

This title is Indexed  
in SciVerse Scopus

Improving research results  
through analytical power

ISSN 2088-8708

International Journal of

**Electrical and Computer Engineering**

**IJECE**

Vol. 6 No. 5, October 2016



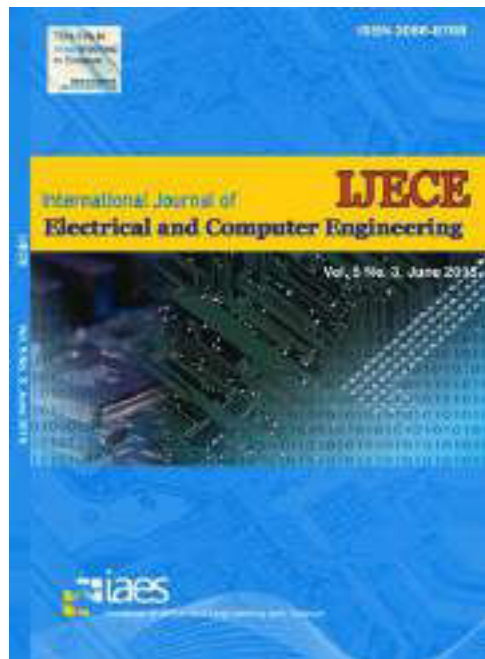
Institute of Advanced Engineering and Science

WALUYO

Home > International Journal of Electrical and Computer Engineering (IJECE)

## International Journal of Electrical and Computer Engineering (IJECE)

International Journal of Electrical and Computer Engineering (IJECE, ISSN: 2088-8708, a SCOPUS indexed Journal, SNIP: 1.001; SJR: 0.296; CiteScore: 0.99; SJR & CiteScore Q2 on both of the Electrical & Electronics Engineering, and Computer Science) is the official publication of the Institute of Advanced Engineering and Science (IAES). The journal is open to submission from scholars and experts in the wide areas of electrical, electronics, instrumentation, control, telecommunication and computer engineering from the global world.



Kindly please download the template in [DOCX](#) or [Latex](#).

**Submit your manuscripts today!**

The IJECE is published bi-monthly (Feb, Apr, Jun, Aug, Oct, Dec)

e-mail: [ijece@iaesjournal.com](mailto:ijece@iaesjournal.com)

### Announcements

#### IJECE Annual Best Paper Awards

We wish to acknowledge all those who have dedicated contributions given towards high quality publications in International Journal of Electrical and Computer Engineering (IJECE). We look forward to your continued support to IJECE for publishing high quality articles covering emerging electrical, electronics, instrumentation, control, telecommunication and computer engineering convergence areas.

We are glad to announce that the Editors and the Publisher of IJECE are choosing best papers for every year since 2015 issues. Best paper candidates may be nominated for the Annual Best Paper Awards by any researcher working in the field. This includes active researchers in topics relevant to the IJECE, the IJECE Authors, Reviewers, Editorial Board, Associate Editors, Managing Editor and Editor-in-Chief. The nomination letter must be emailed to the Annual Best Paper Award Committee ([ijece@iaesjournal.com](mailto:ijece@iaesjournal.com), cc: [info@iaescore.com](mailto:info@iaescore.com)) before September 30, 2019. Letters should briefly outline the reason for nomination with respect to the judging criteria. Judging Criteria: Papers will be judged for contribution and impact to the area of the IJECE.

The winner(s) of the Annual Best Paper Awards will receive an award and \$590\*. Certificates of recognition and recognition on the journal web page will be presented to all awardees.

\*Terms and Conditions applied.

Posted: 2019-07-04

[More...](#)

[More Announcements...](#)

#### USER

Username

Password

☐ Remember me

[Login](#)

#### QUICK LINKS

- Author Guideline
- Editorial Boards
- Online Submissions
- Abstracting and Indexing
- Publication Ethics
- Contact Us

#### PROFILE AT SC

##### 2019 Scopus Journal Metrics

CiteScore 2018: 1.63  
SNIP 2018: 1.144  
SJR 2018: 0.368  
Q2 on Computer Science  
Q2 on Electrical & Electronics Eng



#### NOTIFICATIONS

- View
- Subscribe

#### JOURNAL CONTENT

Search

Search Scope

[Search](#)

Browse

- By Issue
- By Author
- By Title

#### FONT SIZE



#### INFORMATION

- For Readers
- For Authors
- For Librarians



## Aim and Scope

IJECE publishes original papers in the field of electrical and computer engineering which covers, but not limited to, the following scope:

**Electrical:** electrical engineering materials, electric power generation, transmission and distribution, power electronics, power quality, power economic, FACTS, renewable energy, electric traction, electromagnetic compatibility, high voltage insulation technologies, high voltage apparatuses, lightning detection and protection, power system analysis, SCADA, electrical measurements, etc;

**Electronics:** electronic materials, microelectronic system, design and implementation of application specific integrated circuits (ASIC), VLSI design, system-on-a-chip (SoC) and electronic instrumentation using CAD tools, digital signal & data processing, biomedical transducers and instrumentation, medical imaging equipment and techniques, biomedical imaging and image processing, biomechanics and rehabilitation engineering, biomaterials and drug delivery systems, etc;

**Telecommunication:** modulation and signal processing for telecommunication, information theory and coding, antenna and wave propagation, wireless and mobile communications, radio communication, communication electronics and microwave, radar imaging, distributed platform, communication network and systems, telematics services and security network, etc;

**Control:** optimal, robust and adaptive controls, non linear and stochastic controls, modeling and identification, robotics, image based control, hybrid and switching control, process optimization and scheduling, control and intelligent systems, artificial intelligent and expert system, fuzzy logic and neural network, complex adaptive systems, etc;

**Computer and Informatics:** computer architecture, parallel and distributed computer, pervasive computing, computer network, embedded system, human-computer interaction, virtual/augmented reality, computer security, software engineering (software: lifecycle, management, engineering process, engineering tools and methods), programming (programming methodology and paradigm), data engineering (data and knowledge level modeling, information management (DB) practices, knowledge based management system, knowledge discovery in data), network traffic modeling, performance modeling, dependable computing, high performance computing, computer security, human-machine interface, stochastic systems, information theory, intelligent systems, IT governance, networking technology, optical communication technology, next generation media, robotic instrumentation, information search engine, multimedia security, computer vision, information retrieval, intelligent system, distributed computing system, mobile processing, next network generation, computer network security, natural language processing, business process, cognitive systems, etc.

## Paper Submission

Authors are invited to submit their articles properly formatted as per the author guidelines through our on-line system. The manuscript will be subjected to a full review procedure and the decision whether to accept it will be taken by the Editor based on the reviews.

## Article processing

All submitted articles will be initially subjected to editorial procedures, if found suitable for publishing will be sent to reviewers for peer review. IJECE adopts double blind peer review system.

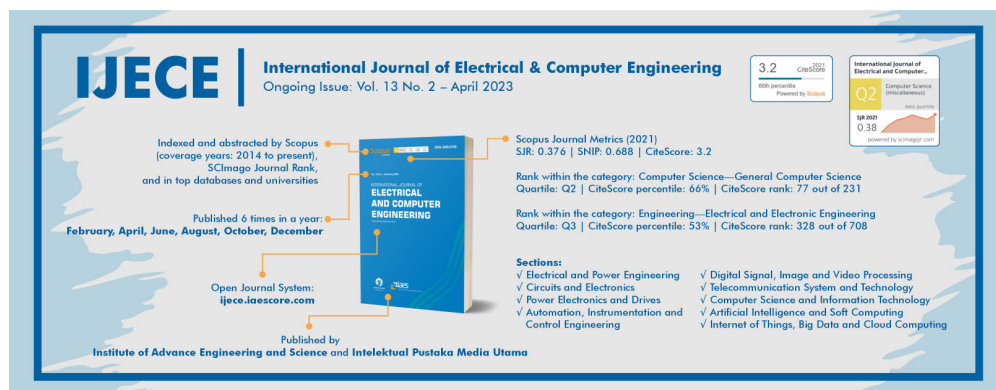
## Abstracting and indexing

IJECE is widely indexed in major databases (most popular and most respected databases), such as: SCOPUS, Scholar Metrics, DOAJ, ProQuest, EBSCO, BASE, SHERPA/ReMEO, CORE, etc.

## International Journal of Electrical and Computer Engineering (IJECE)

**International Journal of Electrical and Computer Engineering (IJECE)**, ISSN 2088-8708, e-ISSN 2722-2578 is an official publication of the Institute of Advanced Engineering and Science (IAES). The IJECE is an international open access refereed journal that has been published online since 2011. The IJECE is open to submission from scholars and experts in the wide areas of electrical, electronics, instrumentation, control, telecommunication, and computer engineering from the global world, and publishes reviews, original research articles, and short communications. This journal is indexed and abstracted by [SCOPUS](#) (Elsevier), [SCImago Journal Rank \(SJR\)](#), and in Top Databases and Universities. Now, this journal has **SNIP: 0.688; SJR: 0.376; CiteScore: 3.2; Q2 on Computer Science and Q3 on Electrical & Electronics Engineering**. Our aim is to provide an international forum for scientists and engineers to share research and ideas, and to promote the crucial field of electrical & power engineering, circuits & electronics, power electronics & drives, automation, instrumentation & control engineering, digital signal, image & video processing, telecommunication system & technology, computer science & information technology, internet of things, big data & cloud computing, and artificial intelligence & soft computing.

IJECE uses a rolling submission process, allowing authors to submit at any time during the year without time restraints.



**IJECE** | International Journal of Electrical & Computer Engineering  
Ongoing Issue: Vol. 13 No. 2 – April 2023

Indexed and abstracted by Scopus (coverage years: 2014 to present), SCImago Journal Rank, and in top databases and universities

Published 6 times in a year: February, April, June, August, October, December

Open Journal System: [ijece.iaescore.com](http://ijece.iaescore.com)

Published by Institute of Advanced Engineering and Science and Intelektual Pustaka Media Utama

Scopus Journal Metrics (2021)  
SJR: 0.376 | SNIP: 0.688 | CiteScore: 3.2

Rank within the category: Computer Science—General Computer Science  
Quartile: Q2 | CiteScore percentile: 66% | CiteScore rank: 77 out of 231

Rank within the category: Engineering—Electrical and Electronic Engineering  
Quartile: Q3 | CiteScore percentile: 53% | CiteScore rank: 328 out of 708

**Sections:**

- ✓ Electrical and Power Engineering
- ✓ Circuits and Electronics
- ✓ Power Electronics and Drives
- ✓ Automation, Instrumentation and Control Engineering
- ✓ Digital Signal, Image and Video Processing
- ✓ Telecommunication System and Technology
- ✓ Computer Science and Information Technology
- ✓ Artificial Intelligence and Soft Computing
- ✓ Internet of Things, Big Data and Cloud Computing



Authors must strictly follow [the guide for authors](#). Please read [these instructions](#) carefully and follow them strictly. In this way you will help ensure that the review and publication of your paper is as efficient and quick as possible. The editors reserve the right to reject manuscripts that are not in accordance with these instructions. No changes in the author list will be permitted after a manuscript has been accepted.

The IJECE is published bi-monthly (Feb, Apr, Jun, Aug, Oct, Dec).

Contact us by e-mail: [ijece@iaesjournal.com](mailto:ijece@iaesjournal.com)

### Announcements

IJECE does not accept any papers suggestion from conference organizers

Dear Sir/Madam,

Due to huge regular papers submission, we apologize that our journal does not accept any papers suggestion from other conference organizers. We sincerely apologize for any inconvenience. Critical suggestions are welcome for improvement of the contents and journal policies.

Your attention and cooperation is very highly appreciated.

Best Regards,  
IJECE Editorial Office

Posted: 2020-06-01

[More...](#)

[More Announcements...](#)

### Vol 13, No 3: June 2023

#### Table of Contents

<a href="#">Optimization and fault diagnosis of 132 kV substation low-voltage system using electrical transient analyzer program</a>	<a href="#">PDF</a>
Mohammed Kareem Mohammed, Mohammed Qasim Taha, Firas Fadhil Salih, Falah Noori Saeed	2375-2383
<a href="#">Simultaneous network reconfiguration and capacitor allocations using a novel dingo optimization algorithm</a>	<a href="#">PDF</a>
Samson Oladayo Ayanlade, Abdurasaq Jimoh, Emmanuel Idowu Ogunwole, Abdullahi Aremu, Abdulsamad Bolakale Jimoh, Dolapo Eniola Owolabi	2384-2395
<a href="#">African vulture optimizer algorithm based vector control induction motor drive system</a>	<a href="#">PDF</a>
Reham H. Mohammed, Ahmed M. Ismaiel, Basem E. Elnaghi, Mohamed E. Dessouki	2396-2408
<a href="#">Induction motors with copper rotor: a new opportunity for increasing motor efficiency</a>	<a href="#">PDF</a>
Percy R. Viegó Felipe, Vladimir Sousa Santos, Julio R. Gómez Sarduy, José P. Monteagudo Yanes, Enrique Ciro Quispe	2409-2418
<a href="#">High-efficiency 2.45 and 5.8 GHz dual-band rectifier design with modulated input signals and a wide input power range</a>	<a href="#">PDF</a>
Sara El Mattar, Abdennaceur Baghdad	2419-2427
<a href="#">Electric vehicles charging station configuration with closed loop control</a>	<a href="#">PDF</a>
Wisam Mohamed Najem, Omar Sh. Alyozbaky, Shaker M. Khudher	2428-2439
<a href="#">Modelling and simulation for energy management of a hybrid microgrid with droop controller</a>	<a href="#">PDF</a>

#### USER

Username   
Password   
☐ Remember me  
[Login](#)

#### CITATION ANALYSIS

- Academia.edu
- Dimensions
- Google Scholar
- Scimagojr
- Scholar Metrics
- Scilit
- Scinapse
- Scopus

#### QUICK LINKS

- Editorial Boards
- Abstracting and Indexing
- Focus and Scope
- Author Guideline
- **Online Submission**
- Publication Ethics
- The Best Journal
- Contact Us

#### JOURNAL CONTENT

Search   
Search Scope   
All   
[Search](#)

#### Browse

- By Issue
- By Author
- By Title

#### INFORMATION

- For Readers
- For Authors
- For Librarians

Investigation and Analysis of Space Vector Modulation with Matrix Converter Determined Based on Fuzzy C-Means Tuned Modulation Indexs Ch. Amarendra, K. Hartnadh Reddy	1939-1947
A New Phase Current Profiling with FLC for Torque Optimization of 12/8 SRM Sihem Saidani, Mohamed Radhouan Hachicha, Moez Ghariani	1948-1955
Design of Observer-Based Robust Power System Stabilizers Hisham M. Soliman, Mahmoud Soliman	1956-1966
Carrier-Based PWM Technique for Inverter-Fed Multiphase Induction Motor B. Jyothi, M. Venugopala Rao	1967-1984
A Modulation Scheme for Floating Source Multilevel Inverter Topology with Increased Number of Output Levels Hussain M. Bassi	1985-1993
Five-Phase Permanent Magnetic Synchronous Motor Fed by Fault Tolerant Five Phase Voltage Source Inverter Hichem Kesraoui, Hamdi Echeikh, Atif Iqbal, Med Faouzi Mimouni	1994-2004
Power-Flow Development Based on the Modified Backward-Forward for Voltage Profile Improvement of Distribution System Suyanto, Citra Rahmadhani, Ontoseno Penangsang, Adi Soeprijanto	2005-2014
Estimation of Optimum Tilt Angle of PV Panel for Maximum Energy Harvesting K. Parkavi Kathirvelu, B. Viswanathan	2015-2024
PV-Transformer-Less Inverter Topology for Battery Equivalent DC Supply from Leakage Current Md. N. H. Khan, Md. T. Anowar, Md. D. Hossen, Md. M. Alam, K. J. Ahmad	2025-2032
Robustness Study of Fractional Order PID Controller Optimized by Particle Swarm Optimization in AVR System N. Ramesh Raju, P. Linga Reddy	2033-2040
Optimal Placement of TCSC Based on Sensitivity Analysis for Congestion Management Naga Raja Kumari. CH, K. Chendra Sekhar	2041-2047
Decomposition-Coordinating Method for Parallel Solution of a Multi Area Combined Economic Emission Dispatch Problem Senthil Krishnamurthy, Raynitchka Tzoneva	2048-2063
Experimental and Simulation Studies of Thermal Distribution on Modified Connector of Li-Ion Battery for Electric Vehicles Application Agus Risdiyanto, Umar Khayam, Noviadi A. Rachman, Maulana Arifin	2064-2072

(Continued on next page)

Responsibility of the contents rests upon the authors and not upon the publisher or editors.



