IJTPE Journal

International Journal on TECHNICAL AND PHYSICAL PROBLEMS OF ENGINEERING (IJTPE)

http://www.iotpe.com http://www.iotpe.com/ijtpe.html ijtpe@iotpe.com, ijtpe0@gmail.com

Issue 54

Volume 15

Number 1

March 2023

Serial No: 0054-1501-0323



Founders and Publishers: Inter

International Organization of IOTPE



Taba Elm International Institute Tabriz, Iran www.tabaelm.com



Institute of Physics Azerbaijan National Academy of Sciences Baku, Azerbaijan www.physics.gov.az



Seraj Higher Education Institute Tabriz, Iran www.seraj.ac.ir



Azerbaijan Research Institute of Energetics and Energy Design Azerenerji JSC, Baku, Azerbaijan www.azenerji.com/en/about/pei.html



Gazi University Ankara, Turkey www.gazi.edu.tr



Cleaner Production and Energy Efficiency Center Baku, Azerbaijan http://cpee.az



Istanbul Technical University Istanbul, Turkey www.itu.edu.tr



Nakhchivan State University Nakhchivan, Azerbaijan www.ndu.edu.az



Isik University Istanbul, Turkey www.isikun.edu.tr



University of Pitesti Pitesti, Romania www.upit.ro



Van Yuzuncu Yil University Van, Turkey www.yyu.edu.tr



University of the Basque Country Bilbao, Spain www.ehu.es



Istanbul Rumeli University Istanbul, Turkey http://rumeli.edu.tr



Near East University Lefkosa, Northern Cyprus www.neu.edu.tr



Ostfold University College Fredrikstad, Norway www.hiof.no

IJTPE Journal

International Journal on TECHNICAL AND PHYSICAL PROBLEMS OF ENGINEERING (IJTPE)

Published by International Organization of IOTPE

http://www.iotpe.com http://www.iotpe.com/ijtpe.html ijtpe@iotpe.com, ijtpe0@gmail.com

Issue 54 Volume 15 Number 1 March 2023 Serial No: 0054-1501-0323

EDITORS-IN-CHIEF:

- Academician Arif Mamed HASHIMOV
- Prof. Naser MAHDAVI TABATABAEI
- Prof. Nicu BIZON

SCIENTIFIC AND EXECUTIVE SECRETARIES:

- Narges S. BOUSHEHRI, M.Sc. Nima M. TABATABAEI, B.Sc. Mostafa NIKBAKHT LAHDERAZI, B.Sc.
- Ali JAFARI, M.Sc. Javad M. TABATABAEI, Ph.D. Ali PASHAEI, Ph.D.

EDITORIAL BOARD:

