

[My Journals](#) [Gazi University Journal of Science](#) [Author Panel](#) 820805

## Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm

**Type:** Research Article**Subject:** Engineering**Id:** 820805 **Status:** Published **Submission Date:** November 4, 2020 **Acceptance Date:** March 17, 2021 **DOI:** [10.35378/gujs.820805](https://doi.org/10.35378/gujs.820805)**Editor** **Section Editor**  
Deniz YÜZBAŞIOĞLU M. Timur AYDEMİR[Overview](#) [Review](#) [Decision](#) [Production](#)[Files](#) [Messages](#) [Timeline](#) [Emails](#)

## Secretary

**Secretary**

Assigned Date: November 4, 2020

Gazi University Journal Of Science EDITORIAL OFFICE

## Authors

**Primary Author**Widi ARIBOWO  
widiaribowo@unesa.ac.id  
[0000-0002-4059-1293](tel:0000-0002-4059-1293)

## Copyeditor

**Copyeditor**

Copyeditor - 1

November 9, 2020

**Copyeditor**

Copyeditor - 2

November 17, 2020

**Copyeditor**

Copyeditor - 3

November 17, 2020

## Details

Primary Language: English

Abstract (en)

This paper presents an approach to overcome economic load dispatch (ELD) using a metaheuristic algorithm. Economic load dispatch (ELD) is one of the most important problems in a power system, and solving it quickly is extremely important. The main problem that will be addressed in this paper is how to optimize the economy of the power grid with various operational limitations, the loss in transmission line power, and consider minimizing the fuel costs produced. In this study, some of the newest metaheuristics inspired by nature will be explored, namely Seagull Optimization Algorithm (SOA), Marine Predator Algorithm (MPA), Sine Tree-Seed Algorithm (STSA), Chimp Optimization Algorithm (ChOA), Equilibrium Optimizer (EO), and Giza Pyramids Construction (GPC). The performance appraisal of the method applied in this study was tested using 2 case studies, namely a system with 3 and 6 power system units. The results are presented by comparing between metaheuristic and mathematical methods. The experimental results is showed that the Sine Tree-Seed Algorithm (STSA) is presented the best performance with various case studies with constraints.

#### Keywords (en)

Economic load dispatch, Metaheuristic, Optimization, Nature inspired algorithm

#### References

- [1] Aribowo, W., "Tuning for Power System Stabilizer Using Distributed Time-Delay Neural Network," SINERGI, 22(3): 205-210, (2017).
- [2] Khan, I., Li, Z., Gu, W. and Xu, Y., "Distributed control algorithm for optimal reactive power control in power grids", International Journal of Electrical Power and Energy Systems, 83: 505-513, (2016).
- [3] Liang, H., Liu, Y., Shen, Y., Li, F. and Man, Y., "A Hybrid Bat Algorithm for Economic Dispatch With Random Wind Power," in IEEE Transactions on Power Systems, 33(5): 5052-5061, (2018).

 See More

#### Additional Information



#### Author's note to the Editor

Dear

I am widi from univesitas negeri surabaya

I am sending the paper for gazi University Journal of Science

Thank You

Best Regard

 [Evaluate Journal](#)

## Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm

**Type:** Research Article**Subject:** Engineering**Id:** 820805**Status:** Published**Submission Date:** November 4, 2020**Acceptance Date:** March 17, 2021**DOI:** [10.35378/gujs.820805](https://doi.org/10.35378/gujs.820805)**Editor****Section Editor**

Deniz YÜZBAŞIOĞLU M. Timur AYDEMİR

[Overview](#)[Review](#)[Decision](#)[Production](#)[Files](#)[Messages](#)[Timeline](#)[Emails](#)

## Editors

**Editor**

Assigned Date: November 18, 2020

Deniz YÜZBAŞIOĞLU

**Section Editor**

Assigned Date: November 20, 2020

M. Timur AYDEMİR

[Evaluate Journal](#)

## Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm

**Type:** Research Article**Subject:** Engineering**Id:** 820805 **Status:** Published **Submission Date:** November 4, 2020 **Acceptance Date:** March 17, 2021 **DOI:** [10.35378/gujs.820805](https://doi.org/10.35378/gujs.820805)**Editor** Deniz YÜZBAŞIOĞLU  
**Section Editor** M. Timur AYDEMİR[Overview](#) [Review](#) [Decision](#) [Production](#)[Files](#) [Messages](#) [Timeline](#) [Emails](#)

## Decision Letter

 Previous Decision Letters**Decision Letter-1**

Dear Widi ARİBOWO,

**Decision:** Minor Revision**Editor Comment:** Dear Widi ARİBOWO,

The review process of your paper is over now. Based on the referee evaluations we decided that the paper can be accepted for publication provided that some minor revisions are made. You can find the revision requests in the referee reports.

I would like to thank you for your interest in our journal.

Best Regards.

