. The conference has a double-blind peer-review process. Any paper submitted for the conference is reviewed by at least two international reviewers with expertise in the relevant subject area. Based on the reviewers' comments, papers are accepted, rejected or accepted with revision. If the comments are not addressed well in the improved paper, then the paper is sent back to the authors to make further revisions. The accepted papers are formatted by the conference for publication in the proceedings.

## **Aims & Scope**

Engineering, technology and basic sciences are closely related fields. Developments and innovations in one of them affect the others. Therefore, the focus of the conference is on studies related to these three fields. Studies in the fields of engineering, technology and basic science are accepted to the conference even if they are not associated with other fields. The conference committee thinks that a study in only one field (for example, mathematics, physics, etc.) will contribute to other fields (for example, engineering, technology, etc.) in future studies, even if it is not associated with the presentation at the conference. In line with this perspective, studies in the following fields are accepted to the conference: Biology, Chemistry, Engineering, Mathematics, Physics and Technology.

The aim of the conference is to bring together researchers and administrators from different countries, and to discuss theoretical and practical issues in all fields of Engineering, Technology and Basic Sciences.

Articles: 1- 63

## CONTENTS

Web Server Support of Multiple Controllers Data Transfer in IoT Network Process / Pages: 1-13  
Maja Kukusheva Paneva, Todor Chekerovski, Sara Stefanova, Goce Stefanov

Digital Systems Model Order Reduction with Substructure Preservation and Fuzzy Logic Control  
Process / Pages: 14-22  
Othman Alsmadi, Zaer Abu- Hammour, Khaled Mahafzah

Attribute-Based Access Control in Internet of Things Security Process / Pages: 23-33  
Melike Kukut, Ibrahim Sogukpinar

Complex Thinking Abilities in the Rapidly Evolving Field of Genomics and Personalized Medicine:  
Analysis of Actionability on Cancer with ChatGPT and Literature Process / Pages: 34-46  
María Soledad Ramírez - Montoya, G.a. Sanchez - Zuno, R.m. Marques Gonzalez, F. Casillas- Munoz

Effect of Graphene Nanoplatelets and Accelerated Weathering on the Mechanical and Shape  
Memory Behaviour of 3D Printed Components Process / Pages: 47-55  
Mohamad Alsaadi, Eoin P. Hinchy, Conor T. McCarthy, Declan M. Devine

Handling Growth and Decay Problems by the New General Integral Transform Process / Pages: 56-61  
Haldun Alpaslan Peker, Esma Uysal

On Lcem Matrices Over Unique Factorization Domains Process / Pages: 62-72  
Haissam Chehade, Yahia Awad, Wiam Zeid

The Scope of Digital Tools and Opportunities in the Life of Hungarian and Slovakian Enterprises and  
Their Impact on Business Competitiveness Process / Pages: 73-80  
János Varga, Agnes Csiszarik- Kocsir

Investigation of Oxidative Stress Parameters and Pro-Inflammatory Cytokines in a Neuropathy Model  
Created with Taraxacum Officinale L. Leaf Extract and Cisplatin Process / Pages: 81-89  
Mehmet Erdem, Mehmet Özaslan

Remote Sensing Upon Tracking Changes in the Water Sufrace Area of Belmeken Dam Process / Pages:  
90-96  
Kameliya Radeva, Silvia Kirilova

Water Retaining Nylon Rolling Application in the Automotive Industry with Collaborative Robot  
(COBOT) Process / Pages: 97-104  
Emrah Aydin, Husayin Bulat, Aydin Gullu

Theoretical Investigation of 3,4-Dihydropyrimidin-2(1H)-Ones Derivatives and in-Silico Biological  
Analysis Process / Pages: 105-112  
Noura Kichou, Anissa Amar, Nabila Guechtouli, Manel Taferguennit

Synthesis, Biological Activities and in Silico ADMET Study of Coumarin3,4-Dihydropyrimidin-2(1H)-  
Ones Process / Pages: 113-122  
Amina Benazzouz– Touami , Karima Ighilahriz- Boubchir , Malika Makhoulfi- Chebli

A Quantitative Study into Purchasing Practices and Influential Factors among Filipino Consumers Regarding Counterfeit Over-The-Counter Medicines in Philippines Process / Pages: 123-133  
Marianito Gallego Jr., Daniel Caparro, Raeselyn Macorol, Treblig John Manalastas, Charisse Anne Olaivar

Effect of Various Treatment and Drying Methods of Blood Meal Additive on Fresh State Properties of Grouting Materials Process / Pages: 134-140  
Emine Ozdogru, Nabi Yuzer, Afife Binnaz Hazar - Yoruc