- Assoc. Prof. Aytek R. BABAYEVA, Azerbaijan Research Institute of Energetics & Energy Design (Baku, Azerbaijan)
- Prof. Javier BILBAO, University of the Basque Country (Bilbao, Spain)
- Prof. Nicu BIZON, University of Pitesti (Pitesti, Romania)
- Prof. Hazim Tamer DODURKA, Istanbul Rumeli University (Istanbul, Turkey)
- Prof. Kamil M. DURSUN, Ostfold University College (Fredrikstad, Norway)
- Asst. Prof. Reza EFFATNEJAD, Islamic Azad University, Karaj Branch (Karaj, Iran)
- Prof. Naci GENC, Yalova University (Yalova, Turkey)
- Acad. Arif M. HASHIMOV, Institute of Physics of Azerbaijan National Academy of Sciences (Baku, Azerbaijan)
- Asst. Prof. Hojat HATAMI, Seraj Higher Education Institute (Tabriz, Iran)
- Prof. Silviu IONITA, University of Pitesti (Pitesti, Romania)
- Prof. Elbrus Saleh ISAYEV, Nakhchivan State University (Nakhchivan, Azerbaijan)
- Prof. Ramiz A. ISKANDEROV, Azerbaijan University of Architecture and Construction (Baku, Azerbaijan)
- Prof. Ires ISKENDER, Cankava University (Ankara, Turkey)
- Prof. Yorgo ISTEFANOPULOS, Isik University (Istanbul, Turkey)
- Prof. Anvar T. KHUDIEV, Institute of Petrochemical Processes of Azerbaijan National Academy of Sciences (Baku, Azerbaijan)
- Assoc. Prof. Lyudmila V. KRIVOVA, Tomsk Polytechnic University (Tomsk, Russia)
- Prof. Naser MAHDAVI TABATABAEI, Seraj Higher Education Institute (Tabriz, Iran)
- Prof. Ozgur C. OZERDEM, European University of Lefke (Lefke, Northern Cyprus)
- Assoc. Prof. Kamil B. QURBANOV, Institute of Physics of Azerbaijan National Academy of Sciences (Baku, Azerbaijan)
- Prof. Nariman R. RAHMANOV, Azerbaijan Research Institute of Energetics & Energy Design (Baku, Azerbaijan)
- Prof. Ali ROSTAMI, University of Tabriz (Tabriz, Iran)
- Assoc. Prof. Rustam B. RUSTAMOV, Institute of Physics of Azerbaijan National Academy of Sciences (Baku, Azerbaijan)
- Prof. Fahreddin M. SADIKOGLU, Near East University (Lefkosa, Northern Cyprus)
- Prof. Heidar Ali SHAYANFAR, Iran University of Science and Technology (Tehran, Iran)
- Prof. M. Cengiz TAPLAMACIOGLU, Gazi University (Ankara, Turkey)
- Prof. Omer USTA, Istanbul Technical University (Istanbul, Turkey)

ADVISORY BOARD:

- Prof. Senol BEKTAS, Near East University (Lefkosa, Northern Cyprus)
- Assoc. Prof. Robert BELOIU, University of Pitesti (Pitesti, Romania)
- Prof. Eugenio BRAVO, University of the Basque Country (Bilbao, Spain)
- Prof. Dominic B.O. KONDITI, Multimedia University College of Kenya (Nairobi, Kenya)
- Assoc. Prof. Mihai OPROESCU, University of Pitesti (Pitesti, Romania)

CONTRIBUTORS:

Amirkabir University of Technology, Tehran, Iran Azarbaijan University, Tabriz, Iran Ferdowsi University of Mashhad, Mashhad, Iran Iran University of Science and Technology, Tehran, Iran Islamic Azad University, Tehran, Iran K.N. Toosi University of Technology, Tehran, Iran Sharif University of Technology, Tehran, Iran University of Mohaghegh Ardabili, Ardabil, Iran University of Om, Qom, Iran University of Shiraz, Shiraz, Iran University of Tabriz, Tabriz, Iran University of Tehran, Tehran, Iran

Azerbaijan State Marine Academy, Baku, Azerbaijan Azerbaijan State Oil and Industry University, Baku, Azerbaijan Azerbaijan Univ. of Architecture and Construction, Baku, Azerbaijan Azerbaijan Technical University, Baku, Azerbaijan Institute of Petrochemical Processes, Baku, Azerbaijan Odlar Yurdu University, Baku, Azerbaijan

Cankaya University, Ankara, Turkey Yalova University, Yalova, Turkey Cankiri Karatekin University, Cankiri, Turkey Mersin University, Mersin, Turkey

University of Bucharest, Bucharest, Romania University of Galati, Galati, Romania University of Valahia, Targovishte, Romania

European University of Lefke, Lefke, Northern Cyprus

University of Granada, Granada, Spain

University of Babylon, Babylon, Iraq University of Baghdad, Baghdad, Iraq University of Basrah, Basrah, Iraq University of Karbala, Karbala, Iraq University of Kufa, Najaf, Iraq University of Technology, Baghdad, Iraq

University of Guelma, Guelma, Algeria University of Oran, Oran, Algeria University of Oum El Bouaghi, Oum El Bouaghi, Algeria

Technological University of Tajikistan, Dushanbe, Tajikistan Tajik Technical University, Dushanbe, Tajikistan