(Continued from previous page)

<b>Improved Performance of DPFC Using Sliding Mode Controller Method</b> D. Narasimha Rao, T. Surnedra, S. Tara Kalyani	2073-2079
<b>DPFC Performance with the Comparison of PI and ANN Controller</b> D. Narasimha Rao, T. Surnedra, S. Tara Kalyani	2080-2087
<b>Internal On-line Partial Discharge Analysis of 68.75 MVA Generator Stator Winding Insulation</b> Waluyo, Siti Saodah, Eltha Hidayatullah	2088-2095
<b>Development of a Measuring Sensory System Based on LabVIEW for Determining Elastic Properties of Solid Materials</b> Zakaryae Ezzouine, Abdelrhani Nakhell	2096-2105
<b>Monitoring of Landslides in Mountainous Regions Based on FEM Modelling and Rain Gauge Measurements</b> Gian Quoc Anh, Nguyen Dinh-Chinh, Tran Duc-Nghia, Tran Duc-Tan	2106-2113
<b>Rapid Prototyping Methodology of Lightweight Electronic Drivers for Smart Home Appliances</b> Trio Adiono, Rachmad Vidya Wicaksana Putra, Maulana Yusuf Fathany, Braham Lawas Lawu, Khilda Afifah, Muhammad Husni Santraji, Syifaul Fuada	2114-2124
<b>Performance Analysis of Cooperative Hybrid Cognitive Radio Network with Various Diversity Techniques</b> C. S. Preetham, M. S. G. Prasad, D. S. S. L. Saranya, Charan Teja Somepalli, D. Bhargava Satya Sai Krishna, V. Rohit	2125-2133
<b>Bangladesh Perspective: Vehicle Speed Proposition System Using Localized Wireless Identification</b> Mehdi Hasan Chowdhury, Md. Mamunoor Islam	2134-2139
<b>An unsupervised Classification Technique for Detection of Flipped Orientations in Document Images</b> Vijayashree C. S. N. Shobha Rani, Vasudev T	2140-2149
<b>Adaptive Speech Compression Based on Discrete Wave Atoms Transform</b> Bousselmi Souha, Aloui Nouredine, Cherif Adnane	2150-2157
<b>Improved Canny Edges Using Cellular Based Particle Swarm Optimization Technique for Tamil Sign Digital Images</b> M. Krishnaveni, P. Subashini, T.T. Dhivyaprabha	2158-2166
<b>Wood Classification Based on Edge Detections and Texture Features Selection</b> Achmad Fahrurrozi, Sarifuddin Madenda, Ernastuti, Djati Kerami	2167-2175
<b>Sign Language Recognition System Simulated for Video Captured with Smart Phone Front Camera</b> G. Ananth Rao, P.V.V. Kishore	2176-2187
<b>Image Segmentation Based on Doubly Truncated Generalized Laplace Mixture Model and K Means Clustering</b> T. Jyothirmayi, K. Srinivasa Rao, P. Srinivasa Rao, Ch. Satyanarayana	2188-2196
<b>Empirical Mode Decomposition (EDM) Based Denoising Method for Heart Sound Signal and Its Performance Analysis</b> Amy H. Salman, Nur Ahmadi, Richard Mengko, Armein Z. R. Langi, Tati L. R. Mengko	2197-2204

(Continued on next page)

*(Continued from previous page)*

<b>Speech Recognition Using Combined Fuzzy and Ant Colony Algorithm</b> Focad Jalili, Milad Jafari Barani	2205-2210
<b>Statistical Based Audio Forensic on Identical Microphones</b> Fajri Kurniawan, Mohd. Shafry Mohd. Rahim, Mohammed S. Khalil, Muhammad Khurram Khan	2211-2218
<b>Salt and Pepper Noise Removal Using Resizable Window and Gaussian Estimation Function</b> Suhad A. Ali, C. Elaf A. Abbood, C. Shaymaa Abdul Kadhm	2219-2224
<b>A Novel Approach to PID Controller Design for Improvement of Transient Stability and Voltage Regulation of Nonlinear Power System</b> Rekha Chaudhary, Arun Kumar Singh, Saligram Agrawal	2225-2238
<b>Sliding-Mode Controller Based on Fractional Order Calculus for a Class of Nonlinear Systems</b> Nouredine Bouarroudj, Djamel Boukhetala, Fares Boudjema	2239-2250
<b>Hover Position of Quadrotor Based on PD-like Fuzzy Linear Programming</b> Iswanto, Oyas Wahyunggoro, Adha Imam Cahyadi	2251-2261
<b>Synthesis of an Optimal Dynamic Regulator Based on Linear Quadratic Gaussian (LQG) for the Control of the Relative Humidity Under Experimental Greenhouse</b> M. Outanoute, A. Lachhab, A. Ed-dahhak, M. Guerbaoui, A. Selmani, B. Bouchikhi	2262-2273
<b>A Non-Linear Controller for Forecasting the Rising Demand for Electric Vehicles Applicable to Indian Road Conditions</b> Poorani S, Murugan R	2274-2281
<b>Design of a Front-End for Satellite Receiver</b> Tran Van Hoi, Ngo Thi Lanh, Nguyen Xuan Truong, Nguyen Huu Duc, Bach Gia Duong	2282-2290
<b>ENPP: Extended Non-preemptive PP-aware Scheduling for Real-time Cloud Services</b> Fereshteh Hoseini, Mostafa Ghobaei Arani, Alireza Taghizadeh	2291-2299
<b>Single Perceptron Model for Smart Beam Forming in Array Antennas</b> K. S. Senthilkumar, K. Pirapaharan, P. R. P. Hoole, H. R. H. Hoole	2300-2309
<b>PAPR Reduction for Improved Efficiency of OFDM Modulation for Next Generation Communication Systems</b> Shatrughna Prasad Yadav, Subhash Chandra Bera	2310-2321
<b>Node Cooperation to Avoid Early Congestion Detection Based on Cross-Layer for Wireless Ad Hoc Networks</b> Abdalrazak Tareq Rahem, Mahamod Ismail, Nor Fadzilah Abdullah, Mohammed Balfaqih	2322-2330
<b>Analysis and Comparison of SMAC and TMAC Protocol for Energy Efficient Dynamic Topology in Sensor Network</b> Tapaswini Samant, Amlan Datta	2331-2337
<b>A Secured Cloud Data Storage with Access Privileges</b> Naresh Vurukonda, B. Thirumala Rao, B. Tirapathi Reddy	2338-2344
<b>EETA: An Energy Efficient Transmission Alignment for Wireless Sensor Network Applications</b> Sangsoo Lim, Hayoung Oh	2345-2351

*(Continued on next page)*

(Continued from previous page)

Light-Weight Routing Protocol in IoT-Based Inter-Device Telecommunication Wireless Environment Hayoung Oh, Sangsoon Lim	2352-2361
Feasibility and Efficacy of BLE Beacon IoT Devices in Inventory Management at the Shop Floor Ravi Ramakrishnan, Loveleen Gaur, Gurinder Singh	2362-2368
Circuit Models of Lossy Multiconductor Transmission Lines: Incident Plane Wave Effect Salh Mohamed, Roujiaa Hicham, Ghammaz Abdelilah	2369-2378
Stochastic Approach to a Rain Attenuation Time Series Synthesizer for Heavy Rain Regions Masoud Mohebbi Nia, Jafri Din, Hong Yin Lam, Athanasios D. Panagopoulos	2379-2386
Investigation on the Services of Private Cloud Computing by Using ADAM Method Nur Widiyasono, Imam Riadi, Ahmad Luthfi	2387-2395
Trust-Based Privacy for Internet of Things Vera Suryani, Selo Sulistyono, Widyawan	2396-2402
An Unequal Cluster-based Routing Protocol Based on Data Controlling for Wireless Sensor Network Slaheddine Chelbi, Majed Abdouli, Mourad Kaddes, Claude Duvallet, Rafik Bouaziz	2403-2414
An Efficient Approach for Resource Auto-Scaling in Cloud Environments Bahar Asgari, Mostafa Ghobaei Arani, Sam Jabbehdari	2415-2424
A Normative Process Model for ICT Business Continuity Plan for Disaster Management in Small, Medium and Large Enterprises Faduel Sambo, Felix Olu Bankole	2425-2431
Review of IDS Development Methods in Machine Learning Abdulla Amin Aburomman, Mamun Bin Ibne Reaz	2432-2436
Insight on Effectiveness of Frequently Exercised PQ Classification Techniques B. Devi Vighneshwari, R. Neela	2437-2446
Social Media Success for Knowledge Sharing: Instrument Content Validation Setiawan Assegaff, Kurniabudi, Hendri	2447-2453
Effect of Measurement Factors on Photovoltaic Cell Parameters Extracting El Hadi Chahid, Mohammed Idali Oumhand, M'barek Feddaoui, Mohammed Eritali, Abdessamad Malaoui	2454-2461
Multicriteria Group Decision Making Using Fuzzy Approach for Evaluating Criteria of Electrician Wiwien Hadikurniawati, Khabib Mustofa	2462-2469
Adaptive Adjustment of PSO Coefficients Taking the Notion from the Bee Behavior in Collecting Nectar Abbas Fadavi, Karim Faez, Zeinab Famili	2470-2477
Emotional Facial Expression Based on Action Units and Facial Muscle Ahmad Hoirul Basori, Hani Moateq Abdullah Aljahdali	2478-2487
The Analysis of Student Collaborative Work Inside Social Learning Network Analysis Based on Degree and Eigenvector Centrality Andi Besse Firdausiah Mansur, Norazah Yusof, Ahmad Hoirul Basori	2488-2498



[Home](#) > [Archives](#) > **Vol 6, No 5**

## Vol 6, No 5

October 2016

DOI: <http://doi.org/10.11591/ijece.v6i5>

### Table of Contents

<a href="#">Investigation and Analysis of Space Vector Modulation with Matrix Converter Determined Based on Fuzzy C-Means Tuned Modulation Indexes</a>	<a href="#">PDF</a>
Ch. Amarendra, K. Harinadh Reddy	1939-1947
<a href="#">A New Phase Current Profiling with FLC for Torque Optimization of 12/8 SRM</a>	<a href="#">PDF</a>
Siheem Saidani, Mohamed Radhouan Hachicha, Moez Ghariani	1948-1955
<a href="#">Design of Observer-Based Robust Power System Stabilizers</a>	<a href="#">PDF</a>
Hisham M. Soliman, Mahmoud Soliman	1956-1966
<a href="#">Carrier-Based PWM Technique for Inverter-Fed Multiphase Induction Motor</a>	<a href="#">PDF</a>
Jyothi B, M.Venugopala Rao	1967-1984
<a href="#">A Modulation Scheme for Floating Source Multilevel Inverter Topology with Increased Number of Output Levels</a>	<a href="#">PDF</a>
Hussain M. Bassi	1985-1993
<a href="#">Five-Phase Permanent Magnetic Synchronous Motor Fed by Fault Tolerant Five Phase Voltage Source Inverter</a>	<a href="#">PDF</a>
Hichem Kesraoui, Hamdi Echeikh, Atif Iqbal, Med Faouzi Mimouni	1994-2004
<a href="#">Power-Flow Development Based on the Modified Backward-Forward for Voltage Profile Improvement of Distribution System</a>	<a href="#">PDF</a>
Suyanto Suyanto, Citra Rahmadhani, Ontoseno Penangsang, Adi Soeprijanto	2005-2014
<a href="#">Estimation of Optimum Tilt Angle of PV Panel for Maximum Energy Harvesting</a>	<a href="#">PDF</a>
K. Parkavi Kathirvelu, B. Viswanathan	2015-2024
<a href="#">PV-Transformer-Less Inverter Topology for Battery-Equivalent DC Supply from Leakage Current</a>	<a href="#">PDF</a>
Md. N. H. Khan, Md. T. Anowar, Md. D. Hossen, Md. M. Alam, K. J. Ahmad	2025-2032
<a href="#">Robustness Study of Fractional Order PID Controller Optimized by Particle Swarm Optimization in AVR System</a>	<a href="#">PDF</a>
N. Ramesh Raju, P. Linga Reddy	2033-2040
<a href="#">Optimal Placement of TCSC Based on Sensitivity Analysis for Congestion Management</a>	<a href="#">PDF</a>
Naga Raja Kumari.CH, K. Chendra Sekhar	2041-2047
<a href="#">Decomposition-Coordinating Method for Parallel Solution of a Multi-area Combined Economic Emission Dispatch Problem</a>	<a href="#">PDF</a>
Senthil Krishnamurthy, Raynitchka Tzoneva	2048-2063
<a href="#">Experimental and Simulation Studies of Thermal Distribution on Modified Connector of Li-Ion Battery for Electric Vehicles Application</a>	<a href="#">PDF</a>
Agus Risdiyanto, Umar Khayam, Noviadi A. Rachman, Maulana Arifin	2064-2072
<a href="#">Improved Performance of DPFC Using Sliding Mode Controller Method</a>	<a href="#">PDF</a>
D Narasimha Rao, T Suredra, S Tara Kalyani	2073-2079
<a href="#">DPFC Performance with the Comparison of PI and ANN Controller</a>	<a href="#">PDF</a>
D Narasimha Rao, T Surendra, S Tara Kalyani	2080-2087
<a href="#">Internal On-line Partial Discharge Analysis of 68.75 MVA Generator Stator Winding Insulation</a>	<a href="#">PDF</a>
Waluyo Waluyo, Siti Saodah, Eltha Hidayatullah	2088-2095
<a href="#">Development of a Measuring Sensory System Based on LabVIEW for Determining Elastic Proprieties of Solid Materials</a>	<a href="#">PDF</a>
Zakaryae Ezzouine, Abdelrhani Nakheli	2096-2105
<a href="#">Monitoring of Landslides in Mountainous Regions based on FEM Modelling and Rain Gauge Measurements</a>	<a href="#">PDF</a>
Quoc-Anh Gian, Dinh-Chinh Nguyen, Duc-Nghia Tran, Duc-Tan Tran	2106-2113
<a href="#">Rapid Prototyping Methodology of Lightweight Electronic Drivers for Smart Home Appliances</a>	<a href="#">PDF</a>
Trio Adiono, Rachmad Vidya Wicaksana Putra, Maulana Yusuf Fathany, Braham Lawas Lawu, Khilda Afifah, Muhammad Husni Santrijaji, Syifaal Fuada	2114-2124
<a href="#">Performance Analysis of Cooperative Hybrid Cognitive Radio Network with Various Diversity Techniques</a>	<a href="#">PDF</a>
C.S. Preetham, M.S.G. Prasad, D.S.S.L. Saranya, Charan Teja Somepalli, D. Bhargava Satya Sai Krishna, V. Rohit	2125-2133
<a href="#">Bangladesh Perspective: Vehicle Speed Proposition System using Localized Wireless Identification</a>	<a href="#">PDF</a>
Md. Mamunoor Islam, Mehdi Hasan Chowdhury	2134-2139
<a href="#">An Unsupervised Classification Technique for Detection of Flipped Orientations in Document Images</a>	<a href="#">PDF</a>
Vijayashree CS, Shobha Rani, Vasudev T	2140-2149

