

# 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 57

Volume 15

Number 4

December 2023

Serial No: 0057-1504-1223

**Founders and Publishers:****International Organization of IOTPE**

Taba Elm International Institute  
 Tabriz, Iran  
[www.tabaelm.com](http://www.tabaelm.com)



Seraj Higher Education Institute  
 Tabriz, Iran  
[www.seraj.ac.ir](http://www.seraj.ac.ir)



Gazi University  
 Ankara, Turkey  
[www.gazi.edu.tr](http://www.gazi.edu.tr)



Istanbul Technical University  
 Istanbul, Turkey  
[www.itu.edu.tr](http://www.itu.edu.tr)



Isik University  
 Istanbul, Turkey  
[www.isikun.edu.tr](http://www.isikun.edu.tr)



Van Yuzuncu Yil University  
 Van, Turkey  
[www.yyu.edu.tr](http://www.yyu.edu.tr)



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



Institute of Physics  
 Ministry of Science and Education  
 Baku, Azerbaijan  
[www.physics.gov.az](http://www.physics.gov.az)



Azerbaijan Research Institute of  
 Energetics and Energy Design  
 Azerenerji JSC, Baku, Azerbaijan  
[www.azenerji.com/en/about/pei.html](http://www.azenerji.com/en/about/pei.html)



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



Nakhchivan State University  
 Nakhchivan, Azerbaijan  
[www.ndu.edu.az](http://www.ndu.edu.az)



University of Pitesti  
 Pitesti, Romania  
[www.upit.ro](http://www.upit.ro)



Universidad del País Vasco  
 Euskal Herriko Unibertsitatea

University of the Basque Country  
 Bilbao, Spain  
[www.ehu.es](http://www.ehu.es)



NEAR EAST  
 UNIVERSITY

Near East University  
 Lefkosa, Northern Cyprus  
[www.neu.edu.tr](http://www.neu.edu.tr)



Høgskolen i Østfold

Ostfold University College  
 Fredrikstad, Norway  
[www.hiof.no](http://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](mailto:ijtpe@iotpe.com), [ijtpe0@gmail.com](mailto:ijtpe0@gmail.com)**

**Issue 57**

**Volume 15**

**Number 4**

**December 2023**

**Serial No: 0057-1504-1223**

**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. - Hossein SHAFIEI MATANAGH, Ph.D.

**EDITORIAL BOARD:**

- Assoc. Prof. Aytok 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, Ministry of Science and Education (*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, Cankaya University (*Ankara, Turkey*)
- Prof. Yorgo ISTEфанOPULOS, 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, Ministry of Science and Education (*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, Ministry of Science and Education (*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:**

Alzahra University, Tehran, Iran  
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 Qom, 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 Imam Ja'afar Al-Sadiq, Baghdad, Iraq  
University of Karbala, Karbala, Iraq  
University of Kufa, Najaf, Iraq  
University of Technology, Baghdad, Iraq  
University of Warith Al-Anbiyaa, Karbala, Iraq

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

Altai State Technical University, Barnaul, Russia  
Institute of Design-Technology Information Science, Moscow, Russia  
MIREA Russian Technological University, Moscow, Russia  
Novosibirsk State Technical University, Novosibirsk, Russia  
Moscow State Medical University, Moscow, Russia  
Saint Petersburg Polytechnic University, Saint Petersburg, Russia  
Tomsk Polytechnic University, Tomsk, Russia

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

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

Indonesian Muslim University, Makassar, Indonesia  
Lampung University, Lampung, Indonesia  
Malang State University, Malang, Indonesia  
Surabaya State University, Surabaya, Indonesia  
University of Mercu Buana, Jakarta, Indonesia

National University of Malaysia, Selangor, Malaysia  
Technical University of Malaysia, Melaka, Malaysia

Maharakham University, Maha Sarakham, Thailand

Quy Nhon University, Quy Nhon, Vietnam

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 Ain Shams, Cairo, Egypt  
University of Badr, Cairo, Egypt  
University of Benha, Benha, Egypt  
University of Mansoura, Mansoura, Egypt