Turin Polytechnic University, Tashkent, Uzbekistan Tashkent Univ. of Information Technologies, Tashkent, Uzbekistan

Almaty Univ. of Power Eng. and Telecom., Almaty, Kazakhstan Eurasian National University, Nur-Sultan, Kazakhstan

Altai State Technical University, Barnaul, Russia Novosibirsk State Technical University, Novosibirsk, Russia Saint Petersburg Polytechnic University, Saint Petersburg, Russia Tomsk Polytechnic University, Tomsk, Russia

Aarhus University, Aarhus, Denmark Aalborg University, Aalborg, Denmark

University of Kassel, Kassel, Germany

Bharathidasan University, Trichy, India Gujarat Technological University, Ahmedabad, India Hindustan Institute of Technology and Science, Chennai, India Jawaharlal Nehru Technological University, Hyderabad, India

Lampung University, Lampung, Indonesia Surabaya State University, Surabaya, Indonesia University of Mercu Buana, Jakarta, Indonesia

National University of Malaysia, Selangor, Malaysia

Mahasarakham University, Maha Sarakham, Thailand

Cadi Ayyad University, Marrakech, Morocco Sidi Mohamed Ben Abdellah University, Fez, Morocco University of Ibn Tofail, Kenitra, Morocco University of Ibn Zohr, Agadir, Morocco

University of El-Mansoura, Mansoura, Egypt

Multimedia University College of Kenya, Nairobi, Kenya

Polytechnic University of Tirana, Tirana, Albania University of Durres, Durres, Albania

Wroclaw University of Technology, Wroclaw, Poland

Dnipro National University, Dnipro, Ukraine National Univ. of Construction and Architecture, Kiev, Ukraine Poltava National Polytechnic University, Poltava, Ukraine State Research Institute of Building Structures, Kiev, Ukraine Zaporizhzhia National University, Zaporizhzhia, Ukraine

University of the Caribbean, Barranquilla, Colombia

Benito Juarez Garcia University, Puebla, Mexico

University of Texas at Arlington, Arlington, USA

Northern Alberta Institute of Technology, Edmonton, Canada

SCIENTIFIC BOARD:

Ahrabian, Gh., Asst. Prof. (*Iran*) Akcam, N., Assoc. Prof. (*Turkey*)

Aksen, A., Prof. (*Turkey*)
Ardehali, M.M., Prof. (*Iran*)
Ari, M., Prof. (*Turkey*)
Banan, Kh., Prof. (*Iran*)
Bay, O.F., Prof. (*Turkey*)

Behjat, V., Assoc. Prof. (*Iran*) Bektas, S., Prof. (*Northern Cyprus*)

Beloiu, R., Assoc. Prof. (Romania)

Bilbao, J., Prof. (*Spain*) Bizon, N., Prof. (*Romania*) Boushehri, N.S. (*Iran*) Bravo, E., Prof. (*Spain*) Bulut, F., Asst. Prof. (*Turkey*) Camurcu, A.Y., Prof. (*Turkey*)

Chirlesan, D., Assoc. Prof. (Romania) Costea, M., Assoc. Prof. (Canada)

Darabi, A., Prof. (*Iran*)
Demiroren, A., Prof. (*Turkey*)
Dursun, K.M., Prof. (*Norway*)
Effatnejad, R., Asst. Prof. (*Iran*)

Eguia, P., Prof. (Spain) Faiz, J., Prof. (Iran)

Farsadi, M., Assoc. Prof. (*Iran*) Farsangi, M.M., Prof. (*Iran*) Feizi, M.R., Prof. (*Iran*)

Forrisdal, O.K., Assoc. Prof. (Norway)

Genc, N., Prof. (*Turkey*)
Ghanbari, E., Prof. (*Iran*)
Gholami, A., Prof. (*Iran*)
Gonzalez, P., Prof. (*Spain*)
Gozde, H., Assoc. Prof. (*Turkey*)
Hardalac, F., Assoc. Prof. (*Turkey*)
Hasanov, E.R., Prof. (*Azerbaijan*)
Hasanova, S.I., Asst. Prof. (*Azerbaijan*)
Hashimov, A.M., Acad. (*Azerbaijan*)