#### USER

Username

Password

☐ Remember me

[Login](#)

#### CITATION ANALYSIS

- Academia.edu
- Dimensions
- Google Scholar
- Scimagojr
- Scholar Metrics
- Scilit
- Scinapse
- Scopus

#### QUICK LINKS

- Editorial Boards
- Abstracting and Indexing
- Focus and Scope
- Author Guideline
- **Online Submission**
- Publication Ethics
- The Best Journal
- Contact Us

#### JOURNAL CONTENT

Search

Search Scope

All

[Search](#)

#### Browse

- By Issue
- By Author
- By Title

#### INFORMATION

- For Readers
- For Authors
- For Librarians

<a href="#">Adaptive Speech Compression Based on Discrete Wave Atoms Transform</a>	<a href="#">PDF</a>
Bousselmi Souha, Aloui Nouredine, Cherif Adnane	2150-2157
<a href="#">Improved Canny Edges Using Cellular Based Particle Swarm Optimization Technique for Tamil Sign Digital Images</a>	<a href="#">PDF</a>
M Krishnaveni, P Subashini, TT Dhivyaprabha	2158-2166
<a href="#">Wood Classification Based on Edge Detections and Texture Features Selection</a>	<a href="#">PDF</a>
Achmad Fahrurrozi, Sarifuddin Madenda, Ernastuti Ernastuti, Djati Kerami	2167-2175
<a href="#">Sign Language Recognition System Simulated for Video Captured with Smart Phone Front Camera</a>	<a href="#">PDF</a>
G. Ananth Rao, P.V.V. Kishore	2176-2187
<a href="#">Image Segmentation Based on Doubly Truncated Generalized Laplace Mixture Model and K Means Clustering</a>	<a href="#">PDF</a>
T Jyothirmayi, K Srinivasa Rao, P Srinivasa Rao, Ch Satyanarayana	2188-2196
<a href="#">Empirical Mode Decomposition (EMD) Based Denoising Method for Heart Sound Signal and Its Performance Analysis</a>	<a href="#">PDF</a>
Amy Hamidah Salman, Nur Ahmadi, Richard Mengko, Armein Z. R. Langi, Tati L. R. Mengko	2197-2204
<a href="#">Speech Recognition Using Combined Fuzzy and Ant Colony algorithm</a>	<a href="#">PDF</a>
Foad Jallili, Milad Jafari Barani	2205-2210
<a href="#">Statistical Based Audio Forensic on Identical Microphones</a>	<a href="#">PDF</a>
Fajri Kurniawan, Mohd. Shafry Mohd. Rahim, Mohammed S. Khalil, Muhammad Khurram Khan	2211-2218
<a href="#">Salt and Pepper Noise Removal Using Resizable Window and Gaussian Estimation Function</a>	<a href="#">PDF</a>
Suhad A. Ali, C. Elaf A. Abbood, Shaymaa Abdu Ikadhm	2219-2224
<a href="#">A Novel Approach to PID Controller Design for Improvement of Transient Stability and Voltage Regulation of Nonlinear Power System</a>	<a href="#">PDF</a>
Rekha Chaudhary, Arun Kumar Singh, Saligram Agrawal	2225-2238
<a href="#">Sliding-Mode Controller Based on Fractional Order Calculus for a Class of Nonlinear Systems</a>	<a href="#">PDF</a>
Noureddine Bouarroudj, Djamel Boukhetala, Fares Boudjema	2239-2250
<a href="#">Hover Position of Quadrotor Based on PD-like Fuzzy Linear Programming</a>	<a href="#">PDF</a>
Iswanto Iswanto, Oyas Wahyunggoro, Adha Imam Cahyadi	2251-2261
<a href="#">Synthesis of an Optimal Dynamic Regulator Based on Linear Quadratic Gaussian (LQG) for the Control of the Relative Humidity under Experimental Greenhouse</a>	<a href="#">PDF</a>
M. Outanoute, A. Lachhab, A. Ed-dahhak, M. Guerbaoui, A. Selmani, B. Bouchikhi	2262-2273
<a href="#">A Non-Linear Controller for Forecasting the Rising Demand for Electric Vehicles Applicable to Indian Road Conditions</a>	<a href="#">PDF</a>
Poorani S, Murugan R	2274-2281
<a href="#">Design of a Front-End for Satellite Receiver</a>	<a href="#">PDF</a>
Tran Van Hoi, Ngo Thi Lanhi, Nguyen Xuan Truong, Nguyen Huu Duc, Bach Gia Duong	2282-2290
<a href="#">ENPP: Extended Non-preemptive PP-aware Scheduling for Real-time Cloud Services</a>	<a href="#">PDF</a>
Fereshteh Hoseini, Mostafa Ghobaei Arani, Alireza Taghizadeh	2291-2299
<a href="#">Single Perceptron Model for Smart Beam forming in Array Antennas</a>	<a href="#">PDF</a>
K.S. Senthikumar, K. Pirapaharan, P.R.P Hoole, R.R.H Hoole	2300-2309
<a href="#">PAPR Reduction for Improved Efficiency of OFDM Modulation for Next Generation Communication Systems</a>	<a href="#">PDF</a>
Shatrughna Prasad Yadav, Subhash Chandra Bera	2310-2321
<a href="#">Node Cooperation to Avoid Early Congestion Detection Based on Cross-Layer for Wireless Ad Hoc Networks</a>	<a href="#">PDF</a>
Abdalrazak Tareq Rahem, Mahamod Ismail, Nor Fadzilah Abdullah, Mohammed Balfaqih	2322-2330
<a href="#">Analysis and Comparison of SMAC and TMAC Protocol for Energy Efficient Dynamic Topology in Sensor Network</a>	<a href="#">PDF</a>
Tapaswini Samant, Amlan Datta	2331-2337
<a href="#">A Secured Cloud Data Storage with Access Privileges</a>	<a href="#">PDF</a>
Naresh Vurukonda, B. Thirumala Rao, B. Tirapathi Reddy	2338-2344
<a href="#">EETA: An Energy Efficient Transmission Alignment for Wireless Sensor Network Applications</a>	<a href="#">PDF</a>
Sangsoon Lim, Hayoung Oh	2345-2351
<a href="#">Light-weight Routing Protocol in IoT-based Inter-Device Telecommunication Wireless Environment</a>	<a href="#">PDF</a>
Hayoung Oh, Sangsoon Lim	2352-2361
<a href="#">Feasibility and Efficacy of BLE Beacon IoT Devices in Inventory Management at the Shop Floor</a>	<a href="#">PDF</a>
Ravi Ramakrishnan, Loveleen Gaur, Gurinder Singh	2362-2368
<a href="#">Circuit Models of Lossy Multiconductor Transmission Lines: Incident Plane Wave Effect</a>	<a href="#">PDF</a>
Saih Mohamed, Rouijaa Hicham, Ghammaz Abdelilah	2369-2378
<a href="#">Stochastic Approach to a Rain Attenuation Time Series Synthesizer for Heavy Rain Regions</a>	<a href="#">PDF</a>
Masoud Mohebbi Nia, Jafri Din, Hong Yin Lam, Athanasios D. Panagopoulos	2379-2386
<a href="#">Investigation on the Services of Private Cloud Computing by Using ADAM Method</a>	<a href="#">PDF</a>
Nur Widiyasono, Imam Riadi, Ahmad Luthfie	2387-2395
<a href="#">Trust-Based Privacy for Internet of Things</a>	<a href="#">PDF</a>
Vera Suryani, Selo Sulisty, Widyawan Widyawan	2396-2402

<a href="#">An Unequal Cluster-based Routing Protocol Based on Data Controlling for Wireless Sensor Network</a>	<a href="#">PDF</a>
Slaheddine Chelbi, Majed Abdouli, Mourad Kaddes, Claude Duvallet, Rafik Bouaziz	2403-2414
<hr/>	
<a href="#">An Efficient Approach for Resource Auto-Scaling in Cloud Environments</a>	<a href="#">PDF</a>
Bahar Asgari, Mostafa Ghobaei Arani, Sam Jabbehdari	2415-2424
<hr/>	
<a href="#">A Normative Process Model for ICT Business Continuity Plan for Disaster Event in Small, Medium and Large Enterprises</a>	<a href="#">PDF</a>
Fadeel Sambo, Felix Olu Bankole	2425-2431
<hr/>	
<a href="#">Review of IDS Develepment Methods in Machine Learning</a>	<a href="#">PDF</a>
Abdulla Aburomman, Mamun Bin Ibne Reaz	2432-2436
<hr/>	
<a href="#">Insight on Effectiveness of Frequently Exercised PQ Classification Techniques</a>	<a href="#">PDF</a>
BDevi Vighneshwari, R. Neela	2437-2446
<hr/>	
<a href="#">Social Media Success for Knowledge Sharing: Instrument Content Validation</a>	<a href="#">PDF</a>
Setiawan Assegaff, Kurniabudi Kurniabudi, Hendri Hendri	2447-2453
<hr/>	
<a href="#">An Approach of Semantic Similarity Measure between Documents Based on Big Data</a>	<a href="#">PDF</a>
Mohammed Erritali, Abderrahim Beni-Hssane, Marouane Birjali, Youness Madani	2454-2461
<hr/>	
<a href="#">Multicriteria Group Decision Making Using Fuzzy Approach for Evaluating Criteria of Electrician</a>	<a href="#">PDF</a>
Wiwien Hadikurniawati, Khabib Mustofa	2462-2469
<hr/>	
<a href="#">Adaptive Adjustment of PSO Coefficients Taking the Notion from the Bee Behavior in Collecting Nectar</a>	<a href="#">PDF</a>
Abbas Fadavi, Karim Faez, Zeinab Famili	2470-2477
<hr/>	
<a href="#">Emotional Facial Expression Based On Action Units and Facial Muscle</a>	<a href="#">PDF</a>
Ahmad Hoirul Basori, Hani Moaiteq Abdullah AlJahdali	2478-2487
<hr/>	
<a href="#">The Analysis of Student Collaborative Work Inside Social Learning Network Analysis Based on Degree and Eigenvector Centrality</a>	<a href="#">PDF</a>
Andi Besse Firdausiah Mansur, Norazah Yusof, Ahmad Hoirul Basori	2488-2498
<hr/>	
<b><a href="#">International Journal of Electrical and Computer Engineering (IJECE)</a></b>	
p-ISSN 2088-8708, e-ISSN 2722-2578	



Home > [About the Journal](#)

## About the Journal

### People

- [Contact](#)
- [Editorial Team](#)
- [Reviewers](#)

### Policies

- [Focus and Scope](#)
- [Section Policies](#)
- [Peer Review Process](#)
- [Open Access Policy](#)
- [Archiving](#)
- [Publication Ethics and Publication Malpractice Statement](#)
- [Abstracting and Indexing](#)
- [Policy of Plagiarism Detection](#)
- [Checklist for preparing your paper for publication](#)
- [Withdrawal of Manuscripts](#)
- [Checklist for finalizing your camera-ready paper for publication](#)

### Submissions

- [Online Submissions](#)
- [Author Guidelines](#)
- [Copyright Notice](#)
- [Privacy Statement](#)
- [Author Fees](#)

### Other

- [Journal Sponsorship](#)
- [Site Map](#)
- [About this Publishing System](#)

**International Journal of Electrical and Computer Engineering (IJECE)**

p-ISSN 2088-8708, e-ISSN 2722-2578

#### USER

Username   
Password   
☐ Remember me  
[Login](#)

#### CITATION ANALYSIS

- Academia.edu
- Dimensions
- Google Scholar
- Scimagojr
- Scholar Metrics
- Scilit
- Scinapse
- Scopus

#### QUICK LINKS

- Editorial Boards
- Abstracting and Indexing
- Focus and Scope
- Author Guideline
- Online Submission**
- Publication Ethics
- The Best Journal
- Contact Us

#### JOURNAL CONTENT

Search   
Search Scope  
All

#### Browse

- By Issue
- By Author
- By Title

#### INFORMATION

- For Readers
- For Authors
- For Librarians

International Journal of

**IJECE****Electrical and Computer Engineering**

**International Journal of Electrical and Computer Engineering (IJECE)** is the official publication of the Institute of Advanced Engineering and Science (IAES). The journal is open to submission from scholars and experts in the wide areas of electrical, electronics, instrumentation, control, telecommunication and computer engineering from the global world. The journal is first published on September 2011. IJECE is published as a bi-monthly journal (from 2012) with six issues per year in the following periods as February, April, June, August, October, December in any year.

**Editorial Board Members****Editor-in-Chief:**

*L.M. Grzesiak, Warsaw University of Technology, Poland*

**Managing Editors:**

*T. Sutikno, Universitas Ahmad Dahlan, Indonesia*

*A. Jidin, Universiti Teknikal Malaysia Melaka, Malaysia*

**Editors:**

*A. Amphawan, Massachusetts Institute of Technology, United States*

*A.G. Aissani, University of Bechar, Algeria*

*A.S. Samosir, Universitas Lampung, Indonesia*

*D. Stiawan, Universitas Sriwijaya, Indonesia*

*F. Attarzadeh, University of Houston, United States*

*F. Djeflal, University of Batna, Algeria*

*G. Thangavel, Muthayammal Engineering College, India*

*G.S. Tamar, Vikrant Institute of Technology & Mgt, India*

*J.L. Mauri, Polytechnic University of Valencia, Spain*

*J. Lu, Broadcom Corp., United States*

*K. Anwar, Japan Advanced Institute of Science and Technology, Japan*

*K. Zhao, Qiongzhou University, China*

*M.L.D. Wong, Xi'an Jiaotong-Liverpool University, China*

*M. Belajehem, University of Ottawa, Canada*

*M. Fatch, Universitas Diponegoro, Indonesia*

*M.A. Riyadi, Universitas Diponegoro, Indonesia*

*N. Boucynaya, University of Arkansas at Little Rock, United States*

*R. Huang, Washington State University, United States*

*R.K. Barai, Jadavpur University, India*

*S.A. Alkoon, Yarmouk University, Jordan*

*S.K. Stoe, Multimedia University, Malaysia*

*S. M. El-Rabaie, Minufiya University, Egypt*

*T. Bouktir, Ferhat Abbas University, Algeria*

*V.G. Diaz, University of Oviedo, Spain*

*V.H. Mankar, Government Polytechnic of Nagpur, India*

*W. Assamoinchachote, King Mongkut's University of Technology Thonburi, Thailand*

*Y. Liu, Symantec Core Research Lab, United States*

*Y. Zhang, Columbia University, United States*

*Z. Xu, IBM Corporation, United States*

**Administrator:**

*Lyne Han*

email: [info@iaesjournal.com](mailto:info@iaesjournal.com)

Publisher by:

**Institute of Advanced Engineering and Science (IAES)**

Website: <http://iaesjournal.com/online/index.php/IJECE>

email: [ijece@iaesjournal.com](mailto:ijece@iaesjournal.com)

[Home](#) > [About the Journal](#) > [Journal Contact](#)

## Journal Contact

### Mailing Address

International Journal of Electrical and Computer Engineering - D2, Ngoto Asri, Bangunharjo, Sewon, Bantul, Yogyakarta 55187, Indonesia - C5 JEC Resd, Plumbon, Banguntapan, Bantul, Yogyakarta 55198, Indonesia - No. 15, CJE, Plumbon, Banguntapan, Bantul, Yogyakarta 55198, Indonesia

### Principal Contact

**Lech M. Grzesiak**  
Principal Contact  
Email: [ijee@iaesjournal.com](mailto:ijee@iaesjournal.com)

### Support Contact

**IJECE Editorial**  
Email: [ijee@iaescore.com](mailto:ijee@iaescore.com)

[International Journal of Electrical and Computer Engineering \(IJECE\)](#)  
p-ISSN 2088-8708, e-ISSN 2722-2578

