

CERTIFICATION for the PEER REVIEW PROCESS &
EVALUATION of the PEER REVIEW PROCESS &
CERTIFICATION for NON EXISTENCE of ARTIFICIAL CITATIONS
and ANTI-PLAGIARISM CONTROL

Name: Edison-Andres Caicedo Peñaranda

Institution: Universidad de Pamplona

City: Pamplona

Country: Colombia

Phone: +57 3134699599

Academic email: edison.caicedo@unipamplona.edu.co

I declare, I confirm, I certify and I sign that I received substantial, important, line by line peer review with several and substantial comments, important remarks and hints from, at least, 3 Reviewers and the Assistant Editor for my paper: *Optimal Reactive Power Compensation in Distribution Systems Using Genetic Algorithms: A Case Study on the IEEE 33-Bus Network* with Authors: JAIME BARRERA, VÍCTOR GARRIDO-ARÉVALO, EDISON CAICEDO PEÑARANDA.

I would like to thank all the reviewers for their thoughtful comments and efforts towards improving our manuscript. We revised the manuscript with special attention to the comments that we received from **Three (3)** reviewers that were experts, specialists in the area of my paper.

I declare, confirm, certify and sign that WSEAS has checked my paper for possible plagiarism by Turnitin and my paper was found without plagiarism or self-plagiarism by Turnitin. I also declare, confirm, certify and sign that also that no Associate-Editor, no Editor-in-Chief, no member of the WSEAS Secretariat forced me in this Journal to add references (citations) to any previous publications of the journal.

I also declare, confirm, certify and sign that I have made all the changes, modifications, additions, studies, corrections asked by the reviewers and I have fully complied with their instructions. I also understand that before the publication the 3 (or more than 3) reviewers will check my paper to see if all the changes, modifications, additions, studies, corrections etc have been done and I authorize the WSEAS to publish my paper or to reject my paper even in the 2nd round of peer review or to continue with an additional round of peer review.

I also declare, I confirm, I certify and I sign that I will not publish this paper or an important part of the paper in any other Journal (inside or outside WSEAS) Conference Proceedings (inside or outside WSEAS), Book (inside or outside WSEAS), University Repository etc) without the written permission of the WSEAS.

I also declare, I confirm, I certify and I sign that this paper or an important part of the paper has not been published other Journal (inside or outside WSEAS) Conference Proceedings (inside or outside WSEAS), Book (inside or outside WSEAS), University Repository etc). In case of violation of the above terms, WSEAS can reject any unpublished paper or even retract any published paper.

Please, write additional comments below (take ideas from:
<http://wseas.org/main/author-testimonials.html>)

Andres e

Date: 2-11-2025

CERTIFICATION for the PEER REVIEW PROCESS &
EVALUATION of the PEER REVIEW PROCESS &
CERTIFICATION for NON EXISTENCE of ARTIFICIAL CITATIONS
and ANTI-PLAGIARISM CONTROL

Name: Victor Garrido Arévalo

Institution: Universidad de Pamplona

City: Pamplona

Country: Colombia

Phone: +573204181410

Academic Email: victor.garrido@unipamplona.edu.co

I declare, I confirm, I certify and I sign that I received substantial, important, line by line peer review with several and substantial comments, important remarks and hints from, at least, 3 Reviewers and the Assistant Editor for my paper: *Optimal Reactive Power Compensation in Distribution Systems Using Genetic Algorithms: A Case Study on the IEEE 33-Bus Network* with Authors: JAIME BARRERA, VÍCTOR GARRIDO-ARÉVALO, EDISON CAICEDO PEÑARANDA.

I would like to thank all the reviewers for their thoughtful comments and efforts towards improving our manuscript. We revised the manuscript with special attention to the comments that we received from **Three (3)** reviewers that were experts, specialists in the area of my paper.

I declare, confirm, certify and sign that WSEAS has checked my paper for possible plagiarism by Turnitin and my paper was found without plagiarism or self-plagiarism by Turnitin. I also declare, confirm, certify and sign that also that no Associate-Editor, no Editor-in-Chief, no member of the WSEAS Secretariat forced me in this Journal to add references (citations) to any previous publications of the journal.