Hatami, H., Asst. Prof. (*Iran*) Hernandez, J.R., Prof. (*Spain*) Huseynov, A., Prof. (*Azerbaijan*) Ionita, S., Prof. (*Romania*)

Iskanderov, R.A., Prof. (Azerbaijan)

Iskender, I., Prof. (*Turkey*) Istefanopulos, Y., Prof. (*Turkey*) Izykowski, J., Prof. (*Poland*) Jadid, Sh., Prof. (*Iran*)

Jafari, A. (Iran)

Kalantar, M., Prof. (Iran)

Kazemi, A., Assoc. Prof. (*Iran*)
Kenarangui, R., Prof. (*USA*)
Khalin, M.V., Prof. (*Russia*)
Khalina, T.M., Prof. (*Russia*)
Khudiev, A.T., Prof. (*Azerbaijan*)
Kocaarslan, I., Prof. (*Turkey*)
Kocabas, D.A., Asst. Prof. (*Turkey*)
Konditi, D.B.O., Prof. (*Kenya*)
Krivova, L.V., Assoc. Prof. (*Russia*)
Kuznetsov, V., Prof. (*Ukraine*)
Mamedov, N.A., Prof. (*Azerbaijan*)

Meral, M.E., Prof. (Turkey)

Mokhtarpour, A., Asst. Prof. (*Iran*) Moradzadeh, M., Assoc. Prof. (*Belgium*)

Mordt, H., Assoc. Prof. (*Norway*) Mustafayev, R.I., Prof. (*Azerbaijan*)

Najafi, S., Prof. (*Iran*)

Nasirzadeh, N., Asst. Prof. (Iran)

Nuriyev, M.A., Assoc. Prof. (Azerbaijan)

Oprescu, B., Prof. (Romania)

Oproescu, M., Assoc. Prof. (Romania)

Oraee, H., Prof. (Iran)

Ozerdem, O.C., Prof. (Northern Cyprus)

Pashaei, A., Dr. (*Turkey*)

Pavlyuchenko, D.A., Prof. (*Russia*) Qurbanov, K.B., Assoc. Prof. (*Azerbaijan*) Rahmanov, N.R., Prof. (*Azerbaijan*)

Rebollar, C., Prof. (*Spain*) Rosolowski, E., Prof. (*Poland*) Rostami, A., Prof. (*Iran*) Rzayev, F.T., Dr. (*Azerbaijan*)

Sadikoglu, F.M., Prof. (*Northern Cyprus*) Saracoglu, R., Assoc. Prof. (*Turkey*)

Sazli, M.H., Prof. (*Turkey*)
Sefa, I., Prof. (*Turkey*)
Senol, M.A., Dr. (*Turkey*)
Serban, G., Prof. (*Romania*)
Sharifian, M.B.B., Prof. (*Iran*)
Shayanfar, H.A., Prof. (*Iran*)
Shayeghi, H., Prof. (*Iran*)
Stanescu, C., Prof. (*Romania*)
Tabatabaei, J.M., Dr. (*Turkey*)
Tabatabaei, Naser M., Prof. (*Iran*)

Tabatabaei, Nejat M., Asst. Prof. (Germany)

Taghizadegan, N., Assoc. Prof. (*Iran*) Taplamacioglu, M.C., Prof. (*Turkey*)

Usta, O., Prof. (*Turkey*) Varela, C., Prof. (*Spain*) Vishtibeyev, A. Prof. (*Russia*)

EDITORIAL NOTE

We are pleased to present International Journal on "Technical and Physical Problems of Engineering" (IJTPE) in English and electronic print published seasonal periodically by the partners of International Organization on "Technical and Physical Problems of Engineering" (IOTPE).

The partners of IOTPE organization are universities and institute from Azerbaijan, Iran, Turkey, Romania, Spain, Northern Cyprus and Norway.