Assessing Inventory Management Indicators in Chain Pharmacy Stores: An Importance – Performance Analysis Process / Pages: 141-147  
Atatika Pentrakan, Rawinkhan Srinon

Sustainable Ionic Liquids: A Practical Work about Improving the Mechanical Properties of Bamboo Process / Pages: 148-156  
Anita Fadhilah, Hernani Hernani, Ahmad Mudzakir, Nanda Ayu Lestari

The Essential Oil Context of Lemongrass and Its Potential for Innovative ESD-Informed Learning Process / Pages: 157-166  
Nanda Ayu Lestari, Liliyasi Liliyasi, Iqbal Musthapa, Hernani Hernani, Anita Fadhilah

Extraction of Anthocyanin Pigments from the Peel of Dragon Fruit for Food Coloring Process / Pages: 167-174  
Anis Muyassaroh, Asep Supriatna, Hernani Hernani

A Fixed Point Theorem on Partial Metric Spaces of Hyperbolic Type Process / Pages: 175-184  
Silvja Cobani, Elida Hoxha

Physicochemical Characteristics of Astragalus Honey Obtained from Erzurum Province Process / Pages: 185-190  
Turgay Cetinkaya, Sibel Bayil - Oguzkan

Microprocessor System Control Stage: Railway Tracks Example Process / Pages: 191-200  
Mehriban Almammadova, Nina Kamenieva, Mykyta Bibikov

Innovative Optical Methods for Analytical Monitoring of Bionanoagents with Emphasis on Georgian White Wine Authentication Process / Pages: 201-208  
Nugzar Gomidze, Miranda Khajishvili, Madlena Davitadze, Kakha Makharadze

Development of a New System for Precise Measurement of the Weight of Valuable Liquid Metals with Ladle Cranes Process / Pages: 209-215  
Engin Tekin, Hasan Oktem, Aydogan Akca

Application of the New General Integral Transform for Newton's Law of Cooling Process / Pages: 216-223  
Haldun Alpaslan Peker, Esma Uysal

On Mersenne Power GCD Matrices Process / Pages: 224-233  
Yahia Awad, Ragheb Mghames, Karim Amin



Big Data and Analytical Strategies for Cloud ERP Systems with Business Simulation Process / Pages: 234-240

Lea Masnec, Ruben Picek

Decomposition of Hydrogen Peroxide in Presence of DimethylglyoximateNickel Complexes as Catalysts: Catalase-Like Activity Process / Pages: 241-245

Noura Kichou, Nabila Guechtouli, Anissa Merrad, Zakia Hank

Machine Learning Approach for Predicting Bead Geometry of Stainless Steel in Wire arc Additive Manufacturing Process / Pages: 246-251

Harsh Shah, Kishan Fuse

Design and Calculation of Products from Composite Materials Using Software Process / Pages: 252-258

Sara Srebrenkoska, Vineta Srebrenkoska, Marija Cekerovska, Todor Cekerovski

Utilization of Crushed Waste Glass as a Partial Replacement for Sand in Cement Mortar for a Sustainable Environment Process / Pages: 259-276

Filibin Ali Hassan, Ayse Pekrioglu - Balkis

Utilizing the eXtreme Gradient Boosting Algorithm for Artificial Intelligence-supported Learning Analytics Application Process / Pages: 277-285

Mustafa Cosar

Edible Coating from Breadfruit Starch and Chitosan for Food Packaging Process / Pages: 286-299

Dewi Sulistyowati, Hernani Hernani, Asep Supriatna

Enterprise Resource Planning Implementation: Challenges and Barriers Process / Pages: 300-307

Issam Jebreen, Hanan Omer, Ahmad Al Qerem

Life Cycle Assessment as a Catalyst for Embedding Sustainability in Waste Management Practices Process / Pages: 308-316

Paloma Barajas- Alvarez, Martín Esteban Gonzalez- Lopez, Geraldina Silveyra- Leon, Misael Sebastián Gradilla - Hernandez, Tomas García- Cayuela

Development of Mathematics Interactive E-Worksheet Process / Pages: 317-325

Riska Novia Sari, Rizky Rosjanuardi, Tatang Herman, Ratri Isharyadi, Pujia Siti Balkist

Performance Comparison of AI Platforms in Solving Computer Science Problems Process / Pages: 326-341

Huseyin Karacali, Efekan Cebel, Nevzat Donum

PMSM Design for Elevators: Determination of the Basic Topology Affecting Performance Process / Pages: 342-351

Yusuf Avsar, Mucahit Soyaslan, Ahmet Fenercioglu

Analysis of a High-Pressure Reciprocating Compressor Piston's 2D Simulation Utilizing Computational Fluid Dynamics Process / Pages: 352-359