#### USER

Username   
Password   
☐ Remember me  
[Login](#)

#### CITATION ANALYSIS

- Academia.edu
- Dimensions
- Google Scholar
- Scimagojr
- Scholar Metrics
- Scilit
- Scinapse
- Scopus

#### QUICK LINKS

- Editorial Boards
- Abstracting and Indexing
- Focus and Scope
- Author Guideline
- **Online Submission**
- Publication Ethics
- The Best Journal
- Contact Us

#### JOURNAL CONTENT

Search   
Search Scope  
All

#### Browse

- By Issue
- By Author
- By Title

#### INFORMATION

- For Readers
- For Authors
- For Librarians



[Home](#) > [About the Journal](#) > [Editorial Team](#)

## Editorial Team

### Editor-in-Chief

[Prof. nzw. dr hab. inż. Lech M. Grzesiak](#), Warsaw University of Technology, Poland

### Associate Editors

[Prof. Dr. Abdullah M. Ilivasu](#), Tokyo Institute of Technology, Japan and Prince Sattam Bin Abdulaziz University, Saudi Arabia  
[Prof. Dr. Abdissou Salazar](#), Universidad Politécnica de Valencia, Spain  
[Prof. Dr. Ahmed Attia](#), Electronics Research Institute of Cairo, Egypt  
[Prof. Dr. Angela Amphawan](#), Sunway University, Malaysia  
[Prof. Dr. Aniello Castiglione](#), University of Naples Parthenope, Italy  
[Prof. Dr. Fateh Krim](#), University of Sétif 1, Algeria  
[Prof. Dr. Faycal Djeflal](#), University of Batna 2, Algeria  
[Prof. Dr. Felix Albu](#), Universitatea Valahia din Targoviste, Romania  
[Prof. Dr. Geetam Singh Tomar](#), University of Kent, United Kingdom  
[Prof. Dr. Jia-Chin Lin](#), National Central University, Taiwan  
[Prof. Dr. José Alfredo Ferreira Costa](#), Universidade Federal do Rio Grande do Norte, Brazil  
[Prof. Dr. Krzysztof Szczypiorski](#), Warsaw University of Technology, Poland  
[Prof. Dr. Mihaela M. Albu](#), Politehnica University of Bucharest, Romania  
[Prof. Dr. Nidhal Bouaynaya](#), Rowan University, Glassboro, United States  
[Prof. Dr. Nik Rumzi Nik Idris](#), Universiti Teknologi Malaysia, Malaysia  
[Prof. Dr. Sayed M. El-Rabaie](#), Minufiya University, Egypt  
[Prof. ing. Salvatore Favuzza, Ph.D.](#), University of Palermo, Italy  
[Prof. Ezra Morris Gnanamuthu](#), Universiti Tunku Abdul Rahman, Malaysia  
[Prof. Domenico Ciuonzo](#), University of Naples Federico II, Italy  
[Prof. Hamidah Ibrahim](#), Universiti Putra Malaysia, Malaysia  
[Prof. Paolo Visconti](#), Università del Salento, Italy  
[Prof. Peng Zhang](#), Stony Brook University, United States  
[Prof. Ranathunga Archchilage Ruwan Chandra Gopura](#), University of Moratuwa, Sri Lanka  
[Assoc. Prof. Dr. Ashkan Sami](#), Shiraz University, Iran, Islamic Republic of  
[Assoc. Prof. Dr. Chatchawal Wongchoosuk](#), Kasetsart University, Thailand  
[Assoc. Prof. Dr. Chau Yuen](#), Singapore University of Technology and Design, Singapore  
[Assoc. Prof. Dr. Giovanni Pau](#), Kore University of Enna, Italy  
[Assoc. Prof. Dr. Jaime Lloret Mauri](#), Universitat Politècnica de Valencia, Spain  
[Assoc. Prof. Dr. Jinsong Wu](#), Universidad de Chile, Chile  
[Prof. Dr. Ke-Lin Du](#), Concordia University, Canada  
[Assoc. Prof. Dr. Larbi Boubchir](#), University of Paris 8, France  
[Assoc. Prof. Dr. Ming-Fong Tsai](#), National United University, Taiwan  
[Assoc. Prof. Ts. Dr. Mohd Ashraf Ahmad](#), Universiti Malaysia Pahang, Malaysia  
[Prof. Dr. Naci Genc](#), Yalova University, Turkey  
[Assoc. Prof. Dr. Sunday Olatunji](#), Imam Abdulrahman Bin Faisal University, Saudi Arabia  
[Assoc. Prof. Dr. Winal Jaiika](#), King Mongkut's Institute of Technology Ladkrabang, Thailand  
[Assoc. Prof. Dr. Wudhichai Assawinichachote](#), King Mongkut's University of Technology Thonburi, Thailand  
[Assoc. Prof. Dr. Y. V. Pavan Kumar](#), VIT-AP University, Amaravati, India  
[Asst. Prof. Dr. Luca Cassano](#), Politecnico di Milano, Italy  
[Dr. Brji Bhooshan Gupta](#), Asia University: Taichung, Taiwan, India  
[Dr. Candid Beig](#), University of Valencia, Spain  
[Dr. Chin Hsia](#), National Central University, Taiwan, Province of China  
[Dr. Chrysosvalantou Zigou](#), Technological Educational Institute of Thessaloniki, Greece, Greece  
[Dr. Diego Bellan](#), Politecnico di Milano, Italy  
[Dr. George Suciu](#), University Politehnica of Bucharest, Romania  
[Dr. Harikumar Raja guru](#), Bannari Amman Institute of Technology, India  
[Dr. Haruna Chiroma](#), University of Hafr Al Batin, Saudi Arabia, Nigeria  
[Dr. Imran Shafique Ansari](#), King Abdullah University of Science and Technology (KAUST), Saudi Arabia, Qatar  
[Dr. Khairulmizam Samsudin](#), Universiti Putra Malaysia, Malaysia  
[Dr. Jyoteesh Malhotra](#), Guru Nanak Dev University, India, India  
[Dr. Makram Abdulmuttaleb Fakhry](#), University of Technology, Baghdad, Iraq  
[Dr. Mohamed Djendi](#), Université Saad Dahlab de Blida, Algeria  
[Dr. Mohammed Hossny](#), University of New South Wales, Australia, Australia  
[Dr. Nicola Ivan Giannoccaro](#), University of Salento, Italy  
[Dr. Pascal Lorenz](#), University of Haute Alsace, France  
[Dr. Pavam Teimourzadeh Baboli](#), OFITS - Institute for Information Technology, Germany  
[Dr. Po-Chun Huang](#), Yuan Ze University, Taiwan, Province of China  
[Dr. Samir Ladaci](#), Polytechnic School of Algiers, Algeria, Algeria  
[Dr. Santhanakrishnan Anand](#), New York Institute of Technology, United States  
[Dr. Sorin Ioan Deaconu](#), Politehnica University Timisoara, Romania  
[Dr. Tossapon Boonogon](#), Aberystwyth University, United Kingdom, Thailand  
[Dr. Vicente Garcia Diaz](#), University of Oviedo, Spain  
[Dr. Youssef Errami](#), Universiti Tun Hussein Onn Malaysia, Malaysia, Morocco

### Editorial Board Members

[Prof. Dr. Abdel Ghani Aissaoui](#), Djillali Liabes University, Sidi-Bel-Abbès, Algeria, Algeria  
[Prof. Dr. Abdelhamid Benaini](#), Normandy University, France  
[Prof. Dr. Ahmad Saudi Samosir](#), Universitas Lampung, Indonesia  
[Prof. Chia-Hung Wang](#), Fujian University of Technology, China  
[Prof. Dr. Jun Ma](#), Lanzhou University of Technology, China  
[Prof. Dr. Kewen Zhao](#), Qiongzhou University, China  
[Prof. Dr. Panagiotis Varzakas](#), University of Thessaly, Greece  
[Prof. Dr. Valeri M. Mladenov](#), Technical University of Sofia, Bulgaria  
[Prof. univ. dr. ing. Radu A. Vasiliu](#), Politehnica University of Timisoara, Romania  
[Prof. Dr. Raj Senani](#), Netaji Subhas University of Technology, India  
[Prof. Dr. Zoran Bojkovic](#), University of Belgrade, Serbia  
[Assoc. Prof. Farrokh Attarzadeh, Ph.D.](#), University of Houston, United States  
[Assoc. Prof. Dr. Kottakkaran Sooppy Nisar](#), Prince Sattam bin Abdulaziz University, Saudi Arabia  
[Assoc. Prof. Dr. Lisandro Lovisolo](#), Universidade do Rio de Janeiro, Brazil  
[Assoc. Prof. Dr. Mo'hammed Fakhri](#), Universitas Diponegoro (UNDIP), Indonesia  
[Prof. Dr. Mohammed Issam Younis](#), University of Baghdad, Iraq  
[Assoc. Prof. Dr. Nabli Neggaz](#), Université des Sciences et de la Technologie d'Oran Mohamed Boudiaf, Algeria  
[Dr. Achinta Baidya](#), Mizoram University, India  
[Dr. Ali Hakam](#), General Electric, United Arab Emirates  
[Dr. Alivelu Manga Parimi](#), Birla Institute of Technology and Science (BITS), Pilani, India  
[Dr. Amit Prakash Singh](#), Guru Gobind Singh Indraprastha University, India  
[Dr. Arafat Al-Dweik](#), Khalifa University, United Arab Emirates  
[Dr. Athanasios Salamanis](#), Information Technologies Institute, Greece  
[Dr. Badrul Hisham Ahmad](#), Universiti Teknikal Malaysia Melaka, Malaysia  
[Dr. Brijesh B. Mehta](#), Automaton AI Infosystem Pvt Ltd, India  
[Dr. Ceren Kaya](#), Zonguldak Bülent Ecevit University, Turkey  
[Dr. Deris Stiawan, C.F.H., C.H.F.I.](#), Universitas Sriwijaya, Indonesia  
[Dr. Hanane Arahmane](#), CEA, LIST, Laboratoire Capteurs Architectures Electroniques, 91191 Gif-sur-Yvette, France, Morocco  
[Dr. Hediéh Sajedi](#), University of Tehran, Iran, Islamic Republic of  
[Dr. Hidayat Zainuddin](#), Universiti Teknikal Malaysia Melaka, Malaysia  
[Dr. Jashen Teli](#), Universiti Sains Malaysia, Malaysia  
[Dr. Jinci Zhu](#), Tianjin Normal University, China  
[Dr. Jun-Cheol Jeon](#), Kumoh National Institute of Technology, Korea, Republic of  
[Dr. Junjie Lu](#), Broadcom Corp., United States  
[Dr. Koushik Dutta](#), University of Central Florida: Orlando, Florida, United States, India  
[Dr. Laith Abualqab](#), Al-Ahliyya Amman University: Amman, Yordania, Jordan  
[Dr. Laura Garcia-Hernández](#), CMR Institute of Technology: Bangalore, Karnataka, India, Spain  
[Dr. M. Bhargav Sri Venkatesh](#), Indian Institute of Technology Bombay, India  
[Dr. Mehrdad Ahmadi Kamarposhti](#), Jouybar Branch, Islamic Azad University, Iran, Islamic Republic of  
[Dr. Meng Li](#), The Hong Kong Polytechnic University, China  
[Dr. Mohammad Abdullah](#), University Tun Hussein Onn Malaysia, Malaysia  
[Dr. Mohammad Alibakhshikenari](#), University of Rome "Tor Vergata", Italy  
[Dr. Mohammad Yazdani-Asrami](#), University of Glasgow: Glasgow, Inggris Raya, United Kingdom  
[Dr. Mowafak K. Mohsen](#), University of Kerbala, Iraq  
[Dr. Munawar A Rivadi](#), Universitas Diponegoro, Indonesia  
[Dr. Nafarizal Navan](#), Universiti Tun Hussein Onn Malaysia, Malaysia  
[Dr. Nizam Uddin Ahamed](#), University of Pittsburgh: Pittsburgh, PA, Amerika Serikat, Canada  
[Dr. Nizam Uddin Ahamed](#), University of Pittsburgh: Pittsburgh, PA, Amerika Serikat, Malaysia  
[Dr. Nuri Yilmazer](#), Texas A&M University-Kingsville, United States  
[Dr. Omar Naifar](#), University of Sfax, Tunisia  
[Dr. Omer Saleem](#), National University of Computer and Emerging Sciences, Pakistan

#### USER

Username   
Password   
☐ Remember me  
[Login](#)

#### CITATION ANALYSIS

- Academia.edu
- Dimensions
- Google Scholar
- Scimagojr
- Scholar Metrics
- Scilit
- Scinapse
- Scopus

#### QUICK LINKS

- Editorial Boards
- Abstracting and Indexing
- Focus and Scope
- Author Guideline
- **Online Submission**
- Publication Ethics
- The Best Journal
- Contact Us

#### JOURNAL CONTENT

Search   
Search Scope   
All   
[Search](#)

#### Browse

- By Issue
- By Author
- By Title

#### INFORMATION

- For Readers
- For Authors
- For Librarians

[Dr. Ornella Juliana Piccinni](#), Istituto Nazionale di Fisica Nucleare, Italy  
[Dr. P. Gopi Krishna](#), K L University, India  
[Dr. Prabira Kumar Sethy](#), Sambalpur University, India  
[Dr. Rajvikram Madurai Elavarasan](#), Thiagarajar College of Engineering, Madurai, TAMIL NADU, India, India  
[Dr. Ranjit Kumar Barai](#), Jadavpur University, India  
[Dr. Sandipann P. Narote](#), Government Women Residence Polytechnic, India  
[Dr. Shadi A. Alboon](#), Yarmouk University, Jordan  
[Dr. Teddy Surya Gunawan](#), Electrical and Computer Engineering Department Faculty of Engineering International Islamic University Malaysia, Malaysia  
[Dr. Uei-Ren Chen](#), Hsiuping University of Science and Technology, Taiwan  
[Dr. W. Mansor](#), Universiti Teknologi MARA, Malaysia

**[International Journal of Electrical and Computer Engineering \(IJECE\)](#)**  
p-ISSN 2088-8708, e-ISSN 2722-2578

# International Journal of Electrical and Computer Engineering

## COUNTRY

[Indonesia](#)Universities and research  
institutions in Indonesia

## SUBJECT AREA AND CATEGORY

[Computer Science](#)[└ Computer Science \(miscellaneous\)](#)[Engineering](#)[└ Electrical and Electronic Engineering](#)

## PUBLISHER

[Institute of Advanced Engineering and Science \(IAES\)](#)

## H-INDEX

26

## PUBLICATION TYPE

[Journals](#)

## ISSN

20888708

## COVERAGE

2014-2021

## INFORMATION

[Homepage](#)[How to publish in this journal](#)[ijece@iaesjournal.com](mailto:ijece@iaesjournal.com)

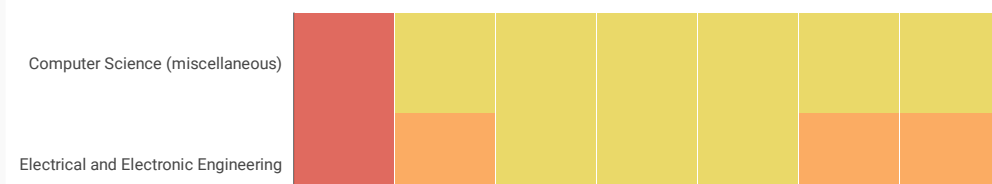
## SCOPE

International Journal of Electrical and Computer Engineering (IJECE) is the official publication of the Institute of Advanced Engineering and Science (IAES). The journal is open to submission from scholars and experts in the wide areas of electrical, electronics, instrumentation, control, telecommunication and computer engineering from the global world. The journal publishes original papers in the field of electrical, computer and informatics engineering which covers, but not limited to, the following scope: -Electronics: Electronic Materials, Microelectronic System, Design and Implementation of Application Specific Integrated Circuits (ASIC), VLSI Design, System-on-a-Chip (SoC) and Electronic Instrumentation Using CAD Tools, digital signal & data Processing, , Biomedical Transducers and instrumentation, Medical Imaging Equipment and Techniques, Biomedical Imaging and Image Processing, Biomechanics and Rehabilitation Engineering, Biomaterials and Drug Delivery Systems; -Electrical: Electrical Engineering Materials, Electric Power Generation, Transmission and Distribution, Power Electronics, Power Quality, Power Economic, FACTS, Renewable Energy, Electric Traction, Electromagnetic Compatibility, High Voltage Insulation Technologies, High Voltage Apparatuses, Lightning Detection and Protection, Power System Analysis, SCADA, Electrical Measurements; -Telecommunication: Modulation and Signal Processing for Telecommunication, Information Theory and Coding, Antenna and Wave Propagation, Wireless and Mobile Communications, Radio Communication, Communication Electronics and Microwave, Radar Imaging, Distributed Platform, Communication Network and Systems, Telematics Services and Security Network; -Control[...] -Computer and Informatics[...]