The IOTPE organization is a scientific association, founder and holder of International Conferences on "Technical and Physical Problems of <u>Power</u> Engineering" (ICTPE) have been held from 2002 to 2012. The ICTPE Conferences name and topics are improved to International Conference on "Technical and Physical Problems of <u>Electrical</u> Engineering" (ICTPE) have been held from 2013 to 2019.

Finally, the ICTPE Conferences name and topics are improved to International Conference on "Technical and Physical Problems of *Engineering*" (ICTPE) in 2020 Conference to cover subjects in all fields and topics of Electrical Engineering and have been held till now. The ICTPE Conferences were held biannually till ICTPE-2008 and annually after ICTPE-2009 in the partner universities and institutes.

The IOTPE organization is generally managing and performing a set of scientific-executive affairs to holding International Conference of ICTPE, publishing International Journal of IJTPE and directing International Enterprise of IETPE.

Successful organizing and holding ICTPE conference and publishing IJTPE journal indicates close friendship and scientific collaboration of the scientists and researchers of member countries in engineering field development between the countries. The importance of holding ICTPE conference and publishing IJTPE journal are mutual understanding and recognition between the organizer countries through scientific, social and cultural development where yields increasing international cooperation in scientific areas.

Furthermore, the importance subjects of ICTPE conference and IJTPE journal are related to the opportunity for researches and scientists from different

countries to clarify and discuss the latest and mutual research achievements and improvements as well as generalization of the internationally obtained results in the area of engineering and new technologies.

The conducting of ICTPE conference and IJTPE journal are based on important principle of the cooperative relationship between science and industry. This relationship is a basis for the activity of contemporary engineering companies. It is well known that important technical advance is possible only due to achievements of fundamental science.

Publishing IJTPE journal is getting increasing importance for cooperation of researchers and scientific centers of different countries. We strongly believe the journal provides the establishing scientific relationships and also increase the cooperation of east and west countries on the subject of engineering fields and applying the new technologies on solving technical and physical problems.

By the mean of IJTPE journal publication, the cooperation with the partners from the involved countries and also all of the worlds will be fostered. It is the main objective to enhance the level of multilateral exchanges, the involvement of authors in developing and improving the scientific research.

The issues of IJTPE journal are registered, cited and indexed in some scientific organization and databases such as Elsevier-Scopus.

We will do our best to disseminate the journal's results and forward to the possible technological transfer of the accumulated knowledge of the scientific contributions of the authors.

Finally, we wish to express our gratefulness to all the authors and scientists from all over the world who have scientific reports in preparing the transactions published in the journal.