I also declare, confirm, certify and sign that I have made all the changes, modifications, additions, studies, corrections asked by the reviewers and I have fully complied with their instructions. I also understand that before the publication the 3 (or more than 3) reviewers will check my paper to see if all the changes, modifications, additions, studies, corrections etc have been done and I authorize the WSEAS to publish my paper or to reject my paper even in the 2nd round of peer review or to continue with an additional round of peer review.

I also declare, I confirm, I certify and I sign that I will not publish this paper or an important part of the paper in any other Journal (inside or outside WSEAS) Conference Proceedings (inside or outside WSEAS), Book (inside or outside WSEAS), University Repository etc) without the written permission of the WSEAS.

I also declare, I confirm, I certify and I sign that this paper or an important part of the paper has not been published other Journal (inside or outside WSEAS) Conference Proceedings (inside or outside WSEAS), Book (inside or outside WSEAS), University Repository etc). In case of violation of the above terms, WSEAS can reject any unpublished paper or even retract any published paper.

Please, write additional comments below (take ideas from:
<http://wseas.org/main/author-testimonials.html>)

A handwritten signature in black ink, appearing to be 'Sen h.' with a period at the end.

Date: July 16, 2025

Responses to Reviewers (required)

For every revised version, the authors will reply using the following tables

They will upload them via the web or will send them by email.

Authors will have to make all the changes, modifications, additions, studies, corrections asked by the reviewers using the following forms. Authors have to be fully complied with the reviewers' instructions. Before the publication, the three (or more than three) reviewers will check, if the changes, modifications, additions, studies, corrections etc have been carried out. In this case, the paper will be published or will be rejected or a new round of peer review will start.

Reviewer # 1

Reviewer's #1 comment	Authors response	Action Taken
The paper refers to several figures and tables, such as the convergence curve (Figure 2), voltage profile comparison (Figure 3), and the IEEE 33-bus topology (Figure 1), which are not included in the current version of the manuscript.	Figures 1, 2, and 3, along with the corresponding tables, have now been included in the revised manuscript. These visual elements provide clearer insight into the convergence behavior of the Genetic Algorithm, the voltage profile before and after optimization, and the layout of the IEEE 33-bus distribution system.	Done
The study mentions cost-effectiveness and capacitor sizing, but lacks a concrete cost model or quantitative analysis comparing installation costs with loss reduction benefits.	More details have been added.	We have incorporated a basic cost-benefit analysis in Section 4.3, which estimates the cost of capacitor installation and quantifies the economic savings derived from reduced energy losses. Although detailed utility-specific cost models vary, we include a general framework that illustrates the financial viability of the proposed optimization.
The paper could benefit from expanding the discussion to include recent developments in hybrid approaches and machine learning techniques for RPC. These are briefly mentioned in the conclusion but should be integrated into	We agree with this suggestion.	The Related Work section has been revised to include recent publications (2023–2025) on hybrid metaheuristic approaches and the emerging application of machine learning techniques in reactive power compensation.

the Related Work section.		These additions enhance the context for selecting Genetic Algorithms in our study.
The validation is confined to the IEEE 33-bus test system. The addition of a second test case or a real-world feeder model would improve generalizability. Alternatively, the paper should discuss deployment potential in actual networks.	Due to data availability and scope limitations, we have retained the IEEE 33-bus system as the main case study.	However, we now include a discussion in Section 4.4 and 4.5 elaborating on how the methodology could be adapted for real-world deployment, considering system parameters, regulatory constraints, and commercial capacitor bank availability.
The reference list should be enriched and the authors urged to integrate a wider array of experiments and simulations, ideally with comparative tables to improve clarity.	We have updated the reference list with recent studies from 2023–2025, including works involving PSO, hybrid FPA-PSO, ML-based optimization, and real-time compensation strategies	In addition, new comparative tables have been added in Section 4.5 and 4.6, highlighting the performance of various algorithms across key metrics.
The manuscript relies extensively on existing literature and lacks a clear articulation of its innovative contribution.	We have clarified the novelty of our work in both the Abstract and the Introduction. The originality lies in the customized GA encoding and the practical constraints considered (e.g., maximum number of capacitors, size bounds, load bus eligibility), as well as the simplicity and robustness of the implementation compared to more complex algorithms. This refinement has been made explicit in the revised version.	Done
The manuscript must adhere precisely to the official formatting standards.	The manuscript has been revised to fully comply with the official WSEAS formatting guidelines, including headings, figures, tables, captions, and references. All previously missing elements have been restored or adjusted accordingly.	Done