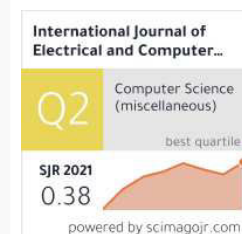
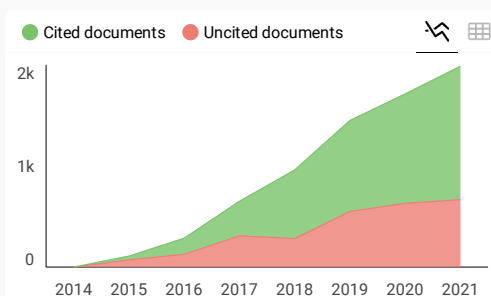
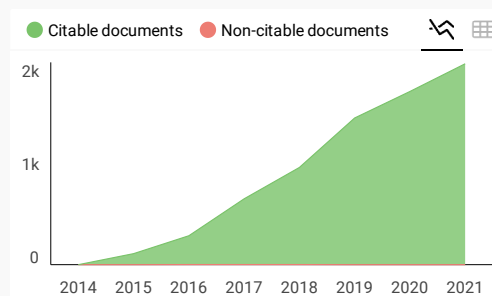
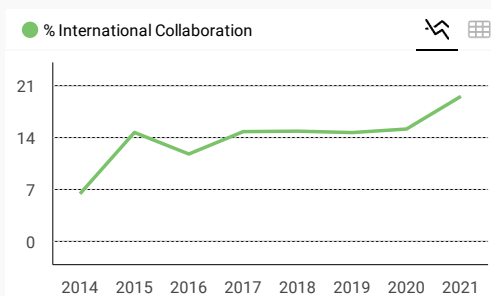
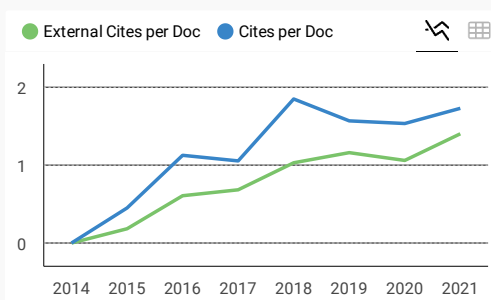
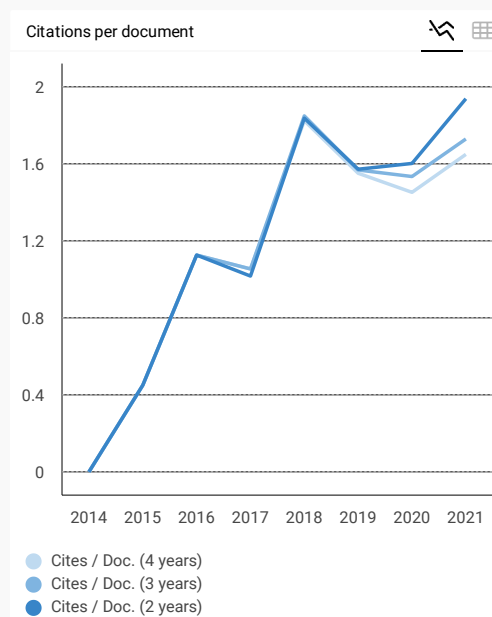
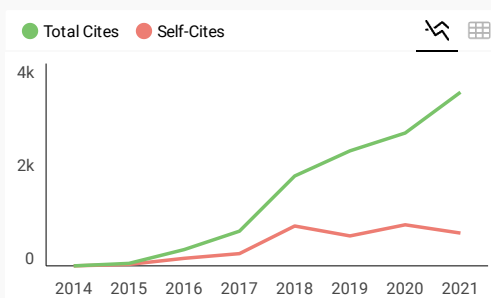
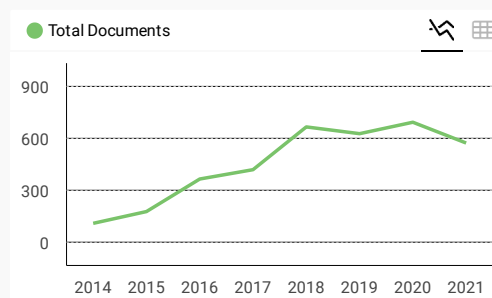
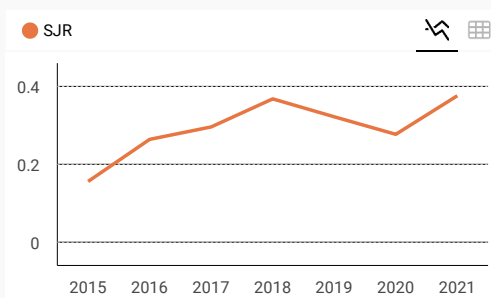
Join the conversation about this journal





## FIND SIMILAR JOURNALS ?

options ⋮

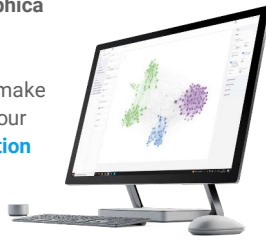


← Show this widget in your own website

Just copy the code below and paste within your html code:

`<a href="https://www.scimaç"`

Explore, visually communicate and make sense of data with our [new data visualization tool](#).



Metrics based on Scopus® data as of April 2022

T

**Thin Zar** 1 month ago

Dear Sir,  
i face a lot of problem of turnitin plagiarism check software.  
I can't do enrolled class and enrollment key.  
please give me suggestion.

← reply



**Melanie Ortiz** 1 month ago

SCImago Team

Dear Thin,  
Thank you for contacting us. Unfortunately, SCImago cannot help you with your request.  
SJR is committed to help decision-making through scientometric indicators.  
Best Regards, SCImago Team

N

**Nazar Elfadil Mohmed** 8 months ago

The Journal accepted my paper and requested that I send them proof of payment before they published it.  
Since May 2021, I've been sending them payment receipts for publication fees. Prof. Sutikno, I have not received any feedback from the editor.  
How long will it take for my paper to be published?

My Paper ID# 24741

← reply

M

**Manuel Ospina** 4 months ago

A long time, the article that I sent in June 2021 just came out in September 2022 in volume 12 issue 6.

R

**Roman Tsarev** 5 months ago

Dear Nazar Elfadil Mohmed,

so how was it. Was your article published?

Best regards,  
Roman.



... 5 months ago

Same



**amad rayan** 7 months ago

Hello, have you received the acceptance from the International Journal of Electrical and Computer Engineering (IJECE) how long time and received acceptance because I have the problem with acceptance?



**Melanie Ortiz** 8 months ago

SCImago Team

Dear Nazar,  
Thank you for contacting us.  
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.  
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team



**AAN** 1 year ago

Is the journal currently indexed in Scopus? From the Scopus website, I found the coverage from 2014 to 2022. What does it indicate? Is the journal going to lose indexing from 2022 January or something else? Please let me know.

← reply



**Doaa Abdelfattah** 1 year ago

HELLO  
The Journal sent me the acceptance of my paper and they asked me to send them the proof of payment to publish it.  
I sent them the payment receipt of the publication fees from 2 months ago.  
How long does it take to publish my paper?  
pleas help me

Paper ID: 24901

Authors: Doaa Abdelfattah, Hesham A.Hassan and Fatma A.Omara

← reply



**Melanie Ortiz** 1 year ago

SCImago Team

Dear Doaa,  
Thank you for contacting us.  
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team



**mag** 2 years ago

Dear T. Sutikno and IJCEC Editorial Office,

I submitted my paper(under id=24838) to this journal before more than 3 months and there is no reply to any email I sent to your journal.

I need to check my paper status (accepted or rejected) since I'm a postgraduate student and I restricted with a limited time.

the other question is this journal still Scopus since there is no update in the cite score since 2019.

Best Regards

Thank you



← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Mag,  
Thank you for contacting us.  
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus. To see the current journal's index status, please consult Scopus database.  
Unfortunately, we cannot help you with your request concerning your paper, we suggest you visit contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team

G

**Ghufarn essam drewll** 2 years ago

Hello. Does this journal accept research papers type review

← reply



**amad rayan** 7 months ago

Hello.the same question Does this journal accept research papers type review ?



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Ghufarn,  
Thank you for contacting us.  
Unfortunately, we cannot help you with your request, we suggest you visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team

Z

**Zinara** 2 years ago

Hello, I submitted my paper to this journal in 2020 but status still the same "Active (has manuscript)". What should I do? Should I wait? My paper submission is #1570682879

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Zinara,  
thank you for contacting us.  
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.  
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team

M

**Mag** 2 years ago

Dear Sir / Madam on this journal editor  
I sent my paper before more than 2 months, I don't receive any acceptance or rejection decision about my paper  
How long does the review process take?

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Mag,  
thank you for contacting us.  
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.  
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team



**Huda Khazie** 2 years ago

Dear Sir / Madam on this journal editor

I tried to publish my Paper in your journal when I registered and do anything the system give me an error  
when I tried to upload the paper so please help me.

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Huda,  
thank you for contacting us.  
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.  
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team



**Sourav Sinha** 2 years ago

I am Sourav Sinha, author of paper id #22165, titled "Antenna Design

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Sourav, thanks for your participation! Best Regards, SCImago Team



**suhad** 2 years ago

please is this journal indexed in scopus for the year 2021?

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Suhad,  
Thank you very much for your comment.  
All the metadata have been provided by Scopus /Elsevier in their last update sent to SCImago, including the Coverage's period data. The SJR for 2019 was released on 11 June 2020. We suggest you consult the Scopus database directly to see the current index status as SJR is a static image of Scopus, which is changing every day.  
For further information, please contact Scopus support:  
[https://service.elsevier.com/app/answers/detail/a\\_id/14883/kw/scimago/supporthub/scopus/](https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/)  
Best Regards, SCImago Team



**lenovo uae** 2 years ago

I appreciate the efforts you people put in to share blogs on such kind of topics, it was indeed helpful. Keep Posting!

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Sir/Madam, thanks for your participation! Best Regards, SCImago Team



**El Ayachi** 2 years ago

Hi,  
Many days ago, I submitted a paper to the journal (IJECE) using the EDAS platform.  
However, till now, the paper status is the same: pending (no manuscript).  
What does it mean this state?  
Do you think the paper will be soon considered, or the submission is missing something?  
I can see and download the pdf manuscript-file that I have uploaded ...  
I

Thank you for your comments.

← reply



**Rajendra Kumar** 2 years ago

Hi El Ayachi ,

Have u got solution to it , I am facing same problem.

Pls suggest .

Thanks



**Melanie Ortiz** 2 years ago

SCImago Team

Dear El Ayachi,  
thank you for contacting us.  
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team



**Ahmad Al-Jarrah** 2 years ago

What is/are the used media for publish this journal, is it published in print and electronic media? or just electronic?

On your web site, there is only one ISSN, where on the journal web site, there are two ISSN.

Thanks

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Ahmad,

Thank you for contacting us.

SJR is a portal with scientometric indicators of journals indexed in Scopus. All the metadata (Title, ISSN, Publisher, Category, etc.) have been provided by Scopus /Elsevier.

We suggest you contact Scopus support regarding this matter here:

[https://service.elsevier.com/app/answers/detail/a\\_id/14883/kw/scimago/supporthub/scopus/](https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/)

Best Regards,  
SCImago Team

R

**Rusul Altaie** 2 years ago

Dear sir

The Journal sent me the acceptance of my paper and they asked me to send them the FEES to publish it.

I sent them fees through their own Email but they did not respond to me.

My question how much time that paper may be published.

Paper ID: 22348

Authors: Rusul Altaie

Title: Restoration of Blurred Noisy Images Based on Guided Filtering and Inverse Filter.

Section: Digital Signal, Image and Video processing.

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Rusul,  
thank you for contacting us. Please see comments below.  
Best Regards, SCImago Team

N

**Nikhath Tabassum** 2 years ago

Dear Editor,

Could you please provide the steps to submit the revised manuscript, as the steps mentioned in the journal website is only for new submission.

Best Regards

← reply

M

**Murugiah** 2 years ago

I'm also facing the same issue, Have you found a way to submit your revised paper on the same paper ID number through EDAS online system?

A

**Arnold Ojugo** 2 years ago

From the manuscript tracking system, you can submit your articles for consideration.

Afterwards, you can log-onto the platform (MTS) from time to time to track the stage and processing of your manuscript. When reviews have been made, and you have revised your manuscript as detailed in the review...you can go to the same place, you will see three tabs (Summary Review Editing)

1. Kindly select the Review tab
2. You will see the Editor Decision Tab
3. Browse and select the revised paper
4. Upload



I hope this helps. Cheers



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Nikhath,  
thank you for contacting us.  
Unfortunately, we cannot help you with your request, we suggest you visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team



**Rusul** 2 years ago

Hi

Do you have a Western Union method to pay for acceptable research fees?

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Rusul, thank you very much for your comment. Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff so they could inform you more deeply. Best Regards, SCImago Team



**Latha** 2 years ago

Dear T. Sutikno and IJCEC Editorial Office,

One month onwards, I didn't find any updates in your journal for accepted papers after EDAS login provided but not working properly when I tried to Register.

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Latha,  
thank you for contacting us.  
Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team



**Rusul** 2 years ago

Do you have a Western Union payment method for fees of accepted paper?

← reply



**Rusul H. Al-tale** 2 years ago

Dear Sir

Is it possible to add an author to the research before it is published?  
What are the fees for 11 pages of the article? How are the fees sent?

Thank you

Best Regards,

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Rusul,  
thank you for contacting us.  
Unfortunately, we cannot help you with your request, we suggest you visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.  
Best Regards, SCImago Team



**Riddhi** 2 years ago

Hi,  
I have the following questions if you could answer them point wise.

1) The official website shows that registrations are closed, but the EDAS website is allowing me to create a new account and register? Could you kindly explain this discrepancy?

2) I wish to publish an original research on neural networks and computer vision in IJECE. The track of 'soft computing' that is mentioned on the EDAS website after logging in uses a term called 'review manuscript due'. Could you explain what this term means?

3) Once the paper is submitted, what is generally the review period to get notified for acceptance or rejection?

(I have already asked these questions on email around a week back, but didn't get any response. I was hoping to hear back here.)

Thank you.  
Awaiting your response at the earliest.

Riddhi.

← reply



**Melanie Ortiz** 2 years ago

SCImago Team

Dear Riddhi, thank you very much for your comment. Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff so they could inform you more deeply. Best Regards, SCImago Team



**Peera** 3 years ago

All jomal of IAES are slow and they never respon to email

← reply



**Ahmed Adeeb Jalal** 2 years ago

They did not respond to email, because they are mostly busy. But, The response will be within about two months to accept or reject.