Editors-in-Chief

Academician Arif Mamed HASHIMOV Prof. Naser MAHDAVI TABATABAEI Prof. Nicu BIZON

<u>NO</u>	<u>CONTENTS</u>	PAGES
1	ATTRIBUTION CLASSIFICATION METHOD OF ADVANCED PERSISTENT THREAT (APT) MALWARE USING AI LEARNING E.J. Khalefa, D.A.A. Salman	1-10
2	A REVIEW OF INTRUSION DETECTION SYSTEM METHODS AND TECHNIQUES: PAST, PRESENT AND FUTURE Y.H. Alagrash, H.S. Mehdy, R.H. Mahdi	11-17
3	OPTIMIZATION OF TG-43U1 DATABASE FOR HIGH DOSE RATE COBALT ⁶⁰ Co SOURCE USED IN BRACHYTHERAPY A. El Yazzaoui, A. Kharchaf, R. Errifai, A. Rahmouni	18-25
4	PREDICTING OF TOOL PATH EFFECT ON ROUGHNESS OF A MACHINED SURFACE USING ANN AND RSM O. Outemsaa, O. El Farissi	26-32
5	A NEW HYBRID MULTI-CRITERIA DECISION APPROACH FOR EVALUATING AND BENCHMARKING VACCINES Q.M. Yas, F.K. Zaidan	33-38
6	FREE VIBRATION ANALYSIS OF RECTANGULAR-PLATE-BASED AIRCRAFT WINGS A.A.H. Al-Filfily, B.H. Abed, A.A. Battawi	39-44
7	EXPLORING THE IMPACT OF IMAGE ENHANCEMENT AND DATA AUGMENTATION TECHNIQUES ON LUNG DETECTION IN CHEST RADIOGRAPHY IMAGES M.K. Jalehi, B.M. Albaker	45-51
8	TESTING TWO TYPES OF MAGNETO-RHEOLOGICAL (MR) DAMPER MODELS WITH QUARTER CAR SUSPENSION SYSTEM RESPONSE H.M.H. Al-Araji, A.I.H. Al-Zughaibi, E.Q. Hussein	52-61
9	MANAGEMENT OF AGRO-WASTE BY USING AS AN ADDITIVE TO CONCRETE AND ITS ROLE IN REDUCING COST PRODUCTION: IMPACT OF COMPRESSIVE STRENGTH AS A CASE STUDY W.S. Abdulkareem, H.S.M. Aljumaily, H.A. Mushatat, M.N. Abbas	62-67
10	AUTOMATIC CLASSIFICATION OF PREPROCESSED MRI BRAIN TUMORS IMAGES USING DEEP CONVOLUTIONAL NEURAL NETWORK N. Remzan, K. Tahiry, A. Farchi	68-73
11	PERFORMANCE EVALUATION OF A WASTEWATER TREATMENT PLANT D.H. Aldahy, M.A. Ibrahim	74-80
12	PEDAGOGICAL PRACTICES AND ACADEMIC ACHIEVEMENT IN THE ERA OF GLOBAL PANDEMICS O. Dardary, M. Tridane, S. Belaaouad	81-86
13	TECHNICAL RULES FOR DESIGN AND EXPERIMENTAL RESEARCH OF FIBER CONCRETE SEWER PIPES T.M. Rustamli	87-92
14	IDENTIFYING THE REQUIREMENTS OF WWP USING GIS AND MLR TECHNIQUE A.M. Al Saadi, S.E. Rezouki	93-101
15	STEGANOGRAPHIC DATA HIDING USING QUANTUM BEHAVED PARTICLE SWARM OPTIMIZATION AND AN ENHANCED AES ALGORITHM M.L. Talal, I.A. Hassan, F.K. Zaidan, I.M. Badr	102-109
16	HARMONIC ANALYSIS OF LOADING CHARACTERISTICS RESEARCH OF PUMP JACK	110-115
	IN Aslanov A S Ahmadov Z E Evyazova C A Hamidova4 I R Ihaveva	