Mutah University, Al-Karak, Jordan

Multimedia University College of Kenya, Nairobi, Kenya

Polytechnic University of Tirana, Tirana, Albania  
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

Northern Alberta Institute of Technology, Edmonton, Canada

University of Texas at Arlington, Arlington, USA

**SCIENTIFIC BOARD:**

- Ahrabian, Gh., Asst. Prof. (*Iran*)  
Akcamlar, 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*)  
Istefanopoulos, 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., 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 *Power 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 *Electrical 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**

| <b><u>NO</u></b> | <b><u>CONTENTS</u></b>  | <b><u>PAGES</u></b> |
|------------------|---|---------------------|
| 1                | <b>AUTOMATIC DUST MEASUREMENT SYSTEM USING A MAGNETIC SUSPENSION</b><br>O.Z. Afandiyev, A.T. Allahverdiyeva, S.N. Aliyeva, Y.F. Afandiyeva  | 1-5                 |
| 2                | <b>OPTIMIZATION OF MATHEMATICAL MODELS OF MULTIFACTOR WORKING-OUT PROCESSES AND TECHNOLOGICAL PROCESSES BY EXPERIMENTAL-STATISTICAL METHODS</b><br>A.M. Gafarov, I.A. Khankishiyev, H.V. Gafarzade, E.D. Mammadov, S.G. Pashazade | 6-10                |
| 3                | <b>COMBINING FEATURE DESCRIPTOR TECHNIQUES WITH CONVOLUTIONAL NEURAL NETWORK FOR MASKED FACIAL RECOGNITION</b><br>S.M. Abbas, M.H. Abdulameer   | 11-18               |
| 4                | <b>MATHEMATICAL ANALYSIS OF REGULATED DC MOTOR OF HYBRID SYSTEM</b><br>S.A. Khanahmadova, A.I. Mamedov  | 19-24               |
| 5                | <b>OBSTACLES TO BUILDING INFORMATION MODELING IMPLEMENTATION</b><br>A.L. Elmsri, S. Naimi, Z.A. Alrubaye  | 25-33               |
| 6                | <b>PROPOSED ALGORITHM FOR VIDEO SEQUENCE COMPRESSION</b><br>V.Z. Kuklin, A.K. Lampezhev, L.M. Chervyakov, A.A. Tatarkanov   | 34-45               |
| 7                | <b>A NOVEL DIGITAL MODEL FOR VIDEO INFORMATION NETWORK SECURITY</b><br>A.K. Lampezhev, V.R. Lysenko, A.A. Umyskov   | 46-53               |
| 8                | <b>ESTIMATION OF LAND SURFACE TEMPERATURE BASED ON LAND USE FROM SATELLITE DATA</b><br>P. Wongrawinan, A. Saengprajak, W. Chokkuea, T. Laosuwan   | 54-59               |
| 9                | <b>PERFORMANCE COMPARISON BETWEEN TWO MICROCONTROLLERS BASED GPS FOR PRECISION IN DETERMINING VEHICLES LOCATIONS</b><br>Z.K. Farej, A.N. Ismail   | 60-66               |
| 10               | <b>STUDY OF ENERGY EFFICIENCY INDICATORS OF LED LIGHT SOURCES</b><br>S.A. Baghirov  | 67-71               |
| 11               | <b>DESIGN AND SIMULATION OF WIND TURBINE ENERGY SOURCES FOR A CELLULAR BASE STATION IN A RURAL AREA</b><br>I.A.R. Al-Saddae, B.Z.S. Azzawi, M.E. Yigit, M. Ari  | 72-82               |
| 12               | <b>PERFORMANCE AND EMISSION CHARACTERISTICS OF BIOFUEL BLENDS: A REVIEW</b><br>F.A. Saleh, M.K. Allawi  | 83-88               |
| 13               | <b>IMPACT ASPECT RATIO ON MECHANICAL PROPERTIES OF ALUMINUM ALLOY PRODUCED BY SQUEEZE CASTING PROCESS</b><br>S.S. Mutar, N.S. Abtan   | 89-93               |
| 14               | <b>DETERMINATION OF MAIN PARAMETERS AND THERMAL REPORT OF VERTICAL AXIS MAGNETIC LEVITATION WIND GENERATOR SYSTEM</b><br>N.A. Yusifbayli, A.P. Guliyev, I.M. Marufov  | 94-99               |
| 15               | <b>IMAGE CAPTIONING SCHEME BASED ON DEEP LEARNING WITH VISUAL ATTENTION</b><br>Y.H. Zaidan, J.W. Salih  | 100-106             |
| 16               | <b>APPLICATION OF FUZZY LOGIC TECHNIQUES IN MEDICAL DIAGNOSIS</b><br>M.A. Salih, M.M. Hamad, W.M. Jasim   | 107-115             |
| 17               | <b>RICE DISEASES DETECTION AND CLASSIFICATION USING YOU ONLY LOOK ONCE AND CONVOLUTIONAL NEURAL NETWORK</b><br>D.S. Alwan, M.H. Naji  | 116-122             |