I have already published two papers with them, and they look very cooperative in that picture. So, those efforts determine the credibility of the Organization and of the values it enshrines.



**IAES Editorial Office** 3 years ago

International Journal of Electrical and Computer Engineering 0.322 Q2 19 629 1331 15003 2075.  
Your calculation for citation number from the published articles in 2016-2018 of the IJECE in 2019 is 2075 is not true, it is should 2227 (not 2075). You can check on scopus dot com

← reply



**Melanie Ortiz** 3 years ago

SCImago Team

Dear Editorial Team,

Thank you for contacting us.

As you probably already know, SCImago calculates the scientometric indicators based on the data sent by Scopus. Keep in mind that these data are a static image of Scopus database and that this one increases its documents daily. The SJR indicator is calculated equally with a recursive algorithm that takes into account the data sent by Scopus. The SJR indicator is performed on the calculation of citations received by journals over a period of 3 years, giving greater weight to citations from highly prestigious journals (those with high citation rates and low self-citation) using the Google PageRank algorithm.

For further information related to the data sent by Scopus, we suggest you contact Scopus Support directly here:

[https://service.elsevier.com/app/answers/detail/a\\_id/14883/kw/scimago/supporthub/scopus/](https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/)

Best Regards, SCImago Team



**halima** 3 years ago

please is this journal indexed in scopus for the year 2020?

← reply



**IJECE Editorial Office** 3 years ago

Yes, IJECE is indexed by Scopus in 2020. You can check on scopus dot com



**Melanie Ortiz** 3 years ago

SCImago Team

Dear Halima, thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you consult the Scopus database directly. Keep in mind that the SJR is a static image (the update is made one time per year, next one throughout June 2020) of a database (Scopus) which is changing every day.

Best Regards, SCImago Team



**wahab** 3 years ago

Dear sir

I would like to ask about the fees of publishing and the time elapsed for accepting and publishing, my paper that may be send talk about deep learning

Thanks in advance

← reply



**Dr Ali** 3 years ago



**Melanie Ortiz** 3 years ago

SCImago Team

Dear Wahab,  
thank you for contacting us.  
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.  
Unfortunately, we cannot help you with your request, we suggest you to visit the journal's homepage or contact the journal's editorial staff, so they could inform you more deeply.  
Best Regards, SCImago Team



**Atheel** 3 years ago

I submit my paper in this journal from a lot of 3 months ago and there is no any reply from the journal. My question is this journal still Scopus since there is no update in the cite score since 2018.

← reply



**IJECE Editorial Office** 3 years ago

Paper ID: 21045, Entitled: Fuzzy Sliding Mode Controller with Fuzzy Estimator for Full Vehicle Active Suspension System Optimized by ABC Algorithm  
Authors: Atheel K. Abdul Zahra, Turki Y. Abdalla

A Decision has been made since 2 Feb 2020, but no response from authors side

Yes, Scopus still uses CiteScore 2018 that it was announced on June 2019. CiteScore 2020 should be announced as soon in this month (June 2020)



**Melanie Ortiz** 3 years ago

SCImago Team

Dear Atheel, thank you very much for your comment.

Unfortunately we cannot help you with your request. We suggest you to consult the Scopus database directly. Keep in mind that the SJR is a static image (the update is made one time per year, in June 2020) of a database (Scopus) which is changing every day.  
Best Regards, SCImago Team



**Ali** 3 years ago

this journal is not ISI indexed. how did you validate this journal?  
my article is accepted in this journal and they asked me for publication fee. and that fee is not a few. is costs near \$500 for me. and is too much. Is it worth publishing in this journal?

← reply



**T. Sutikno** 3 years ago

Publication is not USD500 (but USD295).  
<http://ijece.iaescore.com/index.php/IJECE/about/submissions#authorFees>

I think that it is black campaign.

Or you use third party service?  
Who did ask you to pay USD500?

Is your paper too long (more than 8 pages), and it covers extra fee for 4-5 pages?



S

**Sanjoy Kumar Debnath** 3 years ago

This only for scopus

**Melanie Ortiz** 3 years ago

SCImago Team

Dear Ali, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our web to locate the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. We also suggest you to consult the Scopus database directly. Remember that the SJR is a static image of a database (Scopus) which is changing every day. Best regards, SCImago Team

F

**FZ** 3 years ago

Hi,  
Please Inform me about the Impact Factor of the journal??

reply

**Melanie Ortiz** 3 years ago

SCImago Team

Dear user, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our web to locate the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team

M

**Mokhtar** 3 years ago

Dear Sir Elena Corera,  
My question is What is the Impact factor (IF) in 2018 for this Journal (IJECE) indexed SCOPUS?  
Who is the difference between IF and CiteScore 2018: 1.63, SNIP 2018: 1.144 and SJR 2018: 0.368 ?

thank you very much...

reply

I

**IJECE Editorial Office** 3 years ago

Please take a look at scopus dot com directly, that Elsevier still use CiteScore 2018, SNIP 2018, and SJR 2018. Please take a look at: <https://www.scopus.com/sourceid/21100373959>. For your information, CiteScore 2018 and SNIP 2018 and SJR 2018 use announced in June 2019. We should wait a moment for CiteScore 2019, SNIP 2019, and SJR 2019 will appear in scopus dot com in this month (June 2020)

**Melanie Ortiz** 3 years ago

SCImago Team

Dear Mokhtar, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our web to locate the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team

D

**Dr\_basem** 3 years ago

I want to publish my paper in this journal ,What is the review time and article publication fees and publication time. Kindly let me know

reply

I

**IJECE Editorial Office** 3 years ago

Please take a look at: <http://ijece.iaescore.com/index.php/IJECE/about>

Example:

Peer Review Process

(<http://ijece.iaescore.com/index.php/IJECE/about/editorialPolicies#peerReviewProcess>)

This journal operates a conventional single-blind reviewing policy in which the reviewer's name is always concealed from the submitting author. Authors should present their papers honestly without fabrication, falsification, plagiarism or inappropriate data manipulation. Submitted papers are evaluated by anonymous referees for contribution, originality, relevance, and presentation. Papers will be sent for anonymous review by at least two reviewers who will either be members of the Editorial Board or others of similar standing in the field. In order to shorten the review process and respond quickly to authors, the Editors may triage a submission and come to a decision without sending the paper for external review. The Editor shall inform you of the results of the review as soon as possible, hopefully in 8-12 weeks. The Editors' decision is final and no correspondence can be entered into concerning manuscripts considered unsuitable for publication in this journal. All correspondence, including notification of the Editors' decision and requests for revisions, will be sent by email.

**Melanie Ortiz** 3 years ago

SCImago Team

Dear user,  
thank you for contacting us.

Sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.

Unfortunately, we cannot help you with your request, we suggest you to visit the journal's homepage or contact the journal's editorial staff, so they could inform you more deeply.

Best Regards, SCImago Team

M

**Madhu** 3 years ago

Hello sir,

I want to publish my paper in this journal, What is the review time and article publication fees and publication time. Kindly let me know

← reply

N

**navya krishna** 4 years ago

What is the acceptance rate of this journal?

← reply

R

**Radhwan Hussein Abdulzhraa Al-Sagheer** 4 years ago

HELLO

The Journal sent me the acceptance of my my paper and they asked me to send them the FEES to publish it.

I sent them fees and sent them notice through the system of the Journal and through their own e mails but they did not respond to me.

pleas help me

Paper ID: 12914

Authors:Radhwan Hussein AL-Sagheer

Title:Impact Of Crack Length Into Pipe Conveying Fluid Utilizing FFT Computer Algorithm

Section:Telecommunication\_and\_Information\_Technology

← reply

T

**T. Sutikno** 3 years ago

I just read your comment in 1 year ago.

Your paper was published in this journal. Please take a look at:  
<http://ijece.iaescore.com/index.php/IJECE/article/view/12914>

Radhwan Hussein AL-Sagheer, you should give positive comment by reply your previous post, not only give negative comment. We have more than 3000 submitted papers, so we must manage this journal carefully

I

**IJECE Editorial Office** 3 years ago

Paper ID: 12914, Entitled: Impact of Crack Length into Pipe Conveying Fluid Utilizing Fast Fourier transform Computer Algorithm was published on August 2019  
<http://ijece.iaescore.com/index.php/IJECE/article/view/12914>

N

**Nada** 3 years ago

How much you paid?

**Melanie Ortiz** 3 years ago

SCImago Team

Dear user,  
 thank you for contacting us.  
 Sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus. Unfortunately, we cannot help you with your request, we suggest you to visit the journal's homepage. You can see the updated journal's information just above.  
 Best Regards, SCImago Team

A

**aditi** 4 years ago

are you able to publish now..

N

**navya krishna** 4 years ago

Radhwan Hussein, how much time had it took for getting acceptance? Thanks in advance

K

**Khairun Saddami** 4 years ago

Radhwan Hussein AL-Sagheer, you have to be patient till next issue is published. Sometimes it needs some time to be published.

A

**Ammar Issa** 4 years ago

Dear Elena, do you know what happened for the website of the journal. I cannot access to the website of the journal.

← reply

**Elena Corera** 4 years ago

SCImago Team

Please, contact International Journal of Electrical and Computer Engineering, you are contacting Scimago Journal and Country Rank.

Best,  
 SCImago Team

S

Su 4 years ago

Hello, i submitted this journal on 18th March, 2018. I could not log in my registered account. I tried to contact the publisher so many times. I did not get any response. Please help me. My paper id is #9048

 reply

Elena Corera 4 years ago

SCImago Team

Dear Su,

we are so sorry, but we cannot help you with your request. We are an institution absolutely different from the journals, so we cannot provide you any information different from what you can find in their websites.

I hope someone could help you with your questions.

Best regards,  
SCImago Team

A

Ahmad 4 years ago

How long it will take the published paper in this journal to appear in scopus database?  
Thanks

 reply

Elena Corera 4 years ago

SCImago Team

Dear Ahmad,

thank you very much for your comment, unfortunately we cannot help you with your request. We suggest you contact Scopus  
[https://service.elsevier.com/app/answers/detail/a\\_id/14883/kw/scimago/supporthub/scopus/](https://service.elsevier.com/app/answers/detail/a_id/14883/kw/scimago/supporthub/scopus/)

Best Regards,  
SCImago Team

C

cherki zeynab 4 years ago

Participation and publication in this newspaper

 reply

D

Dr Bashar M. Nema 4 years ago

Dear Sir  
My question how much time that paper may be accepted  
Sincerely

 reply

Z

zainab zainab mohammed 4 years ago

hi, please I need help please, this journal accepted my paper and I the editor of this journal send me email tell me problem for my submit incomplete please how solve my problem



**Elena Corera** 4 years ago

SCImago Team

Dear Dr. Bashar, we suggest you locate the author's instructions on the journal's website.  
Best Regards, SCImago Team



**Linda** 4 years ago

How can i join for reviewing my paper?

← reply



**Elena Corera** 4 years ago

SCImago Team

Dear Linda, we suggest you contact the journal directly. Best Regards, SCImago Team

#### Leave a comment

Name

Email

(will not be published)



I'm not a robot



reCAPTCHA  
Privacy - Terms

Submit

The users of Scimago Journal & Country Rank have the possibility to dialogue through comments linked to a specific journal. The purpose is to have a forum in which general doubts about the processes of publication in the journal, experiences and other issues derived from the publication of papers are resolved. For topics on particular articles, maintain the dialogue through the usual channels with your editor.

Developed by:



SCImago

Powered by:

Scopus

Follow us on @ScimagoJR

Scimago Lab, Copyright 2007-2022. Data Source: Scopus®

EST MODUS IN REBUS

Horatio (Satire 1.1, 106)







# Source details

## International Journal of Electrical and Computer Engineering

Scopus coverage years: from 2014 to Present

Publisher: Institute of Advanced Engineering and Science (IAES)

E-ISSN: 2088-8708

Subject area: [Computer Science: General Computer Science](#) [Engineering: Electrical and Electronic Engineering](#)

Source type: Journal

[View all documents >](#)

[Set document alert](#)

[Save to source list](#)

[Source Homepage](#)



Check whether you can access Scopus remotely through your institution

[Maybe later](#)

[Check access](#)

SJR 2021

0.376

SNIP 2021

0.688

[CiteScore](#) [CiteScore rank & trend](#) [Scopus content coverage](#)



### Improved CiteScore methodology

CiteScore 2021 counts the citations received in 2018-2021 to articles, reviews, conference papers, book chapters and data papers published in 2018-2021, and divides this by the number of publications published in 2018-2021. [Learn more >](#)

CiteScore [2021](#)

$$3.2 = \frac{8,184 \text{ Citations } 2018 - 2021}{2,559 \text{ Documents } 2018 - 2021}$$

Calculated on 05 May, 2022

CiteScoreTracker 2022

$$3.6 = \frac{9,212 \text{ Citations to date}}{2,562 \text{ Documents to date}}$$

Last updated on 05 January, 2023 • Updated monthly

### CiteScore rank 2021

Category	Rank	Percentile
Computer Science		
General Computer Science	#77/231	66th
Engineering		
Electrical and Electronic Engineering	#328/708	53rd

[View CiteScore methodology >](#) [CiteScore FAQ >](#) [Add CiteScore to your site >](#)

## About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

[Privacy matters](#)

## Language

[日本語版を表示する](#)

[查看简体中文版本](#)

[查看繁體中文版本](#)

[Просмотр версии на русском языке](#)

## Customer Service

[Help](#)

[Tutorials](#)

[Contact us](#)

ELSEVIER

[Terms and conditions](#) [Privacy policy](#)

Copyright © Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.

We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the [use of cookies](#).

RELX

## Internal On-line Partial Discharge Analysis of 68.75 MVA Generator Stator Winding Insulation

Waluyo Waluyo, Siti Saodah, Eltha Hidayatullah

### Abstract

Partial discharge is a phenomenon of electron ionization occurs due to concentrated electric field in a different edge plane. This phenomenon will be investigated by an electric field measurement in a measuring point. The internal partial discharge will give the insulation damage effect on a generator stator winding due to void existence. This manuscript presents the measurement results of the on-line internal partial discharge on the stator winding insulation of 68.75 MVA generator. It used the resistant temperature detector method and CM2000™. The results were classified into three conditions based on the voids in the generator stator insulation, the internal delamination and the surface discharge.

### Keywords

partial discharge; on-line; stator; winding insulation; generator

### Full Text:

[PDF](#)

DOI: <http://doi.org/10.11591/ijece.v6i5.pp2088-2095>



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

**[International Journal of Electrical and Computer Engineering \(IJECE\)](#)**

p-ISSN 2088-8708, e-ISSN 2722-2578

#### USER

Username   
Password   
☐ Remember me  
[Login](#)

#### CITATION ANALYSIS

- Academia.edu
- Dimensions
- Google Scholar
- Scimagojr
- Scholar Metrics
- Scilit
- Scinapse
- Scopus

#### QUICK LINKS

- Editorial Boards
- Abstracting and Indexing
- Focus and Scope
- Author Guideline
- **Online Submission**
- Publication Ethics
- The Best Journal
- Contact Us

#### JOURNAL CONTENT

Search   
Search Scope  
All

#### Browse

- By Issue
- By Author
- By Title

#### INFORMATION

- For Readers
- For Authors
- For Librarians

## Internal On-line Partial Discharge Analysis of 68.75 MVA Generator Stator Winding Insulation

Waluyo<sup>1</sup>, Siti Saodah<sup>2</sup>, Eltha Hidayatullah<sup>3</sup>

<sup>1,3</sup>Department of Electrical Engineering, National Institute of Technology (Itenas), Bandung, Indonesia

<sup>2</sup>Department of Energy Conversion, Bandung State Polytechnic (Polban), Bandung, Indonesia

---

### Article Info

#### Article history:

Received Feb 4, 2016

Revised May 26, 2016

Accepted Jun 15, 2016

---

#### Keyword:

Generator

On-line

Partial discharge

Stator

Winding insulation

---

### ABSTRACT

Partial discharge is a phenomenon of electron ionization occurs due to concentrated electric field in a different edge plane. This phenomenon will be investigated by an electric field measurement in a measuring point. The internal partial discharge will give the insulation damage effect on a generator stator winding due to void existence. This manuscript presents the measurement results of the on-line internal partial discharge on the stator winding insulation of 68.75 MVA generator. It used the resistant temperature detector method and CM2000<sup>TM</sup>. The results were classified into three conditions based on the voids in the generator stator insulation, the internal delamination and the surface discharge.