17	DETECT MALICIOUS EMAILS USING DART LANGUAGE A.Z. Ablahd	116-120
18	EVALUATING OF THE PEAK HOUR FACTOR OF INTERSECTION A.H. Hameed, D.A. Al-Mamany	121-126
19	EVALUATION OF INTEGRATION OF NEW ICTS IN TEACHING-LEARNING OF SCHOOL SYSTEM N. Ameziane, T. Hassouni, K.A. Bentaleb, A. Chahlaoui	127-134
20	ANALYTICAL EXPRESSIONS OF RELATIONSHIP TO CALCULATION OF AC STABILIZER WITH INDUCTION LEVITATION G.S. Kerimzade	135-139
21	PRE-ANALYSIS OF TEACHING PRACTICES: AN APPROACH THAT PROMOTES DEVELOPMENT OF REFLEXIVITY CASE OF PHYSICS-CHEMISTRY TEACHERS M. Serghini, N. Mjahed, K. Raouf, L. Kamal, A. Khyati	140-147
22	EVALUATING FOUR ELEMENTS FOR QUALITY OF OPENSTREETMAP BUILDINGS LAYER T.H. Ali, M.M. Al Bakri	148-154
23	INTEGRATED SMART REAL TIME SCORING PENCAK SILAT BASED ON INTERNET OF THINGS (IOT) L. Anifah, M.S. Zuhrie, Muhammad, Haryanto	155-163
24	SMART TRUCK DISTRIBUTION IN AN OPEN-PIT MINE H. Bnouachir, M. Chergui, H. Medromi	164-170
25	STUDY OF PHYSICAL PROCESSES CREATED BY SAND GRAINS IN THE WORKING NODES OF ADJUSTABLE THROTTLE J.N. Aslanov, T.U. Khankishiyeva, L.T. Huseynova	171-177
26	MONITORING AND ANALYSIS ON CHANGE OF LAND SURFACE TEMPERATURE BASED ON SATELLITE DATA C. Auntarin, P. Chunpang, C. Plybour, T. Laosuwan	178-183
27	CALCULATION OF MAIN PARAMETERS OF INDUCTION LEVITATION DEVICE USED IN VERTICAL AXIS WIND GENERATORS I.M. Marufov, N.S. Mammadov, K.M. Mukhtarova, N.A. Ganiyeva, G.A. Aliyeva	184-189
28	COMPARATIVE STUDY OF DAMAGE ANALYSIS AND LIFE PREDICTION OF ELECTRICAL CABLES IN OVERHEAD DISTRIBUTION NETWORKS - APPLICATION TO COPPER AND ALUMINUM CONDUCTORS A. Ouafik, A. Wahid, M. Idiri, A. Abouzaid, B. Boubeker	190-194
29	INTEGRATION OF ICT IN THE RESOLUTION OF DIFFERENTIAL EQUATIONS BY THE EULER METHOD IN PHYSICS FOR SECOND YEAR SCIENCE BACCALAUREATE CLASSES S. Dachraoui, K.A. Bentaleb, A. Taqi, T. Hassouni, E.M. Al Ibrahmi	195-203
30	PRODUCE REFERENCE MAPS OF INTERNAL FRICTION ANGLE FOR SOIL USING GIS H.M. Ali, J.K. Thajeel, A.R. Al Adhadh	204-211
31	SIMULATION OF EFFECT OF INJECTION STRATEGIES ON PERFORMANCE OF A SPARK IGNITION ENGINE M.S. Kassim, M.K. Allawi, H.S.S. Aljibori	212-217
32	COMPARISON OF ENERGY EFFICIENT ROUTING FOR MULTIPATH PROTOCOLS IN MOBILE AD-HOC NETWORK A.H. Muosa	218-223

33	A DEEP CONVOLUTIONAL TRANSFER LEARNING APPROACH FOR SMART BEARING FAULT DETECTION AND DIAGNOSIS M.A. Hailan, B.M. Albaker, M.S. Alwan	224-231
34	AGE FACE INVARIANT RECOGNITION MODEL BASED ON VGG FACE BASED DNN AND SUPPORT VECTOR CLASSIFIER M.H. Ibrahem, M.H. Abdulameer	232-240
35	EFFECT OF USING NANO-SILICA WITH CARBON/KEVLAR FIBER REINFORCED EPOXY ON ENERGY OBSERVATION OR TOUGHNESS A.K. Ahmed, M.A. Alwan, A.J. Farhan	241-247
36	COMPUTATIONAL ANALYSIS OF HEAT TRANSFER THROUGH FINS OF DIFFERENT SHAPES IN AN AIR-COOLED INTERNAL COMBUSTION ENGINE A. Dorri, M. Alcani, K. Dhoska, M. Bako	248-254
37	EVALUATION OF EFFECT OF A TEACHING-LEARNING DEVICE BASED ON TUTORING AND INFORMATION AND COMMUNICATION TECHNOLOGIES ON COMMON CORE Y. Karim, K. Raouf, H. Nebdi	255-261
38	DYNAMIC VOLTAGE RESTORER BASED ON A NEW 31-LEVEL CASCADED INVERTER FOR POWER DISTURBANCE MITIGATIONS S.N. Tackie	262-270
39	31-LEVEL SINGLE-PHASE CASCADED INVERTER WITH MINIMAL COMPONENT COUNT S.N. Tackie, N.M. Komi, O.C. Ozerdem	271-282
40	A PRACTICAL MEASUREMENTS OF FRICTION COEFFICIENTS DURING COMPACTION PROCESS OF DIFFERENT CERAMIC POWDERS A.A. Hamid, H.A.M. Al Jewaree	283-287
41	TQM IN A MANDATORY CONSTRUCTION COMPANY: AN EXPERIMENTAL CASE STUDY AND METHODOLOGY A.F. Al Jaberi, S. Naimi	288-295
42	A STUDY OF CONSTRUCTION DELAYS H.A. Alobadi, S. Naimi	296-308
43	MODELING AND DESIGNING CONCRETE WITH STEEL FIBERS TO IMPROVE MULTIPLE-RIBBED SLABS Z. Ghuraibaw, S. Naimi	309-317
44	IMPACT OF PROJECT MANAGEMENT ON SUCCESS CRITERIA S. Mahal, S. Naimi	318-326
45	PRODUCTIVITY IN CONSTRUCTIONS WITH ROLE OF SITE EFFECT AND COMPLEXITY VARIABLES T. Shaker, S. Naimi	327-333
46	ESTIMATING A PERSON'S AGE IS STRANGE TO HUMAN EYE	334-339
	A.B.R. Saabia, M.A. Younus, R.A. Kadhim	
47	PERFORMANCE PREDICTING OF CATALYTIC REFORMING PLANT USING ARTIFICIAL NEURAL NETWORKS M.F. Alzayadi, A.A. Jassim	340-344
48	SELECTING OPTIMAL EDUCATIONAL BOARDS BASED ON A DECISION SUPPORT APPROACH	345-351
	A.A.M. Al-Azzawi, M.L. Talal, B.J. Khadhim, O.M. Yas	