Furkan Turgut, Ahmet Berkay Simsek, Necip Berker Uner, Baris Erdogan

Analysis of Solutions for Nonlinear  $\psi$ -Caputo Fractional Differential Equations with Fractional Derivative Boundary Conditions in Banach Algebra Process / Pages: 360-374  
Yahia Awad, Haissam Chehade

General Upper Bounds for the Numerical Radii of Hilbert Space Operators Process / Pages: 375-381  
Mohammed Al- Dolat

On Graded 2-n-Submodules of Graded Modules Over Graded Commutative Rings Process / Pages: 382-389  
Khaldoun Al- Zoubi

Integration of Air Conditioning Systems in Intelligent Buildings to Increase Efficiency Process / Pages: 390-396  
Jonadri Bundo, Genci Sharko, Aida Spahiu, Ramadan Alushaj, Denis Panxhi, Darjon Dhamo

Proposed Intelligent Irrigation System for Riyadh City Using Fuzzy Logic Process / Pages: 397-407  
Sara Alsaadoun, Fairouz Tchier

Vehicle Autonomous Driving System Process / Pages: 408-416  
Adnan Al - Smadi, Sara Al - Essa, Shaima Momani, Haneen Bani - Salameh

Diversity of Aquatic and Coastal Vegetation in the Lublin Coal Basin Complex - Long-Term Changes Process / Pages: 417-427  
Joanna Sender, Monika Rozanska - Boczula, Danuta Urban

Possibilities for Improving Algorithms for Combat Use of Aircraft Using Unguided Weapons Process / Pages: 428-437  
Milen Atanasov

Food Recommendation System for a Healthy Liver Using Machine Learning Process / Pages: 438-447  
Shyti Bederiana, Stergu Argesta, Valera Dhurata, Papajani Blerina

Locating Emergency Stations Using Multi-Criteria Decision-Making (MCDM) Methods: Application of Ankara Province Process / Pages: 448-461  
Beste Desticioglu Tasdemir

Establishing a Remote Area Network for an Automation System: A Case Study of Yeni Karpuzlu Drinking Water Automation Process / Pages: 462-469  
Aydin Gullu, M. Ozan Aki

Performance and Design Optimization of Solar Collectors Process / Pages: 470-476  
Marija Chekerovska, Todor Chekerovski, Sara Srebrenkoska, Sasko Dimitrov

Oxidation of Sintered Refractory Alloy (Ni3Al) Process / Pages: 477-483  
Nacer Halem, Zohra Halem, Ouardia Halem, Georgette Petot - Ervas

Experimental Investigations on the Fabrication of Low Alloy Steels Using Wire Arc Additive Method Process / Pages: 484-491  
Pruthviraj Chauhan, Vatsal Vaghasia , Rakesh Chaudhari , Jay Vora

Physicochemical, Morphological and Anticorrosive Properties of Electrodeposited ZnNi Alloy Coating Process / Pages: 492-501

Baya Benfedda, Salem Boudinar, Zaina Mezine

Tin-Based Keggin-Type Phosphomolybdate and Silicomolybdate as Catalysts for the Green Synthesis of Adipic Acid Process / Pages: 502-509

Lynda Mouheb, Leila Dermeche, Cherifa Rabia

Application of Methodology for Defining the Adjoining Lands and Flooding River Strips in Bulgaria in a GIS Environment Upon Bridge Facility Designing Process / Pages: 510-518

Silvia Kirilova, Kameliya Radeva

Design, Synthesis and in Silico Studies of New 2-MethylQuinazolin-4(3H)- Ones Derivatives Process / Pages: 519-525

Karima Ighilahriz - Boubchir, Amina Benazzouz - Touami, Malika Makhoulfi - Chebli

Influence of Digital Marketing Techniques on Consumer Behavior for Mobile Services Process / Pages: 526-532

Iyad Khanfar

Software Project Management and Their Economic Evaluation in terms of Enterprise Sustainability Process / Pages: 533-553

Ibrahim Krasniqi, Naim Ismajli, Ganimete Krasniqi

SCADA System for Process Data Exchange in Master Slave RF and Iot Network Process / Pages: 554-564

Bilijana Citkuseva - Dimitrovska, Elena Zafirov, Goce Stefanov

Optimization of Properties of Iron Oxide Nanoparticles Synthized by SolGel Method Process / Pages: 565-574

Gulten Sadullahoglu

Investigation of the Antioxidant Capacity of Taraxacum Officinale L. Leaf Extract Process / Pages: 575-580

Mehmet Erdem, Mehmet Özaslan

A Comparative Analysis of the Opportunities and Challenges Associated with Building Information Modeling Implementation in Jordan and Kuwait Process / Pages: 581-585

Samaher Asaad, Akram Suleiman