Copyright © 2016 Institute of Advanced Engineering and Science.  
All rights reserved.

---

### Corresponding Author:

Waluyo,

Department of Electrical Engineering,

National Institute of Technology (ITENAS),

Jl. PHH. Mustafa No. 23 Bandung, 40124 Indonesia.

Email: waluyo@itenas.ac.id

---

## 1. INTRODUCTION

High voltage electric generators are essential components of reliable electric power generation system. They must operate continuously and so must be very reliable because a fault in a high voltage generator could compromise the power supply. The continuous operation is critical, so that the on-line diagnosis is the best preventive measure. Furthermore, the faults are largely caused by insulation breakdowns in the stator winding, so that the common method of on-line diagnosis is partial discharge (PD) detection in the stator winding [1].

Generator insulation systems, however perfect their initial state, inevitably degrade in service. Heat, thermal cycling, bar forces, vibration, mechanical shock, shrinkage of support structures, such as wedges and spaces, and the presence of high electric stress, act and interact to impair the integrity of the dielectric systems. At some stages, partial discharges will start and begin to increase, providing an additional erosive aging factor. This usually occurs at abraded outer shielding, in cavities or delaminations, or in the end-turn structure [2].

Partial discharges (PDs) are small electrical sparks resulting from the electrical breakdown that occur when void exist within on the surface or in other highly non-uniform electric field of high voltage insulation of stator windings in generators and motors. These PD pulses can occur because of the manufacturing and installation processes, thermal deterioration, winding contamination or stator bar movement during operation. If the void within an organic solid or liquid, the PD will degrade the organic material and may eventually cause the failure of the electrical insulation. As the insulation degrades, the number and magnitude of the PD pulse will increase. Although the magnitude of the PD pulses cannot be directly related to the remaining life of the winding, the doubling PD pulse magnitudes approximately every

6 months, rate of PD pulse activity increase rapidly, or the PD levels are highly compared to other similar machines, this is an indicator that visual inspections and/or other testing methods are need to confirm the insulation condition [3],[4].

Partial discharges (PDs) have been recognized as harmful ageing process for electrical insulation at the beginning of the last century when the HV technology was introduced for the generating and transmission of electrical power. Partial discharges are consequence of local electrical stress concentrations in the insulation or on the surface of the insulation. Generally, such discharge appears as pulse having a duration of much less than 1  $\mu$ s [5].

Partial discharge comes from different factors, such as thermal, electrical field, environmental ambient and mechanical vibrations. Defects identified by partial discharge measurements are base wedges and bar vibration, slot discharges, broken conductors, contamination of damage of end-winding, discharges between phases as a result of vibration [6].

More than ten years, an extensive research project was undertaken to develop a superior partial discharge test turbine generators. The results were the turbine generator analyzer test, which was designed to be performed by non-specialized generator station staff without a generator outage. The main technical advantage of this test was that false indications of deteriorating insulation were virtually eliminated. The main difficulty in performing an on-line PD test was not in detecting the PD signals, but rather distinguishing the PD from electrical noise. The noise was found to be very erratic overtime, and some time as much as 1000 times higher than generator PD signals. The trend in results from the on-line PD test will give sufficient warning to permit timely modification of generator operation or implementation of relatively inexpensive stator winding maintenance. The on-line PD testing facilitated extending winding life and reduced overall maintenance costs by avoiding in service failures and resulting premature rewinds [7].

The statistical analysis of the data base was the distribution of  $Q_m$  as a function of winding age. The PD results in the data base from machines that were from 1 to more 50 years old showed no consistent trend, which was surprising because one would normally assume that older windings would be more deteriorated and thus have higher PD levels. The inconsistent pattern OPD versus winding age may include the observation that manufacturers of machines have a learning curve to climb as the adopt new design and manufacturing techniques or that utilities are continuously oscillating between proactive and breakdown maintenance strategies, depending on management policies. An analysis of the statistical distribution of PD for several manufacturers was also performed. The cause of the differences between manufacturers was unknown, but it might be due to different manufacturing processes, electric stress design levels and assembly methods [8].

PD and /or EMI monitoring of hydrogen-cooled generators having tight windings, with or without contamination, does not generally yield additional information on the insulation condition. EMI indications of core-edge and end-winding discharges could not be confirmed by inspection. EMI is effective in identifying problems outside the winding, such as those relating to the iso-phase bus duct components or the exciter. The interpretation of both PD and EMI signatures requires the skill of a trained insulation expert [9].

An effective on-line PD monitoring system must adequately filter and the impact of noise and disturbances in order to provide valid results. The noise and disturbances from the power system and harmonics could influence the quality of PD signals. Absolute humidity should be included in all trend analysis, especially if surface PD monitored for as long as 30 years with the same method of noise and disturbance separation. The on-line partial discharge testing has become a recognized, proven tool to help maintenance engineers identify which stator windings need off line testing, inspection and /or repairs [10].

Matlab Simulink based model has been introduced to generate the pulse and detect it. One sinusoidal ac cycle was taken and divided into 8 segments and the number of pulses appearing for each segments was found by Matlab program. The results for PD pulse count for 5 kV and 10 kV. The calibrating circuit was modeled in Matlab Simulink to create desired output PD pulses with required the charge levels as 5 pC, 10 pC, 50 pC, 100 pC and 500 pC. The calibrator circuit was connected across the object and output pulses were similar to the calibrating pulses as required. The physical model of calibrator was made and output wave forms were observed on DSO. The output was similar to the simulation results [11].

It has been presented the modern OLPD testing and monitoring technology. It was also explained some partial discharge sensor options, namely high voltage coupling capacitor sensors, high frequency current transformer sensors, Rogowski coil sensors and transient earth voltage sensors. The significant cost and operational benefits could be gained from complete power generation, industrial and petrochemical industry MV networks. The data from continuous CM technology can be used to support CBM schemes and to direct preventive maintenance interventions to repair plat or cables ahead of insulation failure from PD activity [12].

It has been presented some PD detection methods, namely electrical, chemical, acoustic and optical methods of the sensor types. The problems associated with PD for the high voltage equipment and high



voltage power systems have not been ignored and will never be ignored by high voltage system designers and maintenance engineers. PD identification and PD monitoring make economic sense now and many years to come [13].

A positive PD is generated by electrons initiated by collision detachment of negative ions in a high electric field region. Thus, the positive PD generation depends on whether or not negative ions exist around the particle tip. On the other hand, negative PD is generated by an initial electron derived from the field emission from the electrode surface [14]. Partial discharge measurements on operating machines can be influenced by conditions such as humidity, temperature, terminal voltage and load [15].

This research was to analysis and classifies the condition based on the amount of charges per cycle of partial discharge. The partial discharge that monitored was occurred in the 68.75 MVA generator stator winding insulation.

## 2. RESEARCH METHOD

The used measuring method in this research was On-line partial discharge (PD) measurement using resistance temperature detector (RTD) method. This method was to measure the partial discharge that occurred in the generator stator insulation. The illustrated diagram of the measurement is shown in Figure 1 below.

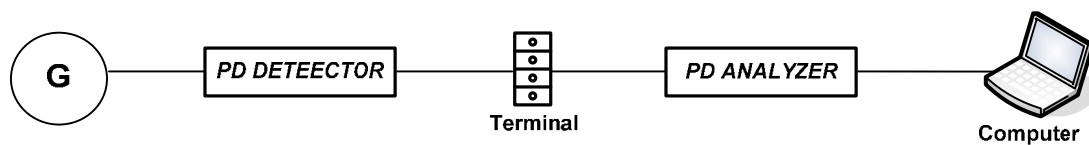


Figure 1. Diagram of partial discharge measurement

The partial discharge measurement used CM 2000™ that connected using a cable from CM2000™ to RTD at the generator and ground. The measurement data sampling collection was carried out automatically using a computer and PD monitor *software* that provided with CM2000.

Diagnosis of *partial discharge*:

- The measurements were carried out using through the RTD (Resistance Temperature Detector) as a sensor mounted on the generator stator windings.
- The used measuring instrument was Toshiba CM2000 that connects the cable probes from CM2000 to the RTD of generator stator windings.
- The partial discharge magnitudes were measured in millivoltage (mV).
- The data collection was performed automatically using the computer and monitor PD software that available on the CM2000.

### 2.1. The terms those need to be considered when testings:

PD testings should be done in a thermally stable condition.

This meant that the stator winding temperature did not change during testings. Temperature stability was obtained at the of the generator with the same load in a certain time period or until the temperature did not change.

1. PD testings should be done fastly.

If the testings are done fastly, the probability of temperature change will be minimized. The temperature change will influence the *comparability* and accuracy of testin results. This case will become be important when it is carried out the testings with load variation, such as *full load* and *no load tests* after the load is released.

2. The load and the temperature does not change more than a few percent.  
When collecting data / partial discharge test, the test should be performed under the same conditions (load and temperature).
3. If the test conditions change, (eg, cooling air humidity), will affect the level of partial discharge and need to be considered in the analysis of partial discharge.
4. When comparing the quantity of partial discharge testing, it is kept in mind the type of used insulation. The different types of insulation are used, it will produce different discharge levels.

The results of partial discharge testing on generators that are not in synchronous condition with networks, they will be different from the generator in synchronous condition with the network. The partial discharge in generators that are not in synchronous condition with the network will be higher.

The first equipment used in the measurement was RTD PT 100 (resistance temperature detector). RTD or also called as resistance thermometers is a temperature sensor that utilize change of electrical resistance in a certain material to change the temperature. RTD referred to a measure of positive temperature coefficient which means that the resistance will increase with the temperature. PT 100 is a platinum material with condition at 0°C temperatures has a resistance of 100 ohms. RTD is used in generators to monitor winding temperature changes due to load current variations. Six pieces of RTD were placed between the top-bottom coils so that the change in each coil could be detected.

Figure 2(a) shows the locations of RTD on the generator stator winding. It is indicated in symmetrical among them. Figure 2(b) shows the position RTD on the generator stator winding. This figure is the extraction in the sheet of Figure 2(a). The stator winding of phase R (U) was placed and sensed by the RTD probes of B2, C2, B1 and A1. While, the stator winding of phase S (V) was placed and sensed by the RTD probes of C2, A2, C1 and B1. Finally, the stator winding of phase T (W) was placed and sensed by the RTD probes of A2, B2, A1 and C1.

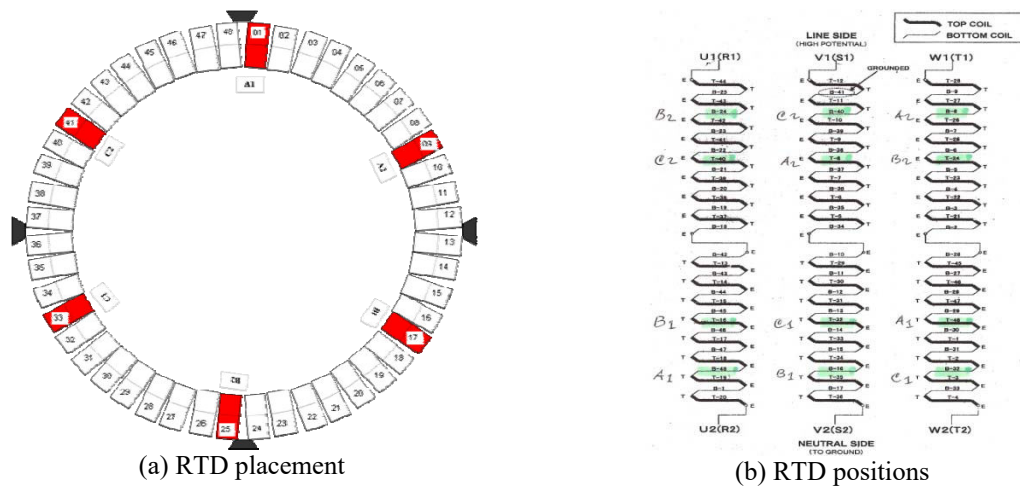


Figure 2. RTD installation and position on the generator stator winding

Table 1 lists the placement of RTD positions. RTD A1 was installed on R and T phases, RTD A2 was installed on T and S phases and RTD B1 was installed on S and R phases. For same sequence, RTDs of B2, C1 and C2 were installed on R and T phases, T and S phases and S and R phases respectively.

Table 1. Placement of RTDs

RTDs	Placement			
	Position	Slot	Type	Phase
A1	Centre	1	Middle	R, T
A2	Exciter	9	Long	T, S
B1	Centre	17	Middle	S, R
B2	Exciter	25	Long	R, T
C1	Centre	33	Middle	T, S
C2	Exciter	41	Long	S, R

Figure 3(a) shows the typical RTD with cable. The equipment was used in the electric generator for partial discharge detections. The second used equipment was CM2000<sup>TM</sup> analyzer of partial discharge measurement system, Figure 3(b) which served to monitor the partial discharge that might occur in the stator generator. Finally, the support tools were BNC coaxial cables including probes with length of 5 meters, as shown in Figure 3(c).



Figure 3. CM2000™ analyzer of partial discharge measurement system and auxiliary cables

The measurement of partial discharge in high voltage equipment is very important because of the obtained data and their interpretation can be determined a reliability of equipment caused by aging and the risk of failure can be analyzed. The partial discharge test specifications depends on the type of test equipment and insulation materials used in the construction of equipment. The existence of partial discharge in the insulation material can be determined by the method of analysis of the magnitude of the partial discharge. This analysis is one of them can be done by using CM2000 analyzer. It should be noted that this analysis should be careful and always be compared with the data state at an earlier time. The partial discharge data can be good information for the condition of the generator stator winding and thus it can be made of data trends.

Table 2. Interpretation of Partial Discharge [16]

No.	PD Measurement results	Interpretation	Remarks
1	40 mV	Danger, action required	Action should be taken
2	30 mV	Detailed analysis to be done	Analysis trend, PD polarity, and history to isolate cause of PD
3	20 mV	PD detected	Monitor time trend
4	0 mV	No problem found	No action required

### 3. MEASUREMENT RESULT DATA AND DISCUSSION

The generator technical data were 3 phase, 50 Hz frequency, 11,800 Volt, 3000 rpm rotation speed, 68,750 kVA capacity, 0.8 power factor lagging, B insulation class and mica tape with epoxy resin insulating material.

This measurement was performed once a month in a period of 12 months, using six RTD (Resistance Thermal Detector) sensors as the detection tool. The purpose of this measurement to determine the magnitude of the partial discharge that occurs in the generator stator winding insulation. The easurement results are shown in Table 3.