| <b><u>NO</u></b> | <b><u>CONTENTS</u></b>   | <b><u>PAGES</u></b> |
|------------------|--|---------------------|
| 18               | WEB MINING ALGORITHMS APPLIED TO UNIVERSITY RESEARCHERS PROFILES:<br>A CASE STUDY<br>D.M.A. Al Kerboly, M.M. Hamad, O.A. Dawood  | 123-133             |
| 19               | INFLUENCE OF PUMPING VARIABILITY ON NOISE FIGURE ANALYSIS OF EDFA-<br>DWDM TRANSMISSION SYSTEM<br>A.A. Amer, H.A. Wahab, A. Abdulelah  | 134-139             |
| 20               | USE OF BLOCKCHAIN TECHNOLOGY IN EDUCATIONAL FIELD<br>B. Al Samarai   | 140-151             |
| 21               | UTILIZING PRINCIPAL COMPONENT ANALYSIS AND FEATURE SELECTION TO<br>IMPROVE HEART DISEASE PREDICTION SYSTEM<br>A.F.H. Alharan, L.M. Saferali, S.K. Abbas, S.J. Mosa   | 152-159             |
| 22               | DEVELOPING WSM-AHP METHOD FOR ADAPTIVE CONSTRUCTION PROJECT<br>MANAGEMENT<br>K. Ahmad, S. Naimi  | 160-170             |
| 23               | SIX-PHASE INDUCTION GENERATOR CONTROL IN HEALTHY AND FAULTY MODE<br>CONNECTED TO SMART GRID<br>S. Mihoubi, B. Meliani, L. Ghomri, A. Mostefa, M. Rahli   | 171-178             |
| 24               | DETECT INTEREST REGION OF FINGER VEIN BASED ON K-MEANS CLUSTERING<br>B.Z. Kamil, D.A. Salman, S.A. Abdul Kareem  | 179-188             |
| 25               | GAMIFICATION AND MATHEMATICS: PLAYING FOR BETTER LEARNING<br>S. El Bakkali, K. Raouf, M. Serghini, M. Barkatou, H. Nebdi   | 189-197             |
| 26               | EFFECT OF A NEW TEACHING MODEL USING COMPUTER SIMULATIONS ON<br>PUPILS CHEMISTRY KNOWLEDGE AND SKILLS: A CASE STUDY<br>A. El Kasri, M. Abid, A. Ouasri, A. Lebkiri   | 198-208             |
| 27               | OPTIMAL SYNTHESIS OF NEXUS SYSTEMS IN PRESENCE OF LOAD PROFILE AND<br>ENVIRONMENTAL INFORMATION WITHOUT LIMITATIONS IN RESOURCES USING<br>GENETIC ALGORITHM<br>M. Ahangari Hassas, N. Taghizadegan Kalantari | 209-219             |
| 28               | EFFECT OF RHENIUM CONCENTRATION ON MECHANICAL PROPERTIES AND<br>DISLOCATION MECHANISMS OF TUNGSTEN-RHENIUM ALLOY<br>T. Karafi, A. Tahiri, M. Idiri, H. Chabba, B. Boubeker                                   | 220-225             |
| 29               | ROLE OF BIOPHILIC DESIGN IN QUALITY OF HOSPITAL PATIENTS ROOMS<br>M.M. Hamed, E.H.A. Affi, T.S. Elhinnawy  | 226-233             |
| 30               | WIND SPEED FORECASTING BASED ON SIX MACHINE LEARNING APPROACHES:<br>DEVELOPMENT AND BENCHMARKING STUDY<br>I. Tyass, A. Raihani, K. Mansouri  | 234-244             |
| 31               | STUDYING THE PERFORMANCE OF CONVOLUTIONAL NEURAL NETWORKS IN<br>RECOGNIZING PRINTED WORDS<br>H.A.A. Alsaadi, M. Cevik  | 245-255             |
| 32               | A COMPREHENSIVE SYSTEMATIC REVIEW OF SQL INJECTION ATTACK<br>DETECTION TECHNIQUES<br>B.H. Ali, A. Al Azzawi  | 256-261             |
| 33               | BUILDING A SYSTEM CAPABLE OF PREDICTING RENEWABLE ENERGY<br>CONSUMPTION AND POWER IMBALANCES ON GRID<br>N.S. Al Dabbagh, Z.M. Hamodat, A.G. Basheer  | 262-269             |