Reviewer #2

Reviewer's #1 comment	Authors response	Action Taken
The objective function referenced as equation (1) is missing. Similarly, the formula for the roulette wheel selection, referenced as equation (2), is also absent. These omissions hinder the reader's understanding.	We thank the reviewer for highlighting this oversight.	Equations (1) and (2) have now been explicitly added and formatted in LaTeX style within the manuscript. Equation (1) defines the objective function for total real power loss, while Equation (2) presents the roulette wheel selection probability formula. These inclusions reinforce the mathematical clarity of the optimization process.
In-text references must align precisely with the corresponding entries in the bibliography.	We have thoroughly revised all in-text citations and ensured that each one corresponds exactly to its matching entry in the reference list. Redundant or unreferenced citations have been removed, and all numbering has been verified for consistency throughout the manuscript.	Done.
All visuals—including figures, tables, and equations—should be properly numbered and labeled, ensuring they correspond accurately with their mentions in the text.	All figures and tables have been carefully reviewed and are now correctly numbered, labeled, and cited within the text.	We have verified figure captions and ensured alignment with WSEAS formatting standards. Additionally, equations are now clearly numbered and formatted according to academic publishing conventions.
The work exhibits minimal innovation and may include duplicated content from previous works.	We respectfully clarify that this manuscript presents an original implementation of a constrained GA-based optimization approach, with novel aspects such as: limited capacitor placement points, integration of practical installation constraints, and a robust yet simple encoding strategy. These elements have not been previously published by the authors. Moreover, a full plagiarism and self-plagiarism check has been performed using Turnitin to ensure that the manuscript contains no duplicate content from prior articles or	Done

	conference papers.	
--	--------------------	--

Reviewer #3

Reviewer's #1 comment	Authors response	Action Taken
The reviewer appreciates the motivation of the study, the relevance of the benchmark system, and the clarity of the Genetic Algorithm implementation.	We sincerely thank the reviewer for recognizing the strengths of our manuscript, particularly the structured explanation of the Genetic Algorithm, the suitability of the IEEE 33-bus test system, and the contextual framing of the reactive power compensation problem. We are pleased that these aspects were clearly conveyed and well received.	Done
The authors are encouraged to include suggestions for prospective areas of research.	Thank you for this suggestion.	We have expanded the “Conclusions” section to include specific and well-defined lines of future research, such as the integration of machine learning techniques, hybrid optimization models, and real-time adaptive compensation in smart grid environments. These directions build upon the current work and align with emerging trends in power systems optimization.
Revisiting and refining the methodology section would likely enhance the overall clarity and quality.	The methodology section has been reviewed and refined for clarity and conciseness.	Redundant or overly technical explanations were streamlined, while maintaining technical rigor. Equations and constraints have been explicitly stated, and transitions between subsections were improved to facilitate readability.
Attention to grammar, syntax, and language fluency is necessary. Tools like Grammarly are recommended.	We have revised the manuscript using professional editing tools, including Grammarly, to ensure fluent and technically precise English throughout the paper. Grammar, syntax, and punctuation issues have been addressed comprehensively, and ambiguous phrases have been reworded for improved clarity.	Done

Ensure all citations and formatting conform strictly to academic standards. Poor referencing may lead to rejection by indexing services.	All references have been meticulously reviewed and reformatted to meet the WSEAS citation style and indexing standards. Each in-text citation now aligns precisely with the reference list, and all entries are complete, accurate, and consistently styled. Additional recent literature (2023–2025) has also been included to strengthen the bibliographic foundation of the work.	Done
---	---	-------------