**Reviewer Reviews****Reviewer-1**

Comments and Suggestions for Author: Dear Editor, The authors present to the potential of six metaheuristic methods, namely, Seagull Optimization Algorithm, marine predator algorithm, Sine Tree-Seed Algorithm, Chimp Optimization Algorithm, Equilibrium Optimizer, and Giza Pyramids Construction in solving economic load dispatch problems. The manuscript contains an interesting overview of the existing methods. Especially proposed method algorithms are attractive for power system. The work presented in this article is of great importance in the power system. The paper is clear and well written. The methods can contribute to the literature. In my opinion, the running time of the algorithms should be compared in the article. The power system diagram must be added in Section 3. Although it is written that the analysis is made for a power system containing 3 and 6 thermal units, this is not enough. Section 3 needs to be expanded and revised with power system schema.

**Recommendation:** Minor Revision**Reviewer-2****Comments and Suggestions for Author:** This is a good paper.**Recommendation:** Minor Revision**Decision Letter-2**

Dear Widi ARİBOWO,

**Decision:** Accepted

**Editor Comment:** Dear Widi Aribowo,  
It is my pleasure to inform you that your paper has been accepted for publication.  
I would like to thank you for your interest in our journal.  
Best Regards,  
Timur

 [Evaluate Journal](#)

## Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm

**Type:** Research Article**Subject:** Engineering**Id:** 820805 **Status:** Published **Submission Date:** November 4, 2020 **Acceptance Date:** March 17, 2021 **DOI:** [10.35378/gujs.820805](https://doi.org/10.35378/gujs.820805)**Editor** Deniz YÜZBAŞIOĞLU **Section Editor** M. Timur AYDEMİR[Overview](#)[Review](#)[Decision](#)[Production](#) [Files](#) [Messages](#) [Timeline](#) [Emails](#)Production Editor ▼Proofreader ▼**Proofreader**

Proofreader - 1

March 22, 2021

**Proofreader**

Proofreader - 2

March 26, 2021

**Proofreader**

Proofreader - 3

March 27, 2021

Production Notes ▼**Widi ARİBOWO** Author

Dear Editor,  
I have uploaded the paper following your message

Thank You  
Best Regards

March 18, 2021 at 12:44:32 PM

**M. Timur AYDEMİR** Section Editor

Thanks

March 18, 2021 at 12:47:04 PM

## Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm

**Type:** Research Article**Subject:** Engineering**Id:** 820805 **Status:** Published **Submission Date:** November 4, 2020 **Acceptance Date:** March 17, 2021 **DOI:** [10.35378/gujs.820805](https://doi.org/10.35378/gujs.820805)**Editor** **Section Editor**  
Deniz YÜZBAŞIOĞLU M. Timur AYDEMİR[Overview](#) [Review](#) [Decision](#) [Production](#)[Files](#) [Messages](#) [Timeline](#) [Emails](#)

## Article Files

Revision	Version	File Name	File Type	Uploaded By	Date	Actions
Revision1	V10	Comparison Study on Economic Load Dispatch Using Metaheuristic Algorithm- SAYI.pdf	Full Text File	Gazi University Journal Of Science MİZANPAJ	February 28, 2022 at 7:54:59 PM	<a href="#">Download</a> 
Revision1	V2	copyright_820805.pdf	Copyright Form	Widi ARİBOWO	March 20, 2021 at 3:58:25 PM	<a href="#">Download</a> 
Original	V0	Tittle Page.docx	Title Page	Widi ARİBOWO	November 4, 2020 at 7:35:21 AM	<a href="#">Download</a> 
Original	V0	referee.docx	Supporting File	Widi ARİBOWO	November 4, 2020 at 7:36:08 AM	<a href="#">Download</a> 
Original	V0	turnitin.pdf	Similarity Report	Widi ARİBOWO	November 4, 2020 at 7:48:43 AM	<a href="#">Download</a> 
Revision1	V0	820805-Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm- Dizgi 2-26.03.2021.docx	Supporting File	Deniz YÜZBAŞIOĞLU	March 26, 2021 at 4:22:00 PM	<a href="#">Download</a> 
Revision1	V0	820805-Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm- Dizgi 2-26.03.2021.pdf	Supporting File	Deniz YÜZBAŞIOĞLU	March 26, 2021 at 4:25:43 PM	<a href="#">Download</a> 

Revision	Version	File Name	File Type	Uploaded By	Date	Actions
Revision1	VI	Comparison Study on Economic Load Dispatch Using Metaheuristic Algorithm- SAYI.docx	Supporting File	Gazi University Journal Of Science MIZANPAJ	February 28, 2022 at 7:54:23 PM	<a href="#">Download</a> ☰

#### Process Files

File Name	Uploaded By	Date	Actions
_SUITABLE.pdf	Copyeditor	November 9, 2020 at 2:26:14 PM	...
_SUITABLE.pdf	Proofreader	March 26, 2021 at 12:16:34 PM	...



## Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm

**Type:** Research Article**Subject:** Engineering**Id:** 820805**Status:** Published**Submission Date:** November 4, 2020**Acceptance Date:** March 17, 2021**DOI:** [10.35378/gujs.820805](https://doi.org/10.35378/gujs.820805)**Editor****Section Editor**

Deniz YÜZBAŞIOĞLU M. Timur AYDEMİR

[Overview](#) [Review](#) [Decision](#) [Production](#)[Files](#)[Messages](#)[Timeline](#)[Emails](#)**Users**[Gazi University Journal Of Science EDITORIAL OFFICE](#)[Secretary](#)[M. Timur AYDEMİR](#)[Section Editor](#)[Deniz YÜZBAŞIOĞLU](#)[Editor](#)[Layout Editor](#)[Layout Editor](#)[Gazi University Journal Of Science EDITORIAL OFFICE](#)

Secretary

**Gazi University Journal Of Science EDITORIAL OFFICE**

Dear Author,

We appreciate for submitting of your precious manuscript for consideration for publication in Gazi University Journal of the Science. In order to make your article suitable for publication, there are some changes that should be made according to the article writing rules:

Keywords section should be edit according to journal rules.  
Keywords section should be include minimum 3 maximum 5 words.  
Author information should not be exist in manuscript.  
15, 11, 7 th references should be edit.  
Level 3 titles like 2.3.1 should not be use in manuscript.  
Figure 1, 2, 3 should be mentioned in manuscript.  
Abbreviation Eq. should not be use in manuscript.

All rules can be control from the web page of journal.  
According to journal rules, articles that are not answered within 1 week, are rejected.

Kind regards  
Gazi University Journal of the Science

November 6, 2020 at 10:36:04 AM

Send

## Comparison Study On Economic Load Dispatch Using Metaheuristic Algorithm

**Type:** Research Article**Subject:** Engineering**Id:** 820805 **Status:** Published **Submission Date:** November 4, 2020 **Acceptance Date:** March 17, 2021 **DOI:** [10.35378/gujs.820805](https://doi.org/10.35378/gujs.820805)**Editor** **Section Editor**

Deniz YÜZBAŞIOĞLU M. Timur AYDEMİR

[Overview](#) [Review](#) [Decision](#) [Production](#) [Files](#) [Messages](#) [Timeline](#) [Emails](#)

- March 21, 2021 at 8:36:20 AM  
Article file (820805.docx) has been changed by Widi ARİBOWO.
- March 20, 2021 at 4:25:52 PM  
Article file (820805.docx) has been changed by Widi ARİBOWO.
- March 20, 2021 at 4:05:36 PM  
Article file (820805.docx) has been changed by Widi ARİBOWO.
- March 20, 2021 at 3:58:25 PM  
Article file (copyright\_820805.pdf) has been changed by Widi ARİBOWO.
- March 18, 2021 at 12:44:32 PM  
New note has been added by Widi ARİBOWO.
- March 18, 2021 at 12:42:52 PM  
Article file (copyright\_820805.pdf) has been changed by Widi ARİBOWO.
- March 18, 2021 at 12:42:26 PM  
Article file (820805.docx) has been changed by Widi ARİBOWO.
- March 18, 2021 at 12:40:30 PM  
Article file (Article820805.docx) has been changed by Widi ARİBOWO.
- March 17, 2021 at 3:32:24 PM  
Article has been accepted by M. Timur AYDEMİR.
- March 17, 2021 at 9:13:56 AM  
Article revision has been completed by author.
- March 17, 2021 at 9:08:45 AM  
Article file (Paperku2Revision.docx) has been changed by Widi ARİBOWO.
- March 17, 2021 at 9:06:27 AM  
Author accepted article revision requested.



March 15, 2021 at 11:31:50 AM

M. Timur AYDEMİR sent article revision request to author.



November 20, 2020 at 5:14:09 PM

M. Timur AYDEMİR has been assigned as section editor by Deniz YÜZBAŞIOĞLU.



November 18, 2020 at 9:43:55 PM

Article has been sent to editor (Deniz YÜZBAŞIOĞLU) by Gazi University Journal Of Science EDITORIAL OFFICE.



November 7, 2020 at 6:15:20 AM

Article resubmission has been completed by author.



November 7, 2020 at 6:15:02 AM

Article file (Paperku2.docx) has been changed by Widi ARİBOWO.



November 7, 2020 at 6:13:13 AM

Article file (Paperku2.docx) has been changed by Widi ARİBOWO.



November 7, 2020 at 6:11:52 AM

Author accepted article resubmission requested.



November 6, 2020 at 10:36:15 AM

Gazi University Journal Of Science EDITORIAL OFFICE sent article resubmission request to author.



November 4, 2020 at 7:54:04 AM

Article has been sent by Widi ARİBOWO.



November 4, 2020 at 7:54:04 AM

Gazi University Journal Of Science EDITORIAL OFFICE has been assigned automatically as secretary.