49 ENERGY CAPACITY DETERMINING OF SEDIMENT CLEANING FROM CONCRETE-LINED CHANNELS BASED ON REAL INDICATORS G.V. Novruzova

50 EXPERIMENTAL COMPARISON OF THERMAL PERFORMANCE BETWEEN V-CORRUGATED AND FLAT PLATE SOLAR COLLECTORS A.M. Alsaffawi, F.A. Ali, A.H. Soheel

* The issues of IJTPE Journal are registered, cited and indexed in:

Scopus

■ Scopus / Elsevier, www.scopus.com

The IJTPE is indexed in Scopus $\!\!/$ Elsevier since 2019.

Indexing address:

https://www.scopus.com/sourceid/21100913338





■ Norwegian Directorate for Higher Education and Skils (NDHES) and Norwegian Center for Research Data (NSD), https://www.nsd.no/en/, are under Norwegian Ministry of Education and Research

since 2013. Indexing address:

 $\underline{https://kanalregister.hkdir.no/publiseringskanaler/KanalTidsskriftInfo.action?id=480511\&request_locale=en$



■ <u>Google Scholar</u>, http://scholar.google.com/, for searching, exploring, locating, keeping, checking and citing the publications and authors through the libraries and on the web since 2013. Search for: IJTPE

 $\underline{https://scholar.google.com/citations?hl=} da\&user=gfWxEhEAAAAJ$



■ Index Copernicus International (ICI), https://indexcopernicus.com/index.php/en/, since 2013.

Indexing address:

https://journals.indexcopernicus.com/search/details?id=32511



■ Research Bible Academic Research Index, http://journalseeker.researchbib.com/, since 2016.

Indexing address:

http://journalseeker.researchbib.com/view/issn/2077-3528



Scientific Indexing Services (SIS), http://www.sindexs.org/, since 2016.

Indexing address:

http://www.sindexs.org/JournalList.aspx?ID=3176



■ Eurasian Scientific Journal Index (ESJI), http://esjindex.org/, since 2018.

Indexing address:

http://esjindex.org/search.php?id=438



Sciamgo Journal & Country Rank (SJR), https://www.scimagojr.com/, since 2018.

Indexing address:

https://www.scimagojr.com/journalsearch.php?q=2077-3528



Resurchify, https://www.resurchify.com/

Indexing address:

https://www.resurchify.com/impact/details/21100913338



■ Canadian Institute for Knowledge Development (CIKD), https://cikd.ca/

Indexing address:

https://ieconferences.cikd.ca/call-for-papers-3rd-ie-conference/