| <b><u>NO</u></b> | <b><u>CONTENTS</u></b>  | <b><u>PAGES</u></b> |
|------------------|---|---------------------|
| 34               | FORECASTING OF SOLAR RADIATION FOR SOLAR SYSTEM UNDER DIFFERENT CLIMATIC CONDITION<br>S.S. Al Musawi, Z.M. Hamodat, A.G. Basheer  | 270-277             |
| 35               | ATTITUDES OF MATHEMATICS AND PHYSICS TEACHERS TOWARDS DIFFICULTIES IN MODELING WITH DIFFERENTIAL EQUATIONS IN SECONDARY SCHOOLS<br>Y. Naamaoui, M. Chergui, B. El Wahbi   | 278-286             |
| 36               | PREDICTION OF ECO-GEODYNAMIC RISK FACTOR FOR HAZARDOUS FACILITIES OF MINING AND OIL-GAS COMPLEXES ON THE BASIS OF FUZZY SETS THEORY<br>J.N. Aslanov, G.A. Mammadov, Z.J. Afandiyeva, R.K. Mehtiyev, M.J. Hamashayeva, G.A. Hamidova, L.R. Ibayeva, T.A. Huseynova | 287-293             |
| 37               | ENERGY AUDIT EVALUATION IN PRIVATE RESIDENTIAL BUILDING<br>G. Tyxhari, A. Gorishti, K. Dhoska   | 294-298             |
| 38               | ENERGY DISSIPATION OF REINFORCED CONCRETE SHEAR WALL UNDER IMPACT OF SEISMIC LOADS<br>A.S. Ali  | 299-305             |
| 39               | METHODS FOR REGULATING EJECTOR SYSTEMS WITHIN INTERDISCIPLINARY RESEARCH USING COMPUTER MODELING<br>Y.A. Sazonov, M.A. Mokhov, I.V. Gryaznova, V.V. Voronova, K.A. Tumanyan, E.I. Konyushkov  | 306-320             |
| 40               | DEEP LEARNING TECHNIQUES FOR SKULL STRIPPING OF BRAIN MR IMAGES<br>R.H. Nayyef, M.S.H. Al Tamimi  | 321-327             |
| 41               | A MODIFIED LINE STABILITY INDEX BASED ON SHORT PATH METHOD (MLSISP) FOR VOLTAGE COLLAPSE PREDICTION<br>R. Gadal, A. Oukennou, F. El Mariami, A. Belfqih, N. Agouzoul  | 328-337             |
| 42               | METALLIZATION AND BONDING APPROACH FOR CARBYNE NANOMATERIAL<br>R. Tomov, M. Aleksandrova  | 338-343             |
| 43               | MATHEMATICAL MODELING OF CHANGE OF STEERING WHEEL TOE-IN ANGLES WHEN VEHICLE MOVES IN A CURVED DIRECTION<br>V.G. Verbitsky, A.V. Shcherbyna, O.M. Artyukh, O.V. Dudarenko, V.V. Kuzmin, D.P. Ruban, A.V. Fasoliak   | 344-350             |
| 44               | ENHANCING AERODYNAMIC EFFICIENCY IN SOLID FUEL PLASMA PREPARATION FOR POWER PLANTS<br>A.G. Batukhtin, E.A. Makhov, M.S. Bass, S.G. Batukhtin  | 351-361             |
| 45               | A MULTIPLE SYSTEM BIOMETRIC SYSTEM BASED ON ECG DATA<br>A.N. Abed Alzaki, M.S.H. Al Tammi   | 362-368             |
| 46               | INVESTIGATION SOME MECHANICAL PROPERTIES OF PMMA COMPOSITE-REINFORCED CERAMIC POWDERS<br>H.Y. Fadhil, N. Fouda, Q.A. Hamad, M.H. El Shafei  | 369-375             |
| 47               | PROPERTIES OF AGGREGATES IN DURABLE CONCRETE WORKING IN NORMAL AND AGGRESSIVE MARINE ENVIRONMENTAL CONDITIONS<br>A. Golgota, B. Vrusho, K. Dhoska   | 376-382             |
| 48               | ELECTRIC POWER GENERATION DESIGN AND ESTIMATION USING PHOTOVOLTAIC TECHNOLOGY<br>S.N. Tackie, S.T. Mohammed, L.E. Vafaei, K. Dimililer  | 383-395             |