Table 3. The measurement of partial discharge

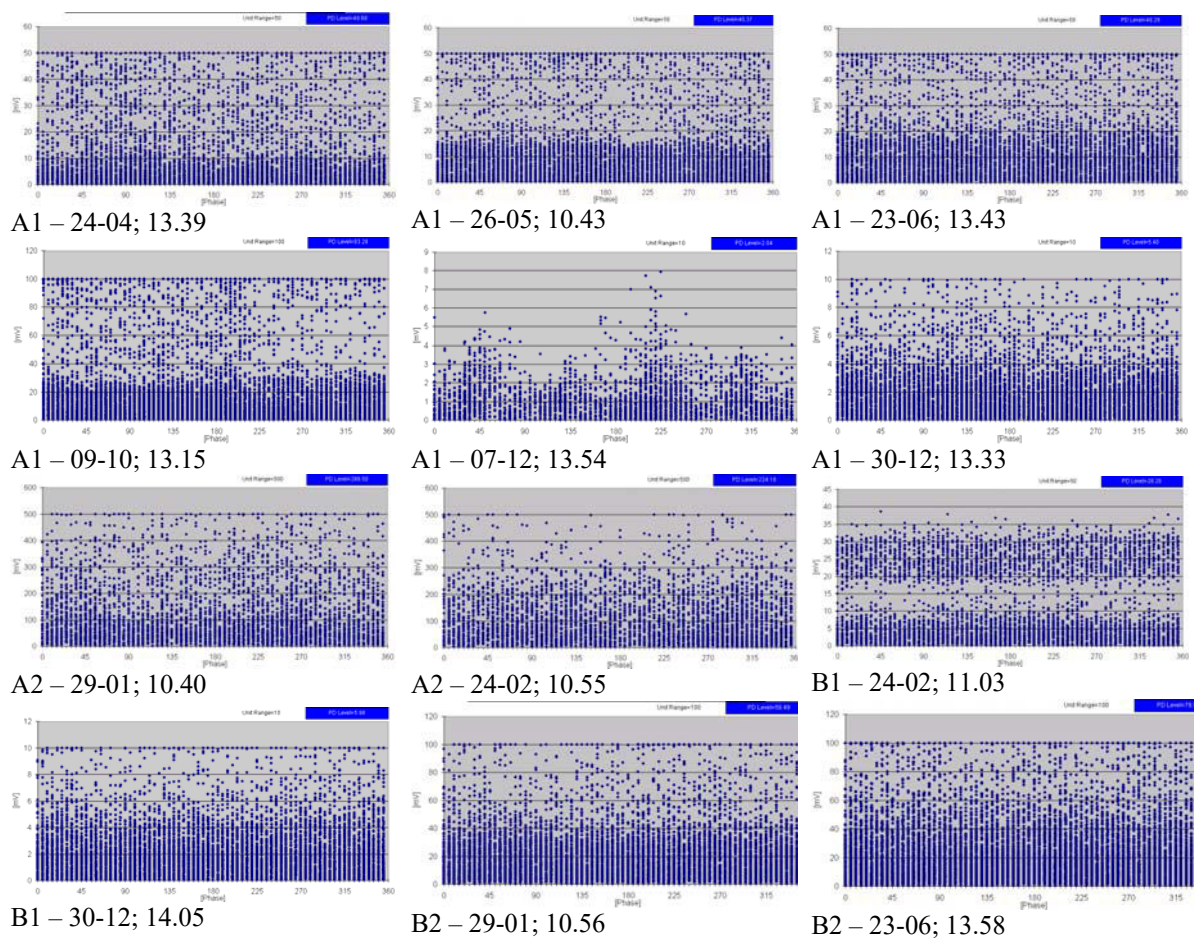
Month	RTD					
	A1	A2	B1	B2	C1	C2
1	25.85	289.50	48.72	58.49	79.59	19.59
2	38.82	224.18	28.28	43.72	58.54	20.32
3	29.53	394.51	10.01	59.96	58.83	20.13
4	40.60		29.44	0.01	50.01	
5	45.37			55.19	41.38	
6	40.29			79.56		
7	289.63			300.13		
8	287.67			389.99		
9	0.01			43.84		
10	83.28			99.39		
11	2.04	4.78	4.51	15.00	3.27	7.64
12	5.40	10.07	5.98	43.30	5.96	49.80

The partial discharge voltages those were measured from the RTD sensor represented the conversion of the temperature scale into the amount of voltage. This could be done with the aid of analyzer that could help analyze the partial discharge that occurs in the stator winding voltage generator. The values those occurred during the 12 months ficked.

1. In the first sensor (A1), the maximum voltage of partial discharge was occurred in the seventh month (289.63 mV) and the minimum voltage of partial discharge was occurred at month of nine (0.01 mV).
2. In the second sensor (A2), the maximum voltage of partial discharge was occurred in third month (394.51 mV) and the minimum voltage of partial discharge was occurred in the eleventh month (4.78 mV).
3. In the third sensor (B1), the maximum voltage of partial discharge was occurred in the first month (48.72 mV) and the minimum voltage of partial discharge was occurred in the eleventh month (4.51 mV).
4. In the fourth sensor (B2), the maximum voltage of partial discharge was occurred in the eighth month (389.99 mV) and the minimum voltage of partial discharge was occurred in the fourth months (0.01 mV).
5. In the fifth sensor (C1), the maximum voltage of partial discharge was occurred in the first month (79.59 mV) and the minimum voltage of partial discharge was occurred in the eleventh month (3.27 mV).
6. In the sixth sensor (C2), the maximum voltage of partial discharge was occurred at twelfth month (49.80 mV) and the minimum voltage of partial discharge was occurred in the eleventh month (7.64 mV).

The trend data of partial discharge measurement results in the generator stator winding appears that most of the partial discharge activity tent to increase, especially in the month of seventh and eighth.

Based on the direct measurements, it was classified into three conditions based on the amount of charges per cycle. Figure 13 shows the partial discharge occurs those caused by internal void in the generator stator insulation. These cases were indicated by the amount of charge occupied on the positive parts of cycles those have almost same amount of those on the negative ones.





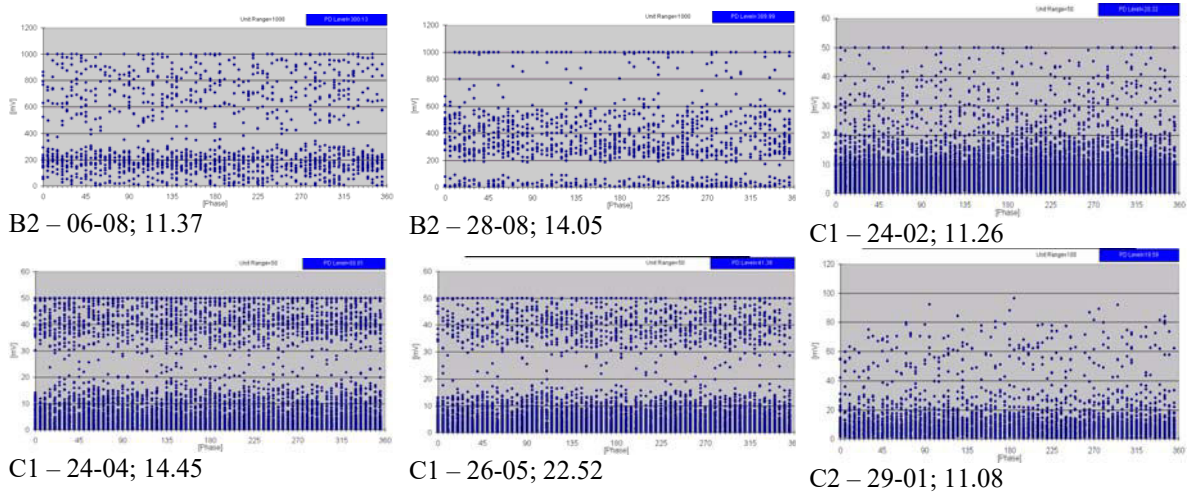


Figure 13. The measurement results those the positive and negative cycles have almost same charges

The second condition, as shown in Figure 14, indicated the internal delamination. In the internal delamination, the insulation would be separated from the copper conductor; therefore it would be weakly bonded, overheating, and so forth. This case could be seen from the most charge was on the negative cycles was more dominant than on the negative cycle ones.

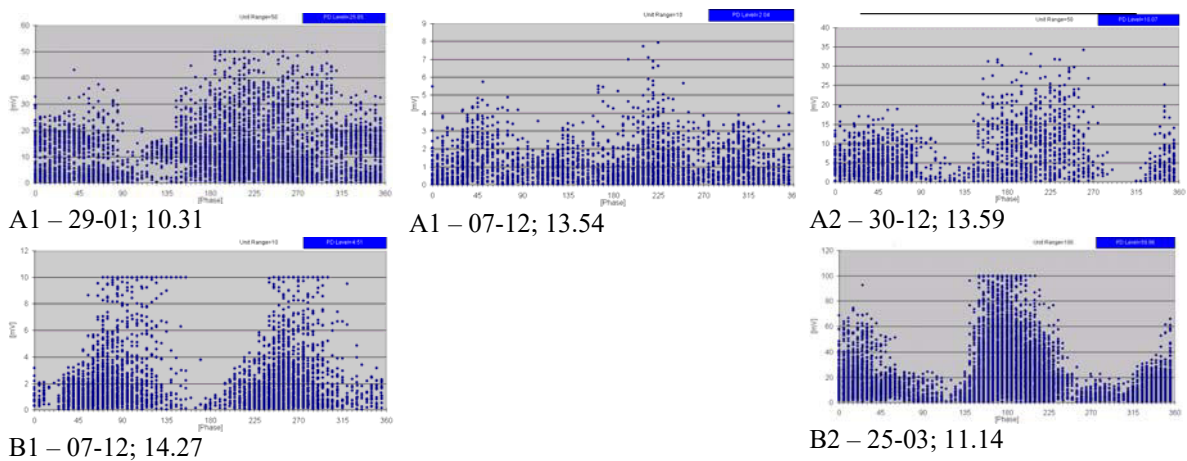
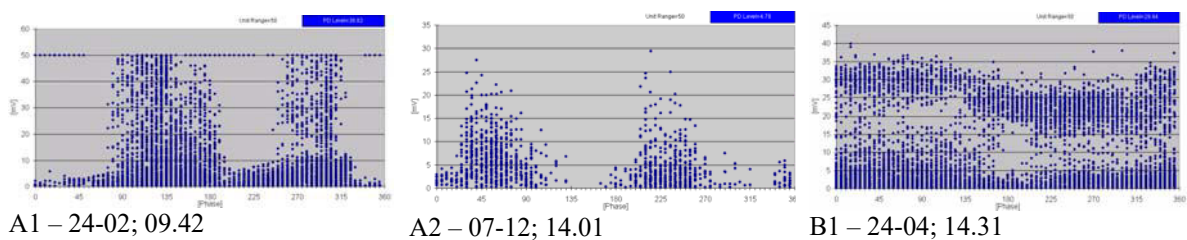


Figure 14. The measurement results those the charge on the negative cycles were more dominant than those on the negative ones

The third condition of measurement indicated the surface discharges. This phenomenon was caused by semi conductive a material (paint) was damage and loose its capability, as shown Figure 15.



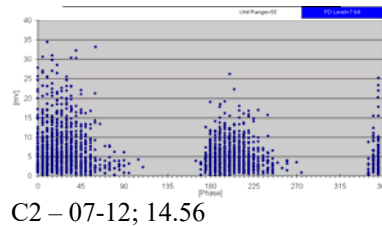


Figure 15. This phenomenon was caused by semi conductive a material (paint)

#### 4. CONCLUSION

Based on the measurement for 12 months, the partial discharge occurs in the generator unit 2 was almost caused by the internal void in the generator insulation. This case was indicated by the charge on the positive cycles almost same with on the negative once. The greatest energy of partial discharge was occurred in third month, and followed by one in eighth months. These cases indicated the discharge occurs, therefore the condition of the stator winding insulation has changed from the normal condition.

#### ACKNOWLEDGEMENTS

We would like to express the deepest appreciation to Indonesia Power, The Geothermal Power Plant Unit of Kamojang, which has supported to provide the data.

#### REFERENCES

- [1] H. Shin, *et al.*, "Denoising of On-line Partial Discharge Signal from High-Voltage Rotating Machines using Standard Deviation Threshold," *International Journal of Innovatives Computing, Information and Control*, vol/issue:7(A), pp. 3761-3769, 2011. ISSN 1349-4198.
- [2] M. Kurtz and G. C. Stone, "In-Service Partial Discharge Testing of Generator Insulation," *IEEE Transaction on Electrical Insulation*, vol/issue: EI-14(2), 1979.
- [3] G. C. Stone, "Partial Discharge Diagnosis and Electrical Equipment Insulation Condition Assessment," *IEEE Transaction on Dielectrics and Electrical Insulation*, vol/issue: 12(5), pp. 891-904, 2005.
- [4] V. Warren, "Partial Discharge Testing: A Progress Report," *Statistical Evaluation of PD Data, Irish Rotating Machine Conference*, San Antonio, Tx., USA, June, 2007.
- [5] E. Lemke, *et al.*, "Guide for Electrical Partial Discharge Measurements in Compliance to IEC 60270," *Electro*, vol. 241, Technical Brochure 366, WG D1.33, pp. 61-67, 2008.
- [6] PD Tech Power Engineering AG, "Partial Discharge Basics of Monitoring," Micamaxx™ Plus-Partial Discharge Basics, pp. 1-18.
- [7] H. G. Sedding, *et al.*, "A New On-Line Partial Discharge Test for Turbine Generators," *Cigre, 1992 Session*, #0 August – 5 September, pp. 1-7, 1992.
- [8] G. C. Stone and V. Warren, "Effect of Manufacturer Winding Age and Insulation Type on Stator Winding Partial Discharge Levels," *From DEIS, Sept-Oct 2004*, vol/issue: 20(5), pp. 13-17, 2004.
- [9] J. K. Nelson and J. Stein, "A Field Assessment of PD and EMI Methodology Applied to Large Utility Generators," *IEEE Transactions on Dielectrics and Electrical Insulation*, vol/issue: 17(5), pp. 1411-1427, 2010. ISSN: 1070-9878.
- [10] V. Warren, "Stator Winding Partial Discharge Activity for Marine Air-Cooled Generators," *FMMS 2013 of ASNE Conference*, August, 2013.
- [11] A. K. Gupta, *et al.*, "Modeling of Calibration Circuit for Partial Discharge Measurement," *Thesis*, Department of Electrical Engineering, National Institute of Technology, Rourkela, Odisha, pp. 13-42, 2013.
- [12] L. Renforth, *et al.*, "Continuous, Remote On-line Partial Discharge (OLPD) Monitoring of Complete Medium Voltage (MV) Network," pp. 1-11.
- [13] M. M. Yaacob, *et al.*, "Review on Partial Discharge Detection Techniques Related to High Voltage Power Equipment using Different Sensors," *Photonic Sensors*, vol/issue: 4(4), pp. 325-337, 2014.
- [14] U. Khayam, *et al.*, "Partial Discharge and Cross Interference Phenomena i a Three-Phase Construction," *International Journal on Electrical Engineering and Informatics*, vol/issue: 1(1), pp. 85, 2009.
- [15] B. A. Lloyd, *et al.*, "Continuous On-line Partial Discharge Monitoring of Generator Stator Windings," *IEEE Transaction on Energy Conversion*, vol/issue: 14(4), pp. 1131-1138. ISSN: 0885-8969.
- [16] Toshiba, "Instruction Manual; CM2000 Specifications," Toshiba International Corporations, Pty., Ltd.



## IAES Institute of Advanced Engineering and Science

### Office Addresses

Order/Enquiries/Marketing/Production:  
C5 JEC Residence, Plumben, Banguntapan, Yogyakarta 55198, Indonesia  
Phone: +62 (274) 4534501, email: [info@iaesjournal.com](mailto:info@iaesjournal.com)

Editorial:  
D2 Griya Ngoto Auri, Banguntapan, Sewon, Bantul, Yogyakarta 55187, Indonesia  
Phone: +62 (274) 4547770, email: [editor@iaesjournal.com](mailto:editor@iaesjournal.com)

Website: <http://iaesjournal.com/online/index.php/IJEC>  
email: [ijec@iaesjournal.com](mailto:ijec@iaesjournal.com)

ISSN 2088-8708



9 772088 870004