| <u>NO</u> | <u>CONTENTS</u>   | <u>PAGES</u> |
|-----------|---|--------------|
| 49        | A METHOD BASED ON ADAPTIVE LINEAR NEURAL NETWORK FOR HARMONIC ESTIMATION<br>H.N. Truong   | 396-403      |
| 50        | INTELLIGENT CANCER SCREENING BASED ON DEEP NEURAL NETWORKS<br>H.S. Rahli, N. Benamrane  | 404-409      |
| 51        | MAINTENANCE MANAGEMENT BASED ON RELIABILITY ANALYSIS OF WELDING ROBOTS USING SVM<br>L. Ait El Maalem, M.E.H. Ech Chhibat, Z. Znaidi                             | 410-419      |
| 52        | BUILDING ASSESSMENT OF MECHANICAL AND CHEMICAL PROPERTIES OF HIGH MANGANESE STEEL IN TALL BUILDING CONSTRUCTION<br>I. Premti, E. Kalluci, S. Drushku, R. Prifti | 420-425      |
| 53        | LOGIC GATES BASED ON THERMAL MEMORY ELEMENTS<br>O.V. Volodina, A.A. Skvortsov, V.K. Nikolaev  | 426-433      |
| 54        | CREATING A METHOD FOR IDENTIFYING OBJECTS IN IMAGE WITH THEIR DIFFERENT ORIENTATIONS<br>V.Y. Terekhov, E.Y. Linskaya, A.K. Lampezhv                             | 434-442      |
| 55        | ENHANCING SIGNATURE RECOGNITION PERFORMANCE THROUGH CONVOLUTIONAL NEURAL NETWORK AND K-NEAREST NEIGHBORS<br>O. El Melhaoui, S. Benchaou, R. Zarrouk, A. Bouzidi | 443-449      |

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

## Scopus

■ **Scopus / Elsevier**, [www.scopus.com](http://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 Skills (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:

[https://kanalregister.hkdir.no/publiseringsskanaler/KanalTidsskriftInfo.action?id=480511&request\\_locale=en](https://kanalregister.hkdir.no/publiseringsskanaler/KanalTidsskriftInfo.action?id=480511&request_locale=en)



■ **Scientific Electronic Library - Russian Science Citation Index**, <https://elibrary.ru/>, since 2019.

eLIBRARY ID: 73924, Indexing address:

[https://elibrary.ru/title\\_about\\_new.asp?id=73924](https://elibrary.ru/title_about_new.asp?id=73924)



■ **Google Scholar**, <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

<https://scholar.google.com/citations?hl=da&user=gfWxEhEAAAAJ>



I N T E R N A T I O N A L

■ **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>

**SJR**

■ **Sciago